



Impact Evaluation of Teaching Quality Improvement in Secondary Education Project (TQI – SEP)



Carried out by

Evaluation Sector

Implementation Monitoring and Evaluation Division (IMED)

Ministry of Planning, Government of the People's Republic of Bangladesh

Conducted by



Eusuf and Associates

June 2012

Impact Evaluation
of
Teaching Quality Improvement in Secondary Education

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FOREWORD

The Directorate of Secondary and Higher Education under the Ministry of Education designed and implemented the "Teaching Quality Improvement in Secondary Education Project". The project covered entire Bangladesh. The project was designed to improve the secondary education through improving the teaching quality in secondary schools. The project was financed by the Asian Development Bank (ADB), Canadian International Development Agency (CIDA), and the Bangladesh Government (GOB).

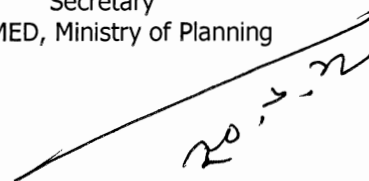
Evaluation Sector of Implementation Monitoring and Evaluation Division (IMED) under the Ministry of Planning contracted out the evaluation of this project to M/s Eusuf and Associates, a consulting Firm through open competition. The Consulting Firm was assigned to evaluate the project implementation and operating performance, and assessing project benefits and impacts including strengths and weaknesses.

Findings of the impact evaluation indicated that the project considerably improved the secondary education through improving the quality of teaching in the secondary schools in Bangladesh. Through project interventions, management of the secondary schools has improved through enhanced capacity of head teachers and commitment of classroom teachers, and increased participation of the members of school management committee. Performance of classroom teachers improved for higher attendance and careful teaching using modern techniques taught under the project training courses in Teacher Training Colleges. The performance of students improved as manifested from increased attendance, improved pass rate in school annual examinations, and public examinations (such as Junior School Certificate, and School Secondary Certificate Examination). The study suggested quite a few important suggestions for continued improvement of the secondary education in Bangladesh. The study also identified number of weaknesses and strengths of the project design and implementation for future similar projects.

I, sincerely congratulate M/S Eusuf and Associates and its consultant team for conducting the impact evaluation and making successful completion of the report in time. I also thank Syed Md. Haider Ali, DG (Evaluation Sector) along with his professional colleagues for providing guidance and supervisory supports to the M/S Eusuf and Associates and its consultants. I would also like to appreciate the Directorate of Secondary and Higher Education and local administration for their all cooperation and cheerful responses of project beneficiaries and participation of local influential/civil society members in the local level workshop held at Barisal.

I am very hopeful that the outcome and recommendations of the impact evaluation study will be much helpful to everyone involved in the design and implementation of similar projects in the future for higher efficiency, effectiveness, and sustainability.


(Md. Mozammel Haque Khan)
Secretary
IMED, Ministry of Planning


20.5.22

PREFACE

Implementation Monitoring and Evaluation Division (IMED) of Ministry of Planning, has been assigned to implement two major activities: one is monitoring of the on-going project activities and other one is evaluation of the completed GOB development projects. The Evaluation Sector, one of the six sectors of IMED is supposed to conduct impact evaluation for at least 10% of the completed projects of the GOB in each financial year. But due to present shortage of man-power/workforce which at present constitutes one third of the total strength, can not evaluate more than 3% to 4% of the completed projects of the GOB.

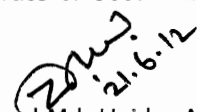
Despite the constraint, this Financial Year 2011-2012, Evaluation Sector, IMED conducted the impact evaluation of 10 completed GOB projects of which 7 projects have been evaluated by outsourcing research firms and 3 evaluation studies have been completed by the in house professional officers of the Evaluation Sector. The Evaluation Sector of IMED, Ministry of Planning outsourced one of the firms, namely, M/S Eusuf and Associates and awarded contract to carry out the impact evaluation on the Project titled "Teaching Quality Improvement in Secondary Education Project" at a total contract value of Taka 18.50 lakh. The project was implemented by the Directorate of Secondary and Higher Education under the Ministry of Education during July 2005 to June 2012 an investment cost of Tk.63,018.74 lakh. The project is jointly financed by the Asian Development Bank (ADB), Canadian International Development Agency (CIDA), and the Government of Bangladesh (GOB). The project covers entire country.

The major focus of this impact evaluation was to: (i) review project design and management aspect; (ii) assess implementation status of major components; (iii) assess impact of the project on teacher training colleges and its trainers, secondary schools and its management, teaching quality of classroom teachers, and performance of the students; (iv) identify strengths and weaknesses of the project; and (v) suggest measures to overcome the weaknesses with similar projects in the future.

Some of the findings of the impact evaluation are found remarkable: Findings of the evaluation evidence that the interventions of the project have improved the capability of teacher training colleges for providing quality training to secondary school teachers, management of secondary schools by head teachers and members of school management committee, improved teaching by the classroom teachers, and increased attendance of the teachers and students. The school overall performance has improved and number of all pass schools has increased, number of zero pass schools has reduced, dropout of students has declined. The findings of this impact evaluation were presented in a workshop organized by the Evaluation Sector, IMED. Workshop was attended by concerned professionals representing the country's reputed agencies, project personnel both from the ministry and the directorate levels and invited guests from different organizations.

I take the opportunity to congratulate M/S Eusuf and Associates and its consultant team for conducting the evaluation work and also concerned IMED professionals in making total efforts to complete the report in time. I also express my thanks to officials of the Directorate of Secondary and Higher Education (DSHE) for their kind cooperation. Thanks are also due to all members of Technical and Steering Committee members especially to Secretary, IMED for providing us useful advice and guidance.

I hope that the lessons learnt and recommendations that are made would contribute to improve the quality and effectiveness of the future projects to be implemented by the Directorate of Secondary and Higher Education under the Ministry of Education.


(Syed Md. Haider Ali)
Director General
Evaluation Sector, IMED
Ministry of Planning

List of Abbreviations

ADB	Asian Development Bank
ADEO	Assistant District Education Officer
AI	Assistant Inspector
ARO	Assistant Research Officer
AS	Academic Supervisor
AUSEO	Assistant Upazila Secondary Education Officer
BANBEIS	Bangladesh Bureau of Educational Information and Statistics
B.Ed.	Bachelor of Education
BIAM	Bangladesh Institute of Administration and Management
BMTTI	Bangladesh Madrasa Teachers' Training Institute
BOU	Bangladesh Open University
B.P.Ed.	Bachelor of Physical Education
CIDA	Canadian International Development Agency
CHT	Chittagong Hill Tracts
CPD	Continuous Professional Development
DA	Daily Allowance
DEO	District Education Officer
DPP	Development Project Proposal
DSHE	Directorate of Secondary and Higher Education
DU	Dhaka University
EA	Education Administrator
EC	European Commission
EMIS	Education Management Information System
EO	Education Officer
FEC	Foreign Exchange Component
FGD	Focus Group Discussions
GIS	Geographic Information System
GOB	Government of the People's Republic of Bangladesh
HSC	Higher Secondary Certificate
HSTTI	Higher Secondary Teachers' Training Institute
HT	Head Teacher
HTT	Head Teacher Training
IDF	Innovation and Development Fund
IE	Inclusive Education
IER	Institute of Education and Research
IMED	Implementation Monitoring and Evaluation Division
JSC	Junior School Certificate
LAN	Local Area Network
M.Ed.	Master of Education
MOE	Ministry of Education
MPO	Monthly Payment Order
NAEM	National Academy for Educational Management
NGO	Non-governmental Organization
NU	National University
NTEARA	National Teacher Education Accreditation and Registration Authority
NTEC	National Teacher Education Council

NTRCA	Non-government Teacher Registration and Certification Authority
OHP	Overhead Projector
ORC	Outreach Resource Center
Ph.D.	Doctor of Philosophy
PMU	Project Management Unit
PROMOTE	Program to Motivate, Train and Employ Female Teachers in Rural Secondary Schools
PP	Project Proposal
PSPU	Policy and Strategy Planning Unit
PSC	Project Steering Committee
RO	Research Officer
RPATC	Regional Public Administration Training Center
SBA	School Based Assessment
SESDC	Secondary Education Science Development Center
SESDP	Secondary Education Sector Development Project
SESIP	Secondary Education Sector Improvement Project
SMC	School Management Committee
SSC	Secondary School Certificate
STC	Secondary Teaching Certificate
STIS	Secondary Teacher Information System
TA	Traveling Allowance
TE	Teachers' Education
TOT	Training of Trainers
TQI-SEP	Teaching Quality Improvement in Secondary Education Project
TTC	Teachers' Training College
UPS	Uninterrupted Power Supply
USEO	Upazila Secondary Education Officer

Executive Summary

1. The Government with assistance from the Asian Development Bank (ADB) and Canadian International Development Association (CIDA) designed and implemented the Teaching Quality Improvement in Secondary Education Project (TQI-SEP) between 2005-6 and 2011-12. The original duration was from July 2005 to September 2011 and was extended up to June 2012. The project covered entire Bangladesh and emphasized on under-served and disadvantaged areas. The original cost of the project was Tk.630.1874 crore.
2. The goal of the project was to enhance the quality of secondary education in Bangladesh secondary schools by improving the quality of teaching. The purpose of the project was to provide initial and in-service teacher training, including continuing professional development, to all eligible teachers of grades 6-10 in government and private secondary schools in Bangladesh.
3. The specific objectives of the project were to: (i) assist government to establish NTRCA, (ii) assist government to establish an integrated national teacher secondary teachers' training network, (iii) provide scope of initial and in-service teachers' training including continuing professional development, (iv) improve overall standard of teacher training centers, (v) help enhancement of professional competence and quality of teacher trainers and educational administrators, and (vi) build upon an appropriate integrated system for linking the ministry of education with its other stakeholder institutes.
4. The project had four major components: (i) improving teaching quality through organizational development and capacity building, (ii) improving teacher training facilities, (ii) strengthening in-service and pre-service teacher training, and (iv) equitable access and community involvement.
5. The Implementation Monitoring and Evaluation Division (IMED), Ministry of Planning, selected the project for evaluation during 2011-2012 through outsourcing, and engaged Eusuf and Associates (a consulting firm) to undertake the study. The objectives of the evaluation study were: (i) review the performance of the project in respect of quality initial and in-service teachers' training activities, quality of training modules, and capacity development of training institutes; (ii) assess whether training activities could have contributed any impact on teaching quality of teachers; and (iii) identify major strengths and weaknesses of project implementation and suggest appropriate recommendations to overcome the weaknesses.
6. The methodologies for impact evaluation included among others: review of secondary data, visits to respective agencies and institutes and discuss various issues, undertake survey and primary data collection from all training institutes and sample secondary schools, administer focus group discussion, conduct case studies, and undertake classroom observations. The consultants interviewed respective officials of concerned agencies, principals of all training institutes, selected trainers of training institutes, head teachers and selected trained classroom teachers and members of school management committee of sample secondary schools, and students of sample schools at all grades. In all 18 teachers training institutes including four higher secondary teacher training institutes and 186 secondary schools were surveyed. In addition, 21 focus group discussions, 14 case studies, and 34 classroom observations were undertaken.
7. Physical progress of the project is highly satisfactory. The project completed almost all activities under the four components within extended project period. Progress in financial term is 91.44% of the revised budget – actual cost incurred up to March 2012 is Tk.496.6488 crore compared to the revised budget for Tk.543.1505 crore. Progress of as many as 13 different types of local training of trainers,

head teachers, members of school management committee, education administrators, and secondary school teachers is 98.17% - a total of 511,995 persons could be trained compared to a target of 521,547 persons. Except slow progress at the initial stage, the project implementation was smooth and quite fast at the later stage. Besides, appreciation from the government for satisfactory progress of project implementation, the Asian Development Bank (ADB) ranked the project as the best performed project three times during its implementation.

8. Average number of teachers per surveyed TTCs reduced compared to baseline data and percentage of vacant posts against sanctioned posts increased to 27.0% from 18.4% during baseline survey. All surveyed TTCs received various facilities like infrastructure, furniture, equipment, and teaching-learning materials.

9. The training rooms and other teaching facilities in teacher training institutes improved and expanded compared to baseline period including the facilities for the trainees such as dormitory, library, canteen, toilets, utensils, etc. Almost all (88%) teachers of TTCs and HSTTIs, received training on computer application at the classroom and the evaluation study noted that 8.5% actually use computers in classroom for training.

10. Evaluation study noted that the trainers of the TTC and HSTTI consider less than 30 participants is best per batch for training class. They also suggested that up to 40 participants is some how manageable. Seven out of every ten trainers (70%) reported that the contents of all training courses were relevant to the purpose and objectives of training focusing improved quality of teaching in secondary schools. The study noted rooms for further improvement of relevance of the content to ensure quality and effectiveness of training.

11. It is noted that in terms of subject based teacher training, subjects like social science, computer, education science, Bengali, religion, mathematics, agriculture got higher priority or the number of teachers in these subjects were higher than other subjects. Training in English in particular should have got high priority.

12. The trainers appreciated high of the use of modern methods of training such as participatory, pair work, question-answer, and group works. The trainers also supported increased use of modern training appliances such projector, OHP, manual, hand out, chart and model, The quality of training modules and other materials were rated by the trainers – manual was rated as good by 88.2%, hand out was rated as good by 76.9%, and chart and model good by 74.1%. Here again, there exists rooms for improvements. Quality of training greatly relies on the quality of training materials. Further, the trainers assessed the quality of training materials as excellent and good, partially good, and not good. It is noted that 88.2% trainers rated manual as excellent and good, 76.9% trainers rated hand outs as excellent and good, and 25.9% trainers rated chart and models excellent and good. The feedback indicated that almost one out of every four trainers considered that quality of manuals, hand out, and chart and models need improvements.

13. The project introduced a unique program for monitoring of classroom observation to monitor performance of trained teachers in the classrooms. The monitoring is proved useful for the classroom teachers as well as the trainers could obtain feedback and making adjustments of training. The monitoring is faced with number of barriers such as lack of skills of teachers, non cooperation of school authority in implementing the suggestions, and resource constraints (lack of electricity, scarcity of materials) and lack of time that often clash with programs in institutes and time for the monitoring). The useful monitoring program is faced with its sustainability due to fund constraints. The program could not

run even during the period of evaluation study due to lack of fund for cost of fuel for the vehicle and per diem of the trainers.

14. The evaluation study surveyed 186 schools including 150 schools surveyed during baseline survey. The 186 schools comprised of 34 public secondary schools and 152 private secondary schools. Among the head teachers 13% are female and 87% male. Interestingly, 61% male head teachers are simply graduates compared to 66% female teachers have masters. On the other hand, 94.4% male head teachers have degree in education while 100% female head teachers have degree is education. In terms of age most of the head teachers irrespective of gender are within the range of 40-60 years. Both male and female head teachers have experience as head of institution for 5-20 years.

15. In average, each school has about 12 teachers under MPO and 2 non-MPO teachers. Growth of the number of total teachers and female teachers in surveyed schools increased by respectively 10.9% and 24.5% during the project indicating increase of access of the female teachers in secondary education. Number of teachers with degree in education increased during the project period only at an annual rate of 2.2%. Turn over of teachers is not high and teachers leave the profession mainly for employments with better opportunities compared to less attractive teaching profession.

16. Frequency of class supervision by head teacher and purpose and activities involved in the supervision has positively changed. In average, a head teacher conduct 11.8 staff meetings per year, evaluates 14.0 teachers per year, and supervises 15.8 classes every month. This supervisory work load has increased partly due to the project compared to the pre-project situation. The academic supervision has dramatically improved teaching and learning and school management altogether. Performance of teachers and students has significantly improved.

17. Evaluation study found that the surveyed schools increasingly involved the community in the affairs of the school. Besides, SMC members having received training changed their attitudes towards responsible and active participation in the school management. Study found that 55% schools hold monthly meetings with SMC members, 29% schools hold meetings quarterly, and 3% half yearly, and the rest hold meetings irregularly as and when needed. Role of the SMC after receiving training is found effective for motivating students and guardians, enhancing attendance of students and teachers, fund raising for the development of the school, proper management of school property, and helping head teacher in protecting school environment.

18. Enrollment of students increased annually by 4.32% during the project – 4.57% boys and 12.48% girls. Ratio of boys and girls in surveyed schools in 2004 was 55:45 and 56:44 in 2011 with little change. Average attendance of students increased across all five grades generally by 4-5 percent indicating a major contribution of the project irrespective of boys and girls. Likewise dropout rate per school per year has reduced across all grades irrespective of gender during the project.

19. The evaluation study noted that 87.9% teachers received training in subjects they teach and the remaining 12.1% teachers teach in one subject but received training in a different subject. Evaluation study noted that work load per teacher per week 21-30 theoretical and 10 practical classes. The load is on high side and to some teachers it is too high for quality teaching. It is also noted that 87.9% teachers use lesson plans and two out of every three teachers (68.7%) use lesson plans in 40-80 percent classes. It is also noted that 94.1% teachers break down lesson time, and 88.6% teachers keep record of student achievement and progress. It is found that one out of every two teachers give home tasks every day, 10.8% give home task once a week, and 24.5% thrice a week.

20. The project introduced provision of using special methods of teaching techniques for disadvantaged and ethnic minority students and found that two out of every three teachers use suitable special techniques as needed and specified during training. It is found that four out of every five teachers use gender sensitive teaching materials.

21. It is noted that 60.5% teachers who received training under the project consider the training effective, 23.7% think that it is effective in some cases, 15.0% consider it less effective, and only 0.8% consider not effective at all. The students benefited from improved classroom performance of the teachers especially for classroom group working technique and the students noted the benefits as, participation of students in class increased, turn around to participate in group work, leadership development through presentation of work, and speak out the ideas openly and confidently.

22. In classroom observation it was noted that most of the teachers (91%) attend classes on time and teachers obtained home tasks in 62% classes. Most of the teachers except fewer exceptions are well dressed. Presentation of about one third of the teachers is attractive while half are good, and the rest are average. Further, 75% teachers highlight the objectives of the session relating to the previous lesson in each class.

23. In classroom observation it was also noted that most of the teachers use black board, use teaching materials and use combination of methods (lecture, discussion, individual work, group work, and demonstration). It is also observed that participation of students in question answer is as high as 76% but participation in group activity is 44% and participation in writing assignment is 36%. The process of wrapping up class session is 85.3% through oral presentation of summary, 79.4% writing main sections in board, and 94.1% giving home tasks. In overall, classroom observation noted that class was interesting, participatory, students understand and become encouraged, students help each other, work in groups, and the class are productive.

24. The evaluation study noted strengths of the trained teachers in speaking, behavior with students, skill and proficiency in class management, answering questions smoothly, mode of speaking, writing on board as much, and keeping students interested in participation. The weaknesses of the teachers include less use of teaching materials, weak in oral English, hurry in class, lesson plans less emphasized, weak in time management, some students remain unattended.

25. The evaluation study based on classroom observation assessed teaching quality of teachers in terms of teaching quality index and compared with the baseline index. The overall teaching index is assessed as 4.04 for male teachers and 3.56 for female teachers. This favorably compares with the base line index of 2.36 for male teachers and 1.91 for female teachers indicating significant improvement of the trained teachers through the project training.

26. The existence 14 TTCs and five HSTTIs provided strong supports to project implementation and making the training successful. The institutes, its existing infrastructure, and trained teaching and non-teaching staff contributed towards faster and efficient implementation of the training. Support from the Institute of Education and Research of the Dhaka University in providing Training of Trainers (TOT) was an advantage to ensure efficient and effective TOT.

27. The project used as many as 30 international and local consultants that contributed to among others in designing various implementation schedules, preparing training curriculum and materials, monitoring tools, etc. The consultant support served project implementation as a driving force and professional base.

28. The project provided sufficient provisions for fund resources for different trainings that served as strength for designing and implementing and monitoring of training of 511,000 persons. However, it is noted that soon after exhaustion of the training funds, the monitoring stopped indicating the importance of training funds for the type of training projects.

29. Continued Professional Development (CPD) trainings helped project implementation and supporting professional development of the teachers and achieving good training results. The provision of cluster training served as a strong strength too for the project. Cluster training served as a tool for low cost highly effective training technique.

30. Although rousing interest of large number of teachers of about 20,000 private secondary schools was supportive to implement the project but this was a huge training load as ever before. Nevertheless, the project has made significant contributions to improving the teaching quality of teaching in secondary schools by training the large number of teachers. These teachers though form the majority of secondary school teachers yet some teachers remained untrained. All the teachers need repeated trainings. NTRCA should continue to locate good candidates aspiring for the position of secondary school teachers as an effort to contribute towards improvement of secondary education.

31. Existence of coaching business in numerous coaching centers run and taught by untrained non-professional teachers though help the students in the short tern but work as an impediment to establishing improved teaching learning in secondary schools. The students, parents, and teachers are highly reliant and dependent on coaching centers where student are not educated but prepared for answering questions to secure high grades without gaining knowledge. The trained teachers of the secondary schools are also involved in coaching who do not follow and use the teaching skills in coaching centers as the teaching in coaching centers is question answer based.

32. Traditional attitudes of some experienced teachers of private secondary schools serve to some extent as weakness of the project as they might take time to change. This may deter effectiveness of the training in applying to the classroom situation. The younger teachers may however be more effective.

33. Not all but some members of SMC might not co-operate with the project especially in sending teachers for training. This issue may be linked to the provision of MPO so that SMC send teachers for training and for upgrading and pursuing degree in education.

34. Lack of sufficient number of effective head teachers is another weakness of the project. In many schools the head teacher is not effective enough to take lead and make the school as a centre of excellence. Some head teachers are professionally less competent to form a good team of teachers with rich teaching learning facility and environment. Government should recruit and administer head teachers.

35. The implementation performance of the project is satisfactory as the physical progress with the major components such as training is over achieved within the project period. The financial progress of implementation is also high. The project utilized 92% of the revised budget and 95.5% of the funds released and became available. The progress of first three years was only 14.86% and that of the last year (2011-2012) is only 2.72%. The remaining 82.42% was utilized in four years (FY208, 2009, 2010, and 2011).

36. The success rate (pass rates) of sample surveyed schools and compared to combined results of all boards between 2004 and 2012 indicated an upward trend of improved student performance in public examination like SSC. The increased pass rates are primarily due to project interventions that provided

improved teaching quality. Example, pass rate of boys and girls combined in 2005 was only 52.57% that positively compares with the pass rate of 86.37% in 2012.

37. Relevant agencies (DSHE, NAEM, NTRCA, and BANBESIS) are yet to be institutionally strengthened enough with specific role and responsibility to play in improving the teaching quality in secondary schools and quality of secondary education. The follow-up project may emphasize on the mater beyond training and logistic facilities.

38. Continued Professional Development (CPD) course demand repeated application to cover as many teachers to sharpen the skills of the teachers with provision for updating and upgrading of the CPD course per se.

39. Strong follow-up monitoring of performance of trained teachers in classrooms by the trainers of TTC and HSTTI in association with local education administrators is needed under future similar programs. Monitoring by the teachers of TTC and HSTTI should not clash with the training classes in the respective institutes affecting normal training programs. In all TTCs and HSTTIs there should be only trained teachers having degrees in education for making these institutions more effective centers of excellence in teaching.

40. Considering needs of the monitoring, government may develop cost effective monitoring through existing system of monitoring by local education administrators and selected teachers in a team ensuring the purpose. However, there should be oversight of the effectiveness of the monitoring. There should be evaluation of each and every monitoring trip to a school by the principal and local education administrators.

41. Local resource center may be established like the primary education for sustainable and low cost and highly effective continued professional development of teachers with the help of the skills of highly proficient local teachers and benefit the new and weak teachers.

42. There is need for either stopping coaching centers or providing registration and accreditation and control on that with enforcement of teaching by trained teachers having degrees in education. There is a need for policy decision on the matter as it deters the effective learning. Quality of education may decline if ineffective teaching-learning continues.

43. Training materials should be updated and upgraded continuously with the pace of time and curriculum changes. Efforts to making and using local level low cost training materials made little progress. However, the efforts need be continued.

44. Progress of innovative Development Fund (IDF) is low due to number of reasons – new concept, initial to budget and conditions, and limited among TTCs. Given increasing interests from teachers and students and enhanced budget, provision of IDF should continue and be promoted especially for developing low cost teaching learning materials locally by the teachers and students.

45. The project started training of teachers of madrasha under the project and later discontinued. The training needs of madrasha teachers demands a critical assessment based on their competencies, courses, and current improvements of the madrasha education. The teachers of madrasha need extensive training under a separate major program or project or together with the program for teacher training. The matter needs a policy decision.

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Section I Project Background and Design of Evaluation Study

A. The Project

1. Background

1. The Government of Bangladesh in order to ensure quality secondary education designed and implemented the Teaching Quality Improvement in Secondary Education Project. The Project was financed by the Government of Bangladesh, the Asian Development Bank (ADB), and the Canadian International Development Agency (CIDA). The Project covered entire Bangladesh. The duration of the Project was originally from April 2005 to September 2011 but the duration was extended by nine months up to June 2012. The cost of the Project was originally estimated at Tk.63,018.74 lakh and finally revised down to Tk.54,315.06 lakh. Cost of project and funding arrangements are at table 1.1 and table 1.2.

Table 1.1: Project Cost and Funding Arrangement

(Million US\$)

Donor(s)	Contributions (million \$)			
	Foreign	Local	Total	%
Asian Development Bank (ADB)	15.69	42.01	57.70	61
Canadian International Development Agency (CIDA)	3.27	14.73	18.00	19
Bangladesh Government (GoB)	0	19.10	19.10	20
Total	18.96	75.84	94.80	100

Table 1.2: Revised Project Cost (Million Taka)

(Lakh Taka)

Cost Level(s)	GoB (FE)	Project Aid		Total
		Special Account	DPA	
Original Cost	12,609.78	28,845.14	21,563.82	63,018.74
Cost after 1 st Revision	12,991.96	38,589.58	12,888.73	64,470.27
Cost after 2 nd Revision	5,562.29	36,853.33	11,899.44	54,315.06

2. Goal and Purpose

2. The goal of the Project is to enhance the quality of secondary education in Bangladesh secondary schools by improving the quality of teaching. The purpose is to provide quality initial and in-service teacher training, including continuing professional development, to all eligible teachers of grades 6 - 10 in government and private secondary schools in Bangladesh.

3. Objectives of the Project

3. The main objectives of the Project were to provide quality through initial and in-service teachers' training including continuing professional development to all eligible teachers of grades 6-10 in government and private secondary schools in Bangladesh. However, the specific objectives of the project were:

- To help the Government to establish a Non-government Teacher Registration and Certification Authority for the registration, certification and deployment of qualified and competent teachers in non-government secondary schools and thereby enhance the quality of secondary education;
- To help to establish an integrated national secondary teachers' training network and improve the teachers' training system and thereby contribute to the quality of teaching learning at secondary level;

- To provide the scope of quality initial and in-service teachers' training including continuing professional development for the teachers serving in government and non-government secondary schools and thereby enhance their professional competency;
- To improve the overall standard of management of teacher training centers and increase significantly training access to under-served and disadvantaged areas and thereby ensure quality teachers for all;
- To help enhancement of professional competence and quality of teacher trainer and concerned officials;
- To build upon an appropriate integrated system for linking the ministry of Education with its other stakeholder institutes, making the stakeholder institutes aware about their roles and responsibilities and thereby contribute towards educational quality;

4. The most important premise underlying the Project was that poor teaching quality was significantly linked to declining student achievement. Pass rates at national examinations declined and dropout rates were high. It was anticipated that improved teaching quality might enhance both the internal and external efficiency of the education system, and lead to higher student achievement.

5. The Project was designed to improve teacher training, its planning, management, and quality of delivery through organizational development, capacity building, and human resources development, and revitalizing the existing, underutilized network of teacher training colleges and institutions. Primary focus of the Project was on improving training of teachers for grades 6-10 through a training network consisting of government TTCs, MTI, SEDCs and HSTTIs. HSTTIs included in the training network, since HSTTIs were then much underutilized for their original purpose as training institutions for higher secondary education, and they have potential physical and human resources which could be utilized also more broadly in secondary education sector for in-service training of teachers.

4. Components and Outcomes

9. The Project had four components: (i) improving teaching quality through organizational development and capacity building, (ii) improving teacher training facilities, (iii) strengthening in-service and pre-service teacher training, and (iv) improving and supporting equitable access for the underserved. Implementation encompassed development activities at central government level, as well as at teacher training colleges and institutes, and on pilot basis also at community levels. Detailed of the project component are at **Appendix 1**.

B. Design of the Evaluation Study

7. The Implementation Monitoring and Evaluation Division (IMED), Ministry of Planning, selected the Teaching Quality Improvement (TQI) in Secondary Education Project for evaluation during 2011-2012. The evaluation study was outsourced to Eusuf and Associates, a local consulting firm.

1. Objectives of the Evaluation Study

8. The main objectives of the evaluation are to: (i) review the performance of project in respect of quality initial and in-service teachers' training activities, quality of training module, and capacity development of training institutes; (ii) assess whether training activities could have contributed any

impact on teaching quality of teachers; and (iii) identify the major strengths and weaknesses of project implementation and suggest appropriate recommendations to overcome those.

2. Methodology and Tools

9. The methodologies for the impact evaluation study included: in-depth review of secondary documents related to the project design, implementation, and changes overtime. The consultants reviewed progress of implementation of all activities of the Project in terms of physical and financial achievements and compared with project targets and milestones. The physical progress included an account of implementation of construction works and renovation of TTCs, SESDCs, HSTTIs, BMTTI, NAEM, new teaching resource centers, cluster-based resource centers, procurement of required furniture for NAEM, PMU, TTCs class rooms, cluster-based resource centers. The project activities included procurement of various office equipment for NAEM, PMU, TTCs, BMTTI and BANBEIS, accessories and software for workstations and computer network for these institutions, all kinds of material i.e. texts, curriculum and supplementary teaching materials.

10. The training activities covered overseas training to teacher trainers, special needs teachers, M.Ed. fellows, initial and in-service training for all head teachers and government officials, workshops and research studies for NAEM, NTRCA, DSHE, and BANBEIS, baseline studies. The Project supported implementation of reforms and innovative schemes for improving quality of teaching, particularly those initiated at the local level through schools, TTCs, BMTTI, SESDCs, HSTTIs and resource centers, management system and capacity and quality support system expertise of consultants, Project Director, Deputy Project Director, PMU officers in charge of training procurement, monitoring and evaluation and support staff and all the operational activities. The consultants highlighted comparative analysis of all relevant indicators obtained from the secondary source.

11. The consultants used different approaches and methodologies and tools for collecting data such as: review of secondary documents, key informant interview, visits to project area by experts and discuss with stakeholders, survey and data collection from sample schools and related institutions, conducting classroom observation and case studies, administration of focus group discussion, holding a field level stakeholder workshop, getting approval of technical committee and steering committee on study design and study findings, and sharing draft final report in a national workshop. The methodologies and tools were developed following the objectives of impact evaluation and key output and outcome indicators as needed.

12. In all, nine sets of data collection instruments were prepared (Appendix 1) for collecting necessary quantitative and qualitative information. Considering the nature of the components and activities, the impact evaluation placed higher importance to qualitative information as needed. Qualitative information was gathered primarily from key informant interviews, classroom observation, discussions with teachers, and focus group discussion. The questionnaires sets were used to interview head teachers, subject teachers and interview of SMC members.

3. Sampling Techniques

13. The consultants undertook survey of randomly selected training institutes, secondary schools (government boys' high school, government girls' high school, government coeducation high school, private boys' high school, private girls' high school, private coeducation high school). Required numbers of the training institutes were selected randomly and the same baseline secondary schools were selected (150) and the additional numbers of schools were selected from Rangpur Division as no school was selected from Rangpur division at the time of conducting baseline survey. The consultants have covered all divisions including three remote areas. The consultants have interviewed all the randomly selected teachers, students and SMC members of the selected schools and principal and teachers of teacher of sampled training institutions, concern officials of DSHE, NAEM, NTRCA. The total numbers of respondents for interview was estimated using the statistical method.

14. In determining survey sample size for teacher training, prevalence rate of trained teacher was estimated using several relevant sub-indicators, confidence level of 95%, precision level of 3%, and design effect of 1.5 (multi-stage sampling). Given the prevalence rate, population size, confidence level, and design effect, the sample size was estimated using the general formula (Cochran):

$$n = \frac{n_0}{1 + n_0/N} = \frac{n_0}{C} \quad \text{Where } C = 1 + \frac{n_0}{N}$$

$$n_0 = \frac{(Z_{0.95}^2 PQ) (\text{deff})}{e^2} = 1,601$$

Where,

N= Population size = 1,86,830

n= Sample size

n_0 = Initial sample size

P= Prevalence rate (estimated trained teacher is 50%)

Q= 1-P

deff=design effect = 1.75 for multi-stage sampling,

$Z_{0.95} = 1.96$

e= precision rate=0.03

$$C = \text{Correction factor} = 1 + \frac{n_0}{N} = 1.009$$

$$n = \frac{n_0}{1 + n_0/N} = \frac{1,601}{1.009} = 1,586$$

4. Sample Frame

15. It is mentionable that three remote districts identified by the project were included in the sampling frame. These districts are Rangamati Hill Tracts, Thakurgaon and Patuakhali. The consultants decided to interview 1860 teachers and surveyed the other components on sample basis. The sample frame followed for conducting the evaluation study is presented in table 1.3, and detailed sample frame is at **Appendix 2**.

Table 1.3: Summary of Sample Frame

	Project components	Sample Units	Number of Respondents
1	Secondary schools/teachers	186	1,860
2	Government Teacher Training College -private TTC are not included in TQI (SEP)	14	140
3	MTTI	1	10
4	HSTTI	5	50
5	NAEM	1	10
6	BANBEIS	1	1
7	BOU	1	1
8	DSHE	1	1
9	SMC Members of private high schools (assuming 30 Govt. schools – two schools in each selected district)		312
10	Students (10 students from a class of each sample school)		1,860
	Total Respondents		4,245

5. Interview of Respondents

16. The impact evaluation team carried out interviews of principals/teachers of training institutes, head teachers/teachers of secondary schools, SMC members and students. The field investigators conducted interviews using survey instruments as at Appendix 1. The trained field investigators conducted interviews and collected information of quality of teaching, training methods and materials, goals and objectives of project, role played by TTCs, HSTTIs, MTTI, NAEM, NTRC, schools and community for quality improvement, supports from project, strengths and weaknesses of project, suggestions for improvement of the implementation and sustainability, etc.

6. Focus Group Discussion (FGD)

17. Further, the impact evaluation team carried out 21 focus group discussions (FGD) sessions. Each FGD session was conducted with homogenous groups of participants consisting of 10-15. Three categories of FGDs were conducted. These groups were teachers, guardians, SMC member and local elite one each from every division. The experts, supervisors and field investigators conducted the focus group discussions using a checklist as at Appendix 1 and captured useful qualitative informants and feedback of participants on school level planning, quality of training, school management, teaching process, participation of community, participation of parents/guardians, strengths and weaknesses of project, suggestions for improvement of implementation of similar projects in future and participation of communities, etc. Details of the feedback of focus group discussion are at feedback of focus group discussion.

7. Case Study

18. In addition to above, the consultants undertook 14 selected case studies of better performing secondary school and less performing secondary schools. Case studies highlighted the benefits of the TQI Project intervention, how, to what extent and in what aspects the schools have benefited. Details of the case studies are at feedback of case studies. In addition, 34 classroom observation were taken in the sample secondary schools.

Section II Project Implementation Performance

19. The Project was planned to implement from April 2005 to September 2011 but time of implementation was revised twice - from October 2011 to May 2012 and again up to June 2012. The components of the Project were a combination of hardware and software. The consultants analyzed the Project implementation by components in the following paragraphs.

Component 1: Organizational Development and Capacity Building

20. **Establish an Integrated Secondary Teachers' Training System:** An Integrated Secondary Teachers' Training System has been established and systems of coordination and collaboration with related organizations have been developed. The related stakeholders were TQI, NU, BOU and SESDP. Major activities were development of digital content as well as training of trainers and teachers; English in Action on materials and trainers; SEQAEP on training materials and approaches and the British Council supported "Connecting Classrooms" program. Various stakeholder meetings and workshops were arranged related to capacity building of DSHE. Visits were made to TICs, HSTTIs, ORC5 and different Cluster Centre Schools.

21. **Establish an Apex Body for Secondary teacher Education:** A National Teacher Education Council (NTEC) is set up under the chairmanship of the honorable Minister of Education.

22. **Support NTRCA:** NTRCA is established and become operational. The role of NTRCA is selecting teachers for ensuring quality teaching in Secondary Schools. NTRCA has been conducting regular examination to ensure quality of teachers to be recruited by the secondary schools. It is reported that the examinations conducted by NTRCA have been playing an effective role in selection of quality teachers by non-government secondary schools.

23. **Strengthening Monitoring and Evaluation capacity of DSHE:** The capacity building of DSHE has taken place through training of relevant staff in various fields. A self assessment based Monitoring and Evaluation System developed under the Project is currently operational for continuous improvement of school performance. The Initial Impact Assessment was completed in early 2011. It sought responses about project impact from respondents including students, teachers, head teachers and SMC members who have been targeted in CPD, HT and TE training.

24. **Strengthening the capacity of BANBEIS:** Hardware support was provided to BANBEIS to set up Secondary Teacher Information System (STIS). Over 2010/2011 STIS database administrators have been working with representatives of DSHE EMIS section and the Director, Training in DSHE to support an SESDP initiative that will reinvent the decentralized STIS as an online data entry program based on Oracle. Software development is complete and beta testing has commenced. TQI is taking responsibility for the production of the operating manual. TQI will also fund a pilot training program. Further support will need to come from future projects. Post project sustainability of the STIS is a major issue.

25. BANBEIS completed collection of GPS data by late 2010. They prepared a list of thematic maps of use to DSHE management with help of TA team in early 2011 and a contract for development of the GIS interface was let in early 2011. BANBEIS now reports that the software has been developed and the system is in a testing phase. In 2011, BANBEIS commenced a program to conduct office productivity training for EI and ARO from all 64 districts.

26. **Training of Head Teachers and Administrators (HT and EA) 21-days In-service Professional Development Training of Head Teachers:** Up to March 2012 a total of 16,035 Head Teachers received 21-days professional development training. It is reported that the trained head teachers are now continuing with annual activity planning along with strategic instructional plan to reach a decided target within a time frame and applying their training skills in both academic and management activities. Follow up training was provided to 11041 head teacher up to March 2012. Head teacher pre-service training was provided to 1537 persons up to March 2012.

27. **Training of secondary Education Administrators (EAs):** As of March 2012, a total of 1177 secondary education field officials including District Education Officer (DEO), Upazila Secondary Education Officer (USEO), Academic Supervisor (AS), Assistant Inspector (AI), and Research Officer (RO) have participated in the 10-day training program for educational administrators. This training course has two dimensions. The course for the DEO and ADEO has more focus on school administration and the course for the AI, RO, AS and USEC is more focused towards academic supervision. This training has substantially improved the capacity of the field officials to provide professional support to the schools which was lacking in the past.

Component 2: Teacher Training Facilities

28. All TTC5, HSTTIIs and NAEM have been transformed through TQI-funded construction, repair, renovation, furniture and equipment. Ramps for impaired persons and female friendly facilities are installed; fire extinguishers and first aid kits provided; science equipment on display; roof-top water tanks installed; attractive internal and external gardens developed and seepage-free roofs and walls are secured.

29. Computer labs have been established at all TTCs, HSTTIIs and BMTTI with computers, desks and swivel chairs from TQI. Basic Computing, including Internet usage, is a required subject on the pre-service BEd. Equipment such as multimedia projectors, OHPs and screens have been delivered to teacher training institutions.

30. Out-Reach-Centers (ORCs) have been established in Thakurgaon, Patuakhali and Rangamati. They are now implementing various TQI supported programs. The ORCs are also planning own, needs based training, both at the ORC and also to be implemented by the mobile units in an outreach mode.

31. The improved standard of facilities and equipment have provided a more conducive teaching and learning environment for both students and teaching staff of the TTCs, HSTTIIs, BMTTI and NAEM. All the TTCs and many schools have been provided with laptop and multimedia equipment. This enhances the use of ICT in TTCs and schools.

Component 3: In-service and Pre-service Teacher Training

32. The Continuous Professional Development (CPD) program has three phases. In the first 2-3 week programs 200,910 persons had participated and in the 5-day follow-up training that started in June 2009 a total of 119,807 had participated. The one-day Cluster training program was given to 98,595 teachers.

33. The one-year modularised B.Ed. curriculum is being implemented all 14 Govt. TTCs. Till March 2012 14,758 classroom teachers who had no training on teaching received 3 – month STC training, and

out of them 1,228 teachers completed 9 – month B.Ed. course from different public TTCs. TQI continued to provide a 3-month Secondary Teaching Certificate (STC) course for in-service, untrained teachers with an optional 9-month follow-up BEd. conversion course. The courses are conducted by TTCs under the auspices of the National University (NU). Completion rates up to June 2011 are as follows: (a) 14,700 participants completed the STC 3-month and (b) 1,228 participants completed the STC 9-month program leading to award of a B.Ed qualification.

34. **B.Ed. Distance Education:** B.Ed. Distance Education course, which is being conducted under the auspices of the Bangladesh Open University (BOU). This initiative has involved: (a) building distance education capacity in the TTCs, and (b) supporting BOU to monitor program. Currently, large numbers of registered students are attending tutorials in 17 tutorial centres around the country.

35. **Innovation and Development Fund (IDF):** Up to June 2011, 138 IDE applications have been received and 129 were approved for support. Out of these, 118 projects are already completed. Approximately 20% of approved IDF proposals focused on school monitoring and mentoring. Teacher Educators from TTCs monitored about 200 schools. Initial assessment of these projects found that IDF interventions have improved TTC capacity to support outreach activities including school level monitoring and mentoring of teachers. Several IDF projects focused on use of Internet for teaching-learning processes which helped the teachers and students to become more computer literate.

Component 4: Equitable Access and Community Involvement

36. The target for recruitment of 30% female teacher was revised by the government to 40% for urban areas and 20% for rural areas. According to BANBEIS report 2009, female teachers in rural schools account for 19.36% and in urban schools account for 40.14%. Overall, the national level target of 40% female teachers in urban schools and 20% female teachers in rural schools has been achieved

Project Management

37. Directorate of Secondary and Higher Education (DSHE) was the executing agency. Ministry of Education (MOE) established a project steering committee (PSC) to oversee the work of DSHE and Project Management Unit (PMU). The PMU was in place and fully operational within two months of loan effectiveness. The PMU is headed by a Project Director supported by a Deputy Project Director and support officers and staffs. At the time of full swing operation of the project total staff strengths were 55 persons including 34 drivers. The PMU is responsible for the day-to-day operational management of the project implementation, monitoring and evaluation of progress. The PMU is also supported by international and local consultants.

1. Civil Works

38. The Project undertook various types of civil works. The major types of civil works accomplished under the project are vertical and/or horizontal extensions, repairs and renovations at 11 Government TTCs (Dhaka, Mymensingh (Male), Mymensingh (Female), Comilla, Feni, Chittagong, Jessore, Rangpur, Rajshahi, Khulna and Barisal. Repair, renovation and/or construction at nine SESDCs (Chittagong, Feni, Comilla, Dhaka, Jessore, Khulna, Memensingh, Rajshahi and Rangpur). Repair, renovation and/ or construction of five HSTTIs (Barisal, Khulna, Mymensingh, Rajshahi and Comilla). Repair, renovation and/or construction at NAEM. Repair, renovation and/ or construction at BMTTI, Gazipur. Establish teaching resource centres at the three new TTCs (Faridpur, Pabna and Sylhet) and three Outreach

Resource Centres (Patuakhali, Rangamati and Thakurgaon). An amount of Tk.4095.48 lakh was allocated for civil works and amount of Tk.4021.13 lakh is spent. Achievement against allocation is 98%. Summary of estimated cost of civil works is at table 2.1 and the detail of cost of civil works is at **Appendix 3.1**.

Table 2.1: Cost of Civil Works

(Lakh Taka)

	Civil Work(s)	Revised Budget	Actual
1	Vertical and/or horizontal extensions repairs and renovations of 11 TTCs	1,413.97	1,413.97
2	Repair, renovation and/or construction at nine SESDCs	485.81	485.81
3	Repair, renovation and/ or construction at five HSTTIIs	209.06	209.06
4	Repair, renovation and/or construction at NAEM	1,337.28	1,337.28
5	Repair, renovation and/ or construction at BMTTI, Gazipur	186.98	186.98
6	Establishing teaching resource center in 3 new TTCs & 3 Outreach Resource Centers	462.38	462.38
	Total	4,095.48	4,095.48

2. Procurement of Goods

39. The Project procured many goods including vehicles and equipments and training materials. The major items included furniture, office equipment, vehicles, computers and peripherals, and learning materials and resources. Procurement of furniture for office of PMU and DSHE; office, hostel, classroom of 14 TTCs; office, hostel, classroom of five HSTTIIs; office, classroom of BMTTI; office, classroom, hostel of NAEM; office and classroom of cluster based resource centers in 3 new TTCs; and office, hostel/dormitory of three out reach resource centers.

40. Office equipment was procured for PMU, DSHE, DEOs, Regional DDs, HSTTIIs, TTCs and BMTTI, ORCs, RCs, NAEM, BOU and Other stakeholders and major items were included photocopier, OHP, multimedia projector, fax machine, scanner, intercom system, air Cooler, TV, video camera, digital camera, pen drive, CD, memory stick, calculator, cupboards (large, metal and lockable), electrical back-up system (IPS), spiral binder, generator, etc.

41. Computer peripherals were procured for MOE, DSHE, PMU, BANBEIS, NTRCA, Regional DDS, HSTTIIs, TTCs and BMTTI, ORCs, RCs, NAEM, BOU and other stakeholders. The major items were desktop computer and accessories, laptop, printer, UPS, LAN and accessories, anti virus, WAN setup between MOE-BANBEIS, and DSHE, website development, scanner, computer software (general and subject based), multimedia projector, hardware (OMR scanner, server, PC etc), internet, software development, licenses, etc.

42. Learning materials of several types were procured by the Project. The items were procured for training institutes, training centers and Bangladesh Open University. The major items were learning materials, BOU training and learning materials and digital learning materials for training institutes. Detailed list of learning materials is at **Appendix 3.2**.

43. There was a provision of procuring 34 vehicles for facilitating project activities. Out of these 17 vehicles were allocated to PMU, NAEM, NTRCA for conducting pre-service training and in-service training and rest 17 vehicles were allocated to Mobile Education Resource Units for mentoring. Summary cost of the items is at table 2.2 and the details are at **Appendix 3.3**.

Table 2.2: Procurement of Furniture, Equipment, Vehicles, and Training Materials

	Items procured	Budget	Actual Expenditure	% Achievement
1	Furniture	400.00	394.98	98.75
2	Equipment	285.00	283.23	99.38
3	Computer and peripherals	470.00	467.43	99.45
4	Learning materials	956.34	926.34	96.86
5	Vehicles	565.37	565.37	100.00
	Total	2676.71	2637.35	98.53

3. Human Resources Development

44. Human resource development component includes professional development of teachers, teacher educators, stakeholder staff (including National University, School of Education of Bangladesh Open University, NAEM, IER, BANBEIS, etc.), educational administrators and community monitors. Both local training and overseas training were under this component. There were seven different types of local training. These were Training of Trainers (TOT), Training of Head Teacher and Teachers acting as Head Teachers (HTT – 21 days in-service training, HTT – 6 days follow up training, and HH – 35 days pre-service training), Continuous Professional Development (CPD) of serving teachers (CPD-1:14 days and 24 days for English, CPD-2: 5 days including English, and CPD-3: one day), Training on Inclusive Education (awareness creation training for SMCs – three days, training for class teachers 4+4 days), Secondary Teaching Certificate (STC)/B.Ed. (three month STC, nine month STC upgrading to B.Ed. and twelve month B.Ed.), Training of Educational Administrators (DEO, ADEOs, USEOs, AUSEOs, UASs, ALs, ROs, etc.), Training of other teacher trainers and tutors (B.Ed. implementation face to face and distance mode). Local training courses were conducted in TTC, HTTIs, NAEM, IER of Dhaka University and district level venues under the guidance and supervision of trained trainers.

45. Quantitative achievement of training is satisfactory. Overall achievement of the training is 98% with 100% in some cases and minimum 86% of the project target (up to March 2012). The Project is continuing training activity and the achievement by June 2012 may be even higher. Achievement of training component by items is at table 2.3.

Table 2.3: Achievement of Local Training by Items (March 2012)

	Local Level Training Course(s)	Target (Persons)	Achievement (Persons)	Achievement (%)
1.	Training of Trainers (TOT)	4,650	4,618	99.31
2.	Training of Head Teacher HTT I	16,050	16,035	99.91
3.	Training of Head Teacher HTT II	12,000	11,041	92.01
4.	Training of Head Teacher pre-service	1,550	1,537	99.16
5.	CPD-1	202,000	202,000	100.00
6.	CPD-2 Follow up	120,000	119,807	99.84
7.	CPD -3 Digital content	1,000	959	95.90
8.	Cluster training	105,000	98,595	93.90
9.	Secondary Teaching Certificate (B.Ed.)	547	547	100.00
10.	Training of Educational Administrators	1,250	1,177	94.16
11.	Training on IE for SMC and HTs	55,000	53,452	97.19
12.	Training on IE for class teachers	2,500	2,142	85.68
13.	Skill Development in English Language	0	85	-
	Total	521,547	511,995	98.17

46. Overseas training comprises study tour and overseas training. Overseas training has four components such as (i) Teacher Educator Training (Customized Training – Distance Learning), (ii) Special Needs Training (Customize Training – Full time study), (iii) Master of Education Degree Program (Full time Study –Distance Learning), and (iv) Study Visits on (a) Registration, Certification and Accreditation of NTRCA, (b) Inclusive Education, and Understanding secondary education system of ASEAN region. Break down of target and achievement of overseas training is at table 2.4 and details of overseas training are at **Appendix 3.4**.

Table 2.4: Summary of Overseas Studies and Training and Study Tours

Course(s)	Country of Training	Number of Participants	Comments
Customized (8 weeks, 6 weeks and 4 weeks)	New Zealand, Australia, Canada, Malaysia, Philippines	442	Completed
Masters/Doctoral Level Studies	Malaysia, Philippines, Australia, New Zealand	44	Completed
Study Tours	England and Canada	17	Completed
	Malaysia/Philippines	15	To be completed
Total		518	

47. Overall financial progress of both the local and overseas training is satisfactory. It achieved 97% of the set target at the end of March 2012. Financial achievement of local training is better (99%) than overseas training (88%). Breakdown of cost of training is presented at table 3.5.

Table 2.5: Breakdown of Cost of Training

(Million Taka)

	Training Category	Budget	Achievement	Achievement (%)
1	Local training	2719.870	2697.032	99.19
2	Overseas training	570.053	502.225	88.10
	Total	3289.923	3199.257	97.24

4. Consulting Services

48. The Project has utilized services of large numbers of national and international consultants. Input of international and national consultants were 350.58 person-months and 582.04 person months respectively. Areas of consultancy services included: (i) improving teaching quality through organizational development and capacity building, (ii) improving teacher training facilities, (iii) strengthening in-service and pre-service teacher training, and (iv) improving and supporting equitable access for the underserved. Summary of inputs of national and international consultants is at table 2.6 and details are at **appendix 3.5**.

Table 2.6: Summary of Inputs of National and International Consultants

Major Areas of consulting Services		Inputs (Person-Months)	
		National	International
1	Improving teaching quality through organizational development and capacity building	244.96	157.03
2	Improving teacher training facilities	30.00	30.00
3	Strengthening In-service and pre-service teacher training	233.58	125.13
4	Improving and Supporting Equitable Access for the Underserved	73.50	47.42
	Total	582.04	359.58

5. Training Grants, Innovation and Development Fund

49. Several individual researchers and organizations undertaken research activities under Innovation and Development Fund (IDF) of the Project. Start of use of Innovation and Development Fund took some time at the initial stage and commenced from June 2009. In total 129 contracts were signed and out of these two contracts were cancelled. Areas of research were transformation of 17 TTC vehicles into mobile ITC units, establishing multimedia classrooms in TTCs and HTTIs, school monitoring, use of internet, localization of digital contents and computer aided learning. Outcome of the research activities is not disseminated properly and benefits of the research outcome are yet to receive. Time of commencement of research activities is at table 2.7 and details of research activities are at **Appendix 3.6**.

Table 2.7: Commencement of Research Studies by Year

	Years of Commencement of the Studies	Number of Studies Completed
1	Up to June 2009	17
2	Up to June 2010	40
3	Up to June 2011	70
	Total	127

50. Government Teacher Training Colleges have undertaken most of the research activities. On an average seven research projects are taken by each TTC while four projects are taken by each HTTI three projects by NAEM, eight projects by BRAC, fifteen projects by Cluster training center, three projects by District level promotion of quality of teaching and learning and one project by Shahjalal Science and Technology University.

51. Financial achievement of the project is satisfactory. Overall financial achievement is about 91% up to March 2012. Uniformity of spending against each item is noticed. Minimum achievement is 75% against staff salary. Summary of estimated cost and expenditure against each item is at table 2.8.

Table 2.8: Overall Financial Achievement

(Lakh Taka)

Major Item(s)		Financial Achievement(s)		
		Revised Budget	Actual Achievement	% Achievement
1	Civil works	4,095.48	4,021.13	98.18
2	Furniture	400.00	394.98	98.75
3	Equipment	285.00	283.23	99.38
4	Computer and peripherals	470.00	467.43	99.45
5	Leaning materials	956.34	926.34	96.86
6	Vehicles	565.37	565.37	100.00
7	Local training	27,198.70	26,970.32	99.16
8	Overseas training	5,700.53	5,022.25	88.10
9	Workshop/Research	440.00	360.92	82.03
10	Training Grant and IDF	2,795.00	2,610.55	93.40
11	International consultants	4,326.40	4,313.24	99.70
12	Local consultants	2,234.54	1,699.79	76.07
13	Staff Salary	419.66	313.29	74.65
14	Operation and maintenance	910.00	700.13	76.94
15	Taxes and Duties	1,000.00	948.42	94.84
16	Repair, preservation and rehabilitation	90.00	67.49	74.99
17	Interest charges during construction	2,428.04	0	0.00
	Total	54,315.06	49,664.88	91.44

Section III Creating Enabling Environment for Improved Teacher Training in Teacher Training Colleges and Higher Secondary Teacher Training Institutes and Secondary Education Development Centers

52. The project provided generous supports to improve the teacher training related physical facilities in 14 public Teacher Training Colleges (TTC) and four Higher Secondary Teacher Training Institutes for creating an enabling environment for improved teacher training for the school teachers. The public teacher training colleges were age old and lack necessary teaching facilities like buildings, classrooms, dormitory, library, office equipment, teaching aids and appliances, training materials, and vehicles for monitoring at school level. The project provided these facilities as discussed in Section II in detailed.

53. The relatively new higher secondary teacher training institutes (HSTTI) also lacked some necessary facilities for improved training of secondary school teachers. The higher secondary teacher training institutes remained under utilized and therefore, the government decided to utilize these institutes for the purpose of training of secondary school teachers under the project. The trainer teachers of both TTC and HSTTI were adequately trained by the Institute of Education Research of the Dhaka University through a planned program of Training of Trainers (TOT). The trainers were drawn from TTC and HSTTI and selected secondary school teachers who first received training of trainers and thereafter provided training of the secondary school teachers.

54. The evaluation team visited all the Government Teacher Training Colleges (TTCs) and Higher Secondary Teacher Training Institutes (HSTTI) of the country. The team also visited National Academy for Educational Management (NAEM), Bangladesh Open University (BOU), Bangladesh Bureau of Educational Information and Statistics and Bangladesh Madrasha Teacher Training Institute (BMTTI) and collected feedback. The physical inputs provided to the teacher training institutes by the Teaching Quality Improvement Project (TQI) in Secondary Education Project are presented in the following paragraphs.

55. Principals or Directors of the training institutes were interviewed and collected the required information. Out of the respondents 72% were male and the rest were female. Ages of all the respondents were between 51 and 59 years. All the respondents except one respondent had experience more than 21 years as teacher while maximum experience as teacher was 35 years. Experience of the respondents is presented at table 3.1.

Table 3.1: Total Teaching Experience of the Principals/Directors as Teacher by Gender

	Experience (years)	Male		Female		Total [n=18]	
		Number	Percent	Number	Percent	Number	Percent
1	Below 10	1	7.7	0	0.0	1	5.9
2	21-25	5	38.5	1	5.9	6	35.3
3	26-30	4	30.8	3	17.6	7	35.3
4	31-35	3	23.1	1	5.9	4	23.5

56. Experience of Principals of Teacher Training Colleges and Directors of Higher Secondary Teacher Training Institutes as head of the institutes were one to four years. Majority of them had experience of one to two years. It is noticed that most of them are working as head of the institute at the present assignment. Experience of principals/directors is presented at table 3.2. Educational qualification of all

the head of the institutions was master degree and some of them had M.Ed. and B.Ed. professional qualification.

Table 3.2: Total Experience as Principal of Present TTC/ Institute

	Experience as head teacher (months)	Male		Female		Total [n=18]	
		Number	Percent	Number	Percent	Number	Percent
1	5 or below	3	23.1	2	40.0	5	27.8
2	6-10	5	38.4	0	0.0	5	27.8
3	11-15	1	7.7	1	20.0	2	11.1
4	16-20	1	7.7	0	0.0	1	5.6
5	21-25	1	7.7	1	20.0	2	11.1
6	25 +	2	15.4	1	20.0	3	16.7
	Total	13	100	5	100	18	100.0

57. Average number of teachers in the surveyed institutions was 24.4 persons while average number of teacher was 27.1 persons during baseline survey time (page 26 of Baseline Report). Number of available teachers per institute is reduced. Among the teachers all of them have master's degree and some of them have other professional education like Ph.D., M.Phil, M.Ed., and B.Ed. Majority of them received training at both home and abroad. Number and educational qualification of trainers of the surveyed institutes is presented at table 3.3.

Table 3.3: Number and Educational Qualification of Trainers of the Surveyed Institutes

	Particulars of teachers of training institutes	Number [n=18]	Average/Institute
1	Total number of teachers	440	24.4
2	Number of teachers having Masters degree	427	23.7
3	Number of teachers having B.Ed.	292	16.2
4	Number of teachers having M.Ed.	147	8.2
5	Number of teachers having Ph.D./M.Phil	27	1.5
6	Number of teachers having training abroad	291	16.2
7	Number of teachers having training in the country	416	23.1

58. It is found that about 27.0% posts were vacant during the survey period but during baseline survey time vacant position was 18.4% (page 26 of Baseline Report). Vacant position of teacher training institutes is increased during the project implementation period. In all the levels right from professor to lecturer positions were vacant. Vacant post of professor was the highest (35%) followed by lecturer (34%). Sanction and vacant position of teacher training institutes is at table 3.4.

Table 3.4: Sanctioned and Vacant Post of Training Staff in TTC/Institute

	Name of the post	Number sanctioned post	Vacant post	
			Number	Percent
1	Professor including Principal	20	7	35.0
2	Associate Professor	31	1	3.2
3	Assistant Professor	174	37	21.3
4	Lecturer	213	72	33.8
5	Other	102	29	28.4
	Total	540	146	27.0

59. The training institutes conducted various types of training courses during last two years and the major courses were B. Ed., B. Ed (Hons), M. Ed. CPD-1, CPD-2 and Cluster. They conducted both the pre-service and in-service training. The training institutes conducted more than ten courses of Teaching Quality Improvement Project. The courses were training of trainers (TOT), training of head teachers (HTT-1), follow up training of head teacher (HTT-2), initial training of head teachers, training of education administrators (DEO, ADEO, USEO, EO), continuous professional development CPD-1 (all subject 14 days and English 24 days), CPD-2 (five days), cluster Training CPD-3 (one day), STC (three months), STC (nine months) and B.Ed (one year). Courses of TQI conducted from 2005-2012 are at table 3.5.

Table 3.5: Courses of TQI Conducted from 2005-2012

Type of Courses		Course			Participants		
		Total	Average/ Institute	Average/ Institute/ Year	Total	Average/ Institute	Average/ Course
1	Training of Trainers (TOT)	19	1.12	0.07	292	17.18	1.01
2	Training of head teachers (HTT-1)	161	9.47	0.56	6597	388.06	22.83
3	Follow up training of head teacher (HTT-2)	102	6.00	0.35	4330	254.71	14.98
4	Initial training of head teachers	29	1.71	0.10	754	44.35	2.61
5	Training of education administrators (DEO, ADEO, USEO, EO)	6	0.35	0.02	284	16.71	0.98
6	Continuous Professional Development (CPD-1) (All subject 14 days and English 24 days)	995	58.53	3.44	70867	4168.65	245.21
7	CPD-2 (five days)	624	36.71	2.16	41454	2438.47	143.44
8	Cluster training (CPD-3) (one day)	17	1.00	0.06	497	29.24	1.72
9	STC (three months)	114	6.71	0.39	9364	550.82	32.40
10	STC (nine months)	26	1.53	0.09	733	43.12	2.54
11	B. Ed (one year)	59	3.47	0.20	6195	364.41	21.44

60. Out of the surveyed training institutes six training institutes have facilities of providing training of teachers of schools teaching students of tribal/deprived groups but only three institutes have teachers for providing such training while during baseline survey there was no training institute having such facilities. It was informed that they have provided training to 485 teachers for teaching of tribal/disadvantaged children. Teachers having respective skills may be posted to the training institutes having such facilities. Details are at table 3.6.

Table 3.6: Training Institutes having Training Facilities for School Teachers from Tribal/Deprived Area

	Particulars of training of teachers of school having students of tribal/deprived groups	Number [n = 18]	Percent
1	Training institutes having facilities of providing training of teachers of schools teaching students of tribal/deprived groups	6	33.3
2	Number of teachers completed such training	485	-
3	Training institutes having teachers for providing such training	3	16.7

61. The project has provided assistance to the teacher training colleges for development of physical facilities to equip the institutes properly for providing training to teachers of the secondary schools. The major assistances were infrastructure, furniture, equipment, office equipment, computer and accessories, vehicles, training equipment, manpower, local training, overseas training and research activities. Details of the physical facilities are at table 3.7.

Table 3.7: Infrastructure, Furniture, Equipment, Manpower & Research Supports from TQI Project

	Areas of Development	Number	Average/Institute
1	Infrastructure	224	17.2
2	Furniture	3020	232.3
3	Office equipment	118	9.1
4	Computer and accessories	574	44.2
5	Vehicles	17	1.3
6	Training equipment	111	8.5
7	Manpower	340	26.2
8	Local training	178	13.7
9	Overseas training	145	11.2
10	Research	19	1.5

62. Practice teaching conducted in about 28 schools by each training institute at the time of impact evaluation survey while this figure was 4 to 12 during baseline survey time. Teaching cycle days is reduced from 45 (baseline) to 27 days during study time. Almost all the trainers arranged subject-wise demonstration classes for the participants and also arranged micro-teaching/ simulation class for the participants for their skill development.

Section IV Performance of Teacher Training Colleges and Higher Secondary Teacher Training Institutes in Training of Secondary School Teachers

63. The consultants conducted interview of the teachers of the Government Teacher Training Colleges (TTC), Higher Secondary Teacher Training Institutes (HSTTI) and Bangladesh Madrasa Teacher Training Institute (BMTTI) in addition to the Principal of the TTCs and Directors of the HSTTIs and BMTTI. In total 143 teachers of these institutes were interviewed. The respondents were both male and female. Male respondents were 105 and female respondents were 38.

64. The respondents were within the age range of 27 to 58 years. Ages of majority of the respondents were between 41 and 50 years. All the respondents are of potential age group and it appears that the TTCs and TTIs are properly staffed. Age distribution of respondents by gender is at table 4.1.

Table 4.1: Age of the Teachers of Teacher's Training Institutes by Gender

	Age (Years)	Male		Female		Total	
		Number	Percent	Number	Percent	Number	Percent
1	Below 35	10	7.0	3	2.1	13	9.1
2	36-40	23	16.1	3	2.1	26	18.2
3	41-45	28	19.6	16	11.2	44	30.8
4	46-50	27	18.9	5	3.5	32	22.4
5	51-55	13	9.1	4	2.8	17	11.9
6	56-58	4	2.8	7	4.9	11	7.7
	Total	105	73.4	38	26.6	143	100.0

65. Educational qualifications of more than 90% respondents were master degree and most of them have professional degree in education. About 5% respondents have Ph.D. degree and rest of them have M.Phil and Bachelor with professional degree in education. Status of educational qualification of respondents is at table 4.2.

Table 4.2: Educational Qualification of Respondents Teachers of Teacher's Training Institute

	Level of education	Male		Female		Total	
		Number	Percent	Number	Percent	Number	Percent
1	Ph. D	3	2.1	4	2.8	7	4.9
2	M. Phi	1	0.7	2	1.4	3	2.1
3	Master	19	13.3	6	4.2	25	17.5
4	Bachelor	2	1.4	0	0.0	2	1.4
5	Bachelor with B. Ed	1	0.7	0	0.0	1	0.7
6	Master with B. Ed	39	27.3	15	10.5	54	37.8
7	Master with M. Ed	40	28.0	11	7.7	51	35.7
	Total	105	73.4	38	26.6	143	100.0

66. Positions of respondents were Principal, Vice Principal, Professor, Associate Professor, Assistant Professor, Lecturer and Subject Specialist. Majority of the respondents were Associate Professor, Assistant Professor and Lecturer. Subject taught by the respondents were Bangla, Mathematics, English, Agriculture, Home Economics, Religion, Social Science, Geography, Economics, Business Education, Computer, Accounting, Physics, Chemistry, Biology, Higher Mathematics. Education Science (Pedagogy), Special Education and Library Science. More respondents were of Bangla, Mathematics, English, Religion, Social Science, Geography, Computer, Physics, Biology and Education Science (Pedagogy). Distribution respondents by subject taught is at table 4.3.

Table 4.3: Teaching Subjects of the Teachers of Teacher's Training Institute

	Subject	Number	Percent
1	Bengali	21	14.7
2	Mathematics	9	6.3
3	English	7	4.9
4	Agriculture	6	4.2
5	Home Economics	3	2.1
6	Religion	8	5.6
7	Social Science	22	15.4
8	Geography	9	6.3
9	Economics	4	2.8
10	Business Education	3	2.1
11	Computer	11	7.7
12	Accounting	4	2.8
13	Physics	11	7.7
14	Chemistry	3	2.1
15	Biology	16	11.2
16	Higher Mathematics	2	1.4
17	Education Science (Pedagogy)	21	14.7
18	Special Education	2	1.4
19	Library Science	1	0.7

67. Most of the teachers taught subjects in which they have specialization. In addition to their specialization some of them taught other related subjects. Subjects of specializations were Bangla, Mathematics, English, Agriculture, Geography, Chemistry, Physics, Biology, Economics, Social Science, Home Economics, Religious studies, Accounting, Computer, Business Education, History, Philosophy, Education, General Science, Political Science, LSBE, Thesis, Psychology, Unified Education, Population Education, Pedagogy, Cultural Function Operation, Islamic Ideology, Botany, Library Science and Guidance and Counseling.

68. Experience of respondents as trainer were collected and range of their experiences were from 1 to 28 years and about 48% having experience less than 10 years and the rest of them have experience of ten and more years. Experience of the Teachers of Teacher's Training Institute is at table 4.4.

Table 4.4: Experience of the Teachers of Teacher's Training Institute as Trainer

	Years of experience	Male		Female		Total	
		Number	Percent	Number	Percent	Number	Percent
1	Below 10	53	50.5	15	39.5	68	47.5
2	11-15	23	21.9	9	23.7	32	22.4
3	16-20	18	17.1	11	28.9	29	20.3
4	21-25	9	8.6	2	5.3	11	7.7
5	26-28	2	1.9	1	1.6	3	2.1

69. Number of sessions conducted by teacher of teacher training institutes per week varied significantly from 2 to 28. About two-third teachers conducted 6 to 20 sessions. Majority of teachers conducted 6 to 10 sessions per week. At the time of Baseline Survey it was found that majority teachers conducted 11 to 15 sessions (page 29 of Baseline Report). Work load during the evaluation survey is reduced. Session conducted per week by the teachers is at table 4.5.

Table 4.5: Number of Sessions Conducted per Week by the TTC and HSTTI

Number of sessions		Teacher Training Colleges/HSTTI/BMTTI	
		Number	Percent
1	5 or below	43	30
2	6-10	59	41
3	11-15	29	20
4	16-20	7	4.9
5	21-25	3	2.1
6	26-30	2	1.4
7	31-35	0	0.00
8	36-40	0	0.0
9	41-45	0	0.0
Total		143	100

70. The respondents have opined about division of session time according to teaching methods and techniques with manageable size of class and required materials. They have divided session time into several slots and these were lecture, question-answer, demonstration, project/practical work, self practice, group discussion, evaluation and feedback. A heterogeneous picture of wide variation is noticed. Training about division of session time is needed so that a uniform system of division of session time can be followed. Pattern of division session time by the respondents is at table 4.6.

Table 4.6: Opinion of the Teachers about Time Allocations for different Teaching Activities

	Methods/ Techniques	10% or less		11-20%		21-30%		31-40%		41-50%		50-60%		61% +	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1	Lecture	90	62.9	42	29.4	5	3.5	1	0.7	2	1.4	0	0.0	3	2.1
2	Question-Answer	63	44.1	70	49.0	6	4.2	2	1.4	0	0.0	2	1.4	0	0.0
3	Demonstration	63	44.1	59	41.3	9	6.3	10	7.0	1	0.7	0	0.0	1	0.7
4	Project/ Practical work	73	51.0	59	41.3	11	7.7	0	0.0	0	0.0	0	0.0	0	0.0
5	Self practice	106	74.1	27	18.9	8	5.6	2	1.4	0	0.0	0	0.0	0	0.0
6	Group discussion	44	30.8	56	39.2	28	19.6	9	6.3	3	2.1	1	0.7	2	1.4
7	Evaluation and feed back	106	74.1	34	23.8	0	0.0	0	0.0	0	0.0	0	0.0	3	2.1

71. The respondents assessed themselves in the light of new B.Ed. Curriculum and opined on access to new curriculum, perception about new curriculum, use of teaching methodology and use of assessment methodology. They have rated these points of assessment as excellent, very good, good and acceptable level. Similar scale of assent was used during baseline survey (page 31 of Baseline Report). Excellent rating is increased during the evaluation survey. Status of their evaluation during baseline and evaluation is at table 4.7.

Table 4.7: Opinion of the Teachers of TTC and HSTTI on new B.Ed Curriculum

	Indicators/Area of Assessment	Excellent %		very good %		Good %		Acceptable level %	
		Baseline	Evaluation	Baseline	Evaluation	Baseline	Evaluation	Baseline	Evaluation
1	Access to the new curriculum	25.0	39.2	50.0	37.1	25.0	5.6	0	0.7
2	Perception about new curriculum	8.3	25.9	58.3	42.7	33.3	13.3	0	0.7
3	Use of teaching methodology	16.7	29.4	66.7	37.8	16.7	12.6		2.1
4	Use of assessment methodology	83.3	26.6	16.7	37.1	0	16.1	0	1.4

72. Most of the teachers (88%) of the training institutes received training on computers. Areas of receiving training on computer were in MS Word (92%), MS Excel (70%), MS Power Point (91%), and Internet (94%). Use of computer in the classroom of teacher training institutions is increased during the project implementation period. About 83% respondents opined for use of computer in the classroom. Their scale of using computer is at table 4.8.

Table 4.8: Use of Computer at the Classroom by the Teacher of TTC/HSTTI

	Status of use of computer	Number	Percent
1	Use computer	118	82.5
2	Use a little	4	2.8
3	Occasionally	60	42
4	Frequently	54	37.8

73. Almost all the trainers (95%) of the teacher training institutions examined the lesson plans in last one year. Average number of lesson plan examined was 385 while during baseline it was 83.5% and 476 respectively. The teachers supervised the practical teaching of per week during 2011-12 and average number of classes supervised was 30 per week while these figures were 25 classes during baseline survey (page 32 of Baseline Report).

74. The respondents opined for facilities of training room in terms of room size, ventilation of the room, sitting arrangement, blackboard/whiteboard, facilities of group work and OHP/multimedia projector as very good, good, partially good and not good. Improvement is needed in future for conducting training. Status of training room is at table 4.9.

Table 4.9: Facilities of the Training Room of Teacher Training Institute

	Facilities in Training Rooms	Very good		Good		Partially good		Not good	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
1	Room size	70	49	64	44.8	1	0.7	8	5.6
2	Ventilation of the room	57	39.9	76	53.1	2	1.4	8	5.6
3	Sitting Arrangement	60	42	72	50.3	3	2.1	8	5.6
4	Board/White board	68	47.6	63	44.1	3	2.1	8	5.6
5	Facilities of group work	65	45.5	60	42	8	5.6	10	7.0
6	OHP/ multimedia projector	58	40.6	61	42.7	12	8.4	12	8.4

75. According to the opinion of respondents number of participants in each varied from 25 to 90. About 55% respondents opined that number participants were within the range of 25 to 40. The other respondents opined for larger size of the participants. About 66% respondents opined the size of the training batch was appropriate while the other said inappropriate. The suggested for an appropriate batch size from 25 to 40. Their suggested batch size is at table 4.10.

Table 4.10: Suggested Size of Participant per Batch by the Teacher of Teacher's Training Institute

	Suggested No. of Participants per Batch	Number	Percent
1	Below 25	26	18.2
2	26-30	58	40.6
3	31-35	6	4.2
4	36-40	45	31.5
5	41-45	2	1.4
6	46-50	6	4.2

76. The respondents informed they received in-service training other than TQI Project. Areas of training were TOT, LSBE, Wash Program, Gender Promote, Digital Control, Science, Computer Application, SESIP, English Language, Management, Education and Method, ACEM, Orientation, Foundation, CLT, Material Development, Skill based life education, Educational planning and development, HIV/Aides, Higher Training, Legal Aid, 6th ERM, Microsoft (BD), Unified Education, Plaster Training, School Monitoring, Classroom based education, Research Methodology, Gender, Mathematics and CCAD. Duration of training varied from 1-30 days. Places of training were TTCs, NAEM, BIAM, PROMOTE, RPATC, New Zealand and India.

77. The respondents of teacher training institutes informed that they provided training to the teachers on TOT, CPD-1, CPD-2, Cluster and others. Duration of training were 3-35 days on TOT, 1-14 days on CPD-1, 1-7 days on CPD-2, 1-7 days on cluster training and 1-35 days on other training.

78. The respondents opined on the relevancy of contents with duration of training both during receiving and providing training. Most of them opined relevant and partially relevant while about one-tenth of the respondent said irrelevant. Almost similar picture is seen for receiving and providing time. Summary of opinion of respondents is at table 4.11.

Table 4.11: Relevancy of the Contents with Duration at the Time of Receiving and Providing Training

	Relevancy	At the time of received		At the time of given	
		Number	Percent	Number	Percent
1	Relevant	100	69.9	103	72
2	Partially relevant	31	21.7	25	17.5
3	Not relevant	12	8.4	15	10.5

79. The respondents received TOT on different subjects and the major subjects were Head Master Training, CPD-1, CPD-2, Social Science, Computer, Inclusive Education, English, Biology, Home Economics, Unified education, Agriculture, Religious Studies, Physics, Bangla, LSBE, Sociology, Chemistry, General mathematics, Higher Mathematics, Basic Computer, Accountancy, Business Studies, Wash in school, Follow up, Professional Efficiency and Development, Pre-service, Adult, Geography, Digital Content Development, ICT Development, Administration and Management and Refreshers Course.

80. Major areas of providing training by respondents were Bangla, Mathematics, English, Agriculture, Home Economics, Religious Studies, Social Science, Geography, Economics, Business Education, Computer, Accounting, Physics, Chemistry, Biology, Higher Mathematics, Education Science and Special Education. Distribution of training provided by the respondents is at table 4.12.

Table 4.12: Training Given on the Subjects by the Teachers of Training Institute

	Subject	TTC		HSTTI		NAEM	
		Number	Percent	Number	Percent	Number	Percent
1	Bengali	22	15.4	0	0.0	0	0.0
2	Mathematics	18	12.6	1	0.7	0	0.0
3	English	12	8.4	0	0.0	0	0.0
4	Agriculture	13	9.1	0	0.0	0	0.0
5	Home Economics	4	2.8	0	0.0	0	0.0
6	Religion	21	14.7	0	0.0	0	0.0
7	Social Science	29	20.3	0	0.0	0	0.0
8	Geography	7	4.9	0	0.0	0	0.0
9	Economics	3	2.1	0	0.0	1	0.7
10	Buss. Education	4	2.8	0	0.0	0	0.0
11	Computer	28	19.6	5	3.5	0	0.0
12	Accounting	3	2.1	1	0.7	0	0.0
13	Physics	10	7.0	1	0.7	0	0.0
14	Chemistry	6	4.2	3	2.1	0	0.0
15	Biology	11	7.7	1	0.7	1	0.7
16	H. Mathematics	7	4.9	0	0.0	1	0.7
17	Education Science	27	18.9	7	4.9	2	1.4
18	Special Education	10	7.0	3	2.1	2	1.4

81. The respondents opined that they gave importance on some issues during providing training. These issues were class management (77%), timely start and finish the session (83%), participation of the learners in lesson (80%), proper evaluation (52%), and use of question-answer method (21%) and use modern methods (43%). They took some measure for conducting training session efficiently. Some of the measures were right planning, proper use of the manpower, complete the program properly, proper evaluation and use of technologies.

82. The respondents used modern methods at the time of Receiving and providing training. The modern methods included participation, pair group work, group work, question- answer, lecture and discussion, demonstration method, research method and assignment presentation. The import and new methods used more during providing training, this one of the positive sides of use of training skills in application. Use of modern methods at the time of receiving and providing training is at table 4.13.

Table 4.13: Use of Modern Methods at the time of Receiving and Providing Training

	Use of modern methods	At the time training received		At the time training given	
		Number	Percent	Number	Percent
1	Participatory	126	88.1	133	93.0
2	Pair group work	97	67.8	102	71.3
3	Group work	29	20.3	122	85.3
4	Question- answer	71	49.7	96	67.1
5	Lecture and discussion	27	18.9	28	19.6
6	Demonstration method	25	17.5	22	15.4
7	Research method	2	1.4	3	2.1
8	Assignment presentation	3	2.1	3	2.1



83. The respondents undertook some practical work at the time of receiving training. These works were completing the given assignment (81%), preparing the teaching materials (86%), preparing report (76%) and presentation of report (70%). The trainers motivated the trainees during providing for undertaking practical work. Major practical work were participation in discussion, preparing report by pair groups, preparing innovative teaching materials, presentation of question by individual and groups. Use of teaching materials was more in most of the sessions during receiving training than providing training. Using pattern of teaching materials at the time of receiving and providing training is at table 4.14.

Table 4.14: Use of Teaching Materials at the time of Receiving and Providing Training

	Use of modern methods	At the time training received		At the time training given	
		Number	Percent	Number	Percent
1	Manual	120	83.9	121	84.6
2	Handout	107	74.8	99	69.2
3	OHP	110	76.9	105	73.4
4	Chart and model	82	57.3	99	69.2
5	Projector	65	45.5	61	42.7
6	Other	9	6.3	12	8.4

84. The respondents assessed the relevancy of handouts used during receiving training as relevant (62%) and more or less relevant (38%) and quality of the training materials as very good (24%), good (64%) and partially good (12%). Quality of training material used at the time of providing training as very good, good, partially good and not good for manual, handout and chart and model. Scale of their assessment is at table 4.15.

Table 4.15: Quality of the Materials Given at the Time of Providing Training

	Quality of Materials	Manual		Handout		Chart and model	
		Number	Percent	Number	Percent	Number	Percent
1	Very good	59	41.3	35	24.5	31	21.7
2	Good	67	46.9	75	52.4	75	52.4
3	Partially good	17	11.8	7	4.9	10	7.0
4	Not good	0	0	26	18.2	27	18.9
	Total	143	100	143	100	143	100

85. The respondents opined that the TQI project undertook several steps for improvement of overall efficiency and skills of the teacher training institutes and these steps were infrastructure development of the institutes (67%), skill development of the manpower (70%), preparation and development of teaching materials (83%), improvement of management (68%) and improvement of environment 29%). They undertook a number of responsibilities for monitoring of TQI activities. The major responsibilities undertaken were developing the program (31%), collecting data (14%), preparing the report (5%), preparing the monitoring guideline (21%) and taking the decisions (9%).

86. The respondents opined that the training program would be more effective if providing necessary supervision (84%), supplying of the materials timely (66%), strengthening coordination between management and administration (76%), evaluating the participants properly (59%) and making residential system mandatory (15%).

87. The respondents opined that the TQI Project provided importance on a number of areas for providing local training. Major areas of importance were skill manpower (81%), role of authority (71%), decision making (66%) and implementation of the decisions (64%). They also mentioned some barriers for monitoring of the activities properly and these were scarcity of skill manpower, non-cooperation of authority, not implementing the taken decisions, electricity failure, lack of sincerity of teacher, scarcity of material and scarcity of time.

88. The respondents assessed the contribution of this training to improve quality of education. They assessed as very good (50%), good (42%), not good (7%) and not good (1%). They recommended some points for improvement of quality of training. Their recommendations were proper management, cooperation of all concerned persons/organization, skill trainer, good quality manual, proper teaching materials, proper use of the teaching materials, improvement of quality of TOT and monitoring of teachers. Distribution of their recommendations is at table 4.16.

Table 4.16: Suggestions of the Teachers of TTC for Improvement of Quality of Training

	Recommendations	Number	Percent
1	Proper management	114	79.7
2	Cooperation of all concerned persons/organization	100	69.9
3	Skilled trainer	107	74.8
4	Good quality manual	69	48.3
5	Proper teaching materials	64	44.8
6	Proper use of the teaching materials	46	32.2
7	Improvement of quality of TOT, monitoring of teachers	2	1.4

89. They provided outlines for making arrangement for intensive monitoring of TQI training activities. Their suggested outlines were proper management, cooperation of relevant persons/organization, skill trainer, good quality manual, proper teaching materials, proper use of the teaching materials, arrangement for monitoring and accountability and refresher training. However monitoring of training in the secondary schools in found highly valuable for ensuring proper practice training of the classroom teachers and also the trainers as useful feedback and improvements of their skills. Nevertheless, the useful monitoring of training has not sustainable even at the time of evaluation study when the project in yet to close. The monitoring program could not continue due to lack money needed for cost of fuel of the vehicle and per diem of the trainers, and adjustment of time between training classes in TTC/HSTTI and monitoring in the schools. Details at table 4.17.

Table 4.17: Opinion of the Teachers of TTC for Intensive Monitoring of Training

	Opinion to make intensive monitoring	Number	Percent
1	Proper management	115	80.4
2	Cooperation of relevant persons/organization	110	76.9
3	Skilled trainer	107	74.8
4	Good quality manual	69	48.3
5	Proper teaching materials	45	31.5
6	Proper use of the teaching materials	43	30.1
7	Arrangement for monitoring and accountability, refresher training	4	2.8

Section V Improvement of Teaching Learning Environment in Secondary Schools and School Performance

90. All the school level information collected from school record and interviewing head teachers (164) and assistant head teachers (22). The consultant team collected information from 186 secondary schools including all the 149 schools covered during baseline survey. Categories of schools surveyed were Government Boys High School, Government Girls High School, Government Coeducation High School, Private Boys High School, Private Girls High School and Private Coeducation High School. Sampled schools by category are at table 5.1.

Table 5.1: Distribution of Surveyed School by Category

	Category of Schools	Number (N=186)	Percent
1	Government Boys High School	16	8.6
2	Government Girls High School	16	8.6
3	Government Coeducation High School	2	1.1
4	Private Boys High School	6	3.2
5	Private Girls High School	29	15.6
6	Private Coeducation High School	117	62.9
	Total	186	100

91. Time of establishment of the sample schools was between 1828 and 1998. Ages of the Government schools are more than the private schools. Year of establishment of Government schools was from 1828 to 1997 while year of establishment of private schools was 1891 to 1998. Rate of establishment of private sampled high schools was highest (19.9%) during 1961-1970 followed by 19.4% during 1981-1990. Years of establishment of schools are at table 5.2.

Table 5.2: Year of Establishment of the Sample Schools

Year of establishment of sample schools	Government		Private	
	Number	Percent	Number	Percent
1991-1998	1	0.5	21	11.3
1981-1990	0	0.0	36	19.4
1971-1980	0	0.0	23	12.4
1961-1970	4	2.2	37	19.9
1951-1960	2	1.1	6	3.2
1941-1950	3	1.6	7	3.8
1931-1940	3	1.6	6	3.2
1828-1931	21	11.3	16	8.6

92. Personal information of head teachers was collected and analyzed. Among the head teacher 162 were male and 24 were female. Minimum age of head teachers was 33 years and maximum age was 65 years. Ages of about 69% head teachers were between 41 and 55 years. Most of the head teachers having ages more than 59 years were deputed on contract basis. Age distribution of head teachers is at table 5.3.

Table 5.3: Age of the Head Teachers on 1 January 2012 by Gender

	Age (years)	Male		Female		Total	
		Number	Percent	Number	Percent	Number	Percent
1	31-35	4	2.2	0	0.0	4	2.2
2	36-40	14	7.5	1	0.5	15	8.1
3	41-45	53	28.5	4	2.2	57	30.6
4	46-50	29	15.6	12	6.5	41	22.0
5	51-55	27	14.5	3	1.6	30	16.1
6	56-60	31	16.7	4	2.2	35	18.8
7	60+	4	2.2	0	0.0	4	2.2
	Total	162	87.1	24	12.9	186	100.0
		Min=33 Max=65 Average 48.34		Min=37 Max=59 Average 48.42			

93. The evaluation survey collected information on teaching experience of head teachers of the sampled schools. Minimum teaching experience of them was eight years while maximum was 42 years while in the baseline survey minimum teaching experience of head teachers was six years (table 7 baseline survey reports). Experience of about 71% head teachers was between 16 and 30 years. Pattern of experience of both the male and female teachers was similar. Minimum experience as head of the institute of male head teachers was one year and maximum 28 years while minimum experience as head of the institute of female head teachers was one year and maximum 30 years. Experience of head teachers as head teacher was similar to evaluation survey (table 7 baseline survey reports). Distribution of length of experience as head of the institution is at table 5.4.

Table 5.4: Experience of the Head Teachers as Head of the Institute by Gender [n=186]

	Experience as head teacher (years)	Male		Female		Total	
		Number	Percent	Number	Percent	Number	Percent
1	5 or below	74	39.8	9	4.8	83	44.6
2	6-10	27	14.5	2	1.1	29	15.6
3	11-15	13	7.0	9	4.8	22	11.8
4	16-20	25	13.4	3	1.6	28	15.1
5	21-25	15	8.1	0	0.0	15	8.1
6	25 +	8	4.3	1	0.5	9	4.8
	Total	162	87.1	24	12.9	186	100.0

94. Educational qualification of head teachers was collected and analyzed. Educational qualification of about 5% of head teachers was Ph.D. followed by master degree (38%) and bachelor degree (57%) while 17% head teachers have M.Ed., 79% have B.Ed. professional qualification and M.Ed. Number of female head teachers having Ph.D. is higher than male head teachers having Ph.D. while the picture is reverse in case of master and bachelor degrees. Educational and professional qualification of head teachers is at table 5.5.

Table 5.5: Educational and Professional Qualification of Head Teachers by Gender

Level of education		Male		Female		Total [n-186]	
		Number	Percent	Number	Percent	Number	Percent
	General						
1	Ph. D	4	2.2	5	2.7	9	4.8
2	Masters	59	31.7	11	5.9	70	37.6
3	Bachelors	99	53.2	8	4.3	107	57.5
	Professional						
1	M. Ed	27	14.5	4	2.2	31	16.7
2	B. Ed	126	67.7	20	10.8	146	78.5
3	BPed.	8	4.3	0	0.0	8	4.3

95. It is appeared from the surveyed information that about 6% head teachers received TOT from the TQI Project. In addition to TOT 60% received CPD-1 and 32% received CPD-2 training and 44% received training on TQI-SEP, Cluster, Administrative Training, Life skills, SBI, TQI follow up, School Leadership, PBM/SBA, Certificate Course, Management and Administration, Training management and development, Questionnaire for innovative ideas. Pre-Science, ISB, SFSDP, Module 1,2 mathematics, Wash, LTP and Inclusive education. Places of receiving training were TTCs, NAEM, BIAM, HSTTIs, and Schools in district level and Abroad. The sampled head masters received training between 2005 and 2011. Duration of TOT courses varied from 5 to 21 days while duration of CPD-1 course was varied from 21 to 28 days, duration of CPD-2 course was five days, and duration of other training varied from 1 to 35 days.

96. The head teachers opined about effectiveness of in-service training on leadership and personal management as excellent (43%), very good (42%) and good (15%), problem solving and decision making as excellent (26%), very good (56%) and good (17%) and acceptable (1%), communication skills as excellent (20%), very good (52%) and good (24%) and acceptable (4%) and planning and management as excellent (28%), very good (46%) and good (22%), acceptable (3%) and bad (1%). Self assessment of effectiveness of the in-service skill development training is at table 5.6.

Table 5.6: Effectiveness of Training in Skill Development of the Head Teacher

	Areas of Skill Development	Level of achievement									
		Excellent		Very Good		Good		Acceptable		Bad	
		No.	%	No.	%	No.	%	No.	%	No.	%
1	Leadership and personal management (n = 166)	71	42.8	69	41.6	26	15.6	0	0	0	0
2	Problem solving and decision making (n =167)	44	26.3	93	55.7	28	16.8	2	1.2	0	0
3	Communication skill (n=166)	33	19.8	87	52.4	40	24.1	6	3.6	0	0
4	Planning and time management (n = 166)	47	28.3	77	46.4	37	22.3	4	2.4	1	0.6

97. The head teachers opined that teaching materials of the schools is improved during the period of implementation of TQI. Areas of improvement were: improvement of book (95%), blackboard (92%), computer (73%), chart/model (84%), laboratory equipment (63%) and multimedia (28%). They also opined about adequacy of the teaching materials and rated adequacy of book (57%), blackboard (67%),

computer (35%), chart/model (45%), laboratory equipment (30%) and multimedia (11%). A gap of adequacy of teaching materials is seen from the opinion of head teachers.

98. Number of teachers listed in monthly payment order (MPO) varied from 4 to 62 in 2004 with an average of 12.3. Average number of teachers listed in MPO was same in 2011 according to the evaluation survey (2012). Average number of non-MPO teachers is increased from 1.3 to 2.1 from 2004 to 2011. Status of teaching staff is at table 5.7.

Table 5.7: Number of Monthly Payment Order (MPO) and Non-MPO Teachers since 2004

	Status of MPO	2004		2007		2009		2011	
		Number [n-186]	Average	Number [n-186]	Average	Number [n-186]	Average	Number [n-186]	Average
1	MPO teachers	2287	12.3	2292	12.3	2216	11.9	2281	12.3
2	Non-MPO teachers	241	1.3	314	1.7	346	1.9	388	2.1

99. Educational qualification of teacher of sampled schools varied from Ph.D to SSC. Male and female ratio of teaching staff was 71% and 29% in 2004, 70% and 30% in 2007, 68% and 32% in 2009 and 69% and 31% in 2011. National objective is to achieve male-female teacher ratio 70:30. Ratio of female teachers having bachelor and above educational qualification is higher than the total teaching staff strengths. Male and female teacher's ratio in Government high schools were 63% and 37% in 2004, 63% and 37% in 2007, same in 2009 and 2011. Ratio of female teachers in Government high schools is a little higher. In the baseline survey ratio of male and female teachers in Government school was 57:43 while in private schools ratio was 71:29 (page 2 of baseline survey report). Among the teaching staff 67% of male teachers had M.Ed. or B.Ed. professional degree in 2004 while for female teachers it was 71%. Number of teacher having professional degree was increased as 70% and 73% male and female in 2007, 71% and 77% male and female in 2009 and 70% and 74% male and female in 2011. Distribution of teacher by educational qualification and gender is at table 5.8. Overall attendances of teachers secondary school is improved from 2005 to 2011 from 93% to 95%.

Table 5.8: Number of Assistant Teachers by Education Qualification and Gender

Qualification	2004		2007		2009		2011	
	M	F	M	F	M	F	M	F
1. Masters and B.ED/M.E d	585	346	557	373	607	407	728	463
2. Masters	233	102	236	101	229	92	325	177
3. Bachelor and B.ED/M. Ed/BPD	989	321	1033	352	966	362	980	396
4. Bachelor	209	103	157	97	142	77	127	65
5. Fazil/Kamel/Pundit	170	21	154	24	156	22	174	22
6. SSC/Alim and Agriculture Diploma	39	22	43	17	36	15	41	22
7. HSC/Alim and PTI/TND	32	11	26	11	27	10	23	10
8. HSC/Alim	73	11	68	12	63	12	58	12
9. SSC and PTI	4	1	5	1	4	1	3	1
10. TOT Received (TQI)	6	3	18	6	47	13	41	19
11. CPD Received (TQI)	60	46	185	101	386	170	479	219
Total	2400	987	2482	1095	2663	1181	2979	1406

Note: M= Male F=Female

100. Manpower strength other than teaching staff of the schools is decreased from 5 to 4 during 2004 and 2011. Position cleaner/gardener is decreased. Strengths of staff other than teacher are at 5.9.

Table 5.9: Strength of Staff other than Teaching of the Schools

Category of staff		2004		2007		2009		2011	
		No.	Average	No.	Average	No.	Average	No.	Average
1	Clerk	212	1.1	219	1.2	208	1.1	207	1.1
2	Peon/Maid	418	2.2	403	2.2	386	2.1	381	2.0
3	Cleaner/ Gardener	143	0.8	150	0.8	148	0.8	5	0.0
4	Night guard	151	0.8	149	0.8	147	0.8	148	0.8
	Total	924	5.0	921	5.0	889	4.8	741	4.0

101. None of the teacher got benefit after receiving training from TQI. On an average 4.8 teachers joined after commencement of TQI. Male female ratio of new teachers was 65% and 35%. A little increasing trend of female teachers is observed. About 55% of the new teachers had pre-service training and 42% teachers received in-service training. Position of pre-service and in-service training is at table 5.10.

Table 5.10: Status of Training of Teachers Joining after Launching of the TQI Project

	Joined and receiving training	Male		Female	
		Number	Average	Number	Average
1	Total teachers Join	571	3.1	308	1.7
2	Having pre-service training	345	1.9	138	0.7
3	Received in-service training	166	0.9	205	1.1

102. On an average two teachers left the schools after receiving training from TQI project. More male teachers (1.5) left the schools than female teachers. They mentioned the reasons of leaving the schools as low salary (6%), got good job elsewhere (32%), transportation problem (7%) and decision of family (9%). Reasons of leaving school are at table 5.11.

Table 5.11: Reasons for Leaving the School by the Teachers

	Reasons for leaving school [n-186]	Number	Percent
1	Low pay	11	5.9
2	Got good job elsewhere	60	32.3
3	Transportation problem	12	6.5
4	Decision of family	17	9.1

103. The head teachers involve in administrative and supervisory activities. A picture of administrative and supervisory activities performed by the head teachers were conducting of staff meeting, evaluation of teachers and supervision of class. The administrative and supervisory activities performed in the recent past are at table 5.12.

Table 5.12: Administrative and Supervisory Activities of the Head Teacher

	Administrative and supervising activities	Number [n-186]	Average
1	Average number of staff meeting last year	2187	11.8
2	Average number of teacher evaluation last year	2599	14.0
3	Average number of class supervised last month	2931	15.8

104. They provided feedback of their supervision at various time. Some of them provide feedback instantly at the class (5%), just after the class finish (22%), advised to meet later (44%) and later at the time of staff meeting (26%). The head teachers informed there is no such provision of staff development at school level.

105. The head teacher informed about internal efficiency of the schools. Almost all the teachers prepared lesson plan and skilled in class management. They send progress report (94%) to the guardians while send progress report monthly (6%), quarterly (69%), half yearly (12%) and yearly (7%). About 96% schools have development plan and the school development plan was relevant to strategic plan of the community (89%).

106. They informed that they ensure participation of community in school activities. They ensure participation through conducting meeting, seminar and workshop with community, send progress report of the students to the guardians, formation of PTA to make close communication between teachers and guardians, through social, cultural and religious events.

107. The head teachers informed about meeting of school management committee (SMC). SMC meeting was held monthly (55%), quarterly (29%) and half yearly (3%). Proceedings of the meeting were written (87%) and conducting discussion in the meet about quality of education (89%). The head teachers assessed the role of SMC as motivating the students and guardian, supervision of attendance of students and teachers, supervision of preparation list for stipend and its distribution, arranging financial contribution of the community, ensure proper management of property of school and help the head teacher to maintain school environment and development. Effectiveness of role of SMC is at table 5.14.

Table 5.14: Effectiveness the Role of SMC in Implementing TQI project

	Role of SMC	Effective		Somewhat effective		Not effective	
		Number	Percent	Number	Percent	Number	Percent
1	Motivating the students and guardian	107	57.5	49	26.3	3	1.6
2	Supervision of attendance of students and teachers	77	41.4	76	40.9	5	2.7
3	Supervision of in preparation list for stipend and its distribution	67	36	49	26.3	33	17.7
4	Arranging financial contribution of the community	40	21.5	46	24.7	54	29
5	Ensure proper management of property of school	62	33.3	55	29.6	20	10.8
6	Help the head teacher to maintain school environment and development	91	48.9	40	21.5	12	6.5

108. Enrolment of students per school is increased gradually from 2004 to 2011. Enrolment of student per school was 676.9 in 2004 with boy girl ratio of 55% and 45%. It is observed that the same ratio throughout the project period although enrolment is increased to 882.1 per school. During baseline survey boy and girl ratio was 49% and 51%. Average enrolment of students by gender in several years is at table 5.15.

Table 5.15: Average Number of Students Enrolled per Class

Year	VI		VII		VIII		IX		X		Total	
	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl
2004	86.9	71.2	77.6	61.9	73.7	61.5	73.2	54.5	62.7	53.6	374.2	302.7
2005	102.7	67.5	80.4	59.7	71.8	55.5	71.3	63.5	65.9	49.9	392.0	296.1
2006	91.4	85.3	80.4	62.3	74.2	55.0	69.8	54.5	66.9	48.7	382.6	305.7
2007	87.4	64.0	82.3	65.5	76.0	58.7	72.1	55.1	64.5	55.8	382.4	299.1
2008	85.2	73.3	79.7	61.6	79.1	59.8	71.7	56.7	66.3	52.1	382.0	303.4
2009	101.6	71.2	81.2	61.4	76.8	65.3	76.6	58.4	68.4	62.2	404.7	318.5
2010	96.4	76.7	90.1	70.3	76.8	59.1	75.9	57.3	72.4	60.0	411.5	323.5
2011	115.6	92.1	108.1	84.4	92.2	70.9	91.0	68.8	86.8	72.0	493.9	388.2

109. Success rate of students in SSC Examination is increased gradually from 2004 to 2011. Rate of success for both the boys and girls is increased. Success rate of boys is a little higher than that of girls. Rate of success by year and gender is at table 5.16.

Table 5.16: Success Rate of Students in SSC Examination by Gender and Year

	Year(s)	Pass Rate (%)		
		Boy	Girls	Combined
1	2004	72.7	69.9	71.5
2	2005	76.0	72.7	74.6
3	2006	79.6	74.8	77.5
4	2007	77.3	74.2	75.9
5	2008	82.7	80.3	81.6
6	2009	83.5	80.6	82.2
7	2010	88.7	85.2	87.1
8	2011	90.2	88.3	89.3

110. Success rates of students in JSC Examination are very good. Success rate of boys were 87% and girls were 84% in 2010 which increased to 91% and 90% respectively in 2011. Overall success rate was 85% and 91% respectively in 2010 and 2011.

111. Success rate of students in annual examination of schools is almost same throughout implementation of the project. Success rate was 81% for boys and 85% for girls in class six in 2004 and in 2011 these figures were 73% and 84% respectively. Similarly the success rate of boys and girls remained almost static in all classes. The success rate of students is at table 5.17.

Table 5.17: Average of Students Passed in the Annual Examination of School

	Class	2004		2007		2009		2011	
		Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl
1	VI	81.1	85.2	78.8	98.9	73.0	96.8	72.7	84.3
2	VII	83.5	93.2	81.0	93.4	82.1	98.4	71.0	83.5
3	VIII	92.1	89.4	78.8	96.3	82.4	83.3	73.3	92.4
4	IX	80.9	96.5	80.9	95.8	79.9	97.6	67.5	83.6
5	X	75.1	74.2	74.0	79.7	71.2	90.9	63.2	87.6

112. Dropout rate of students decreased significantly from 4.5% of boys in 2004 to 1.8% in 2011 in class six and the picture for girls from 4.7% to 2.4%. Similarly dropout rate in class ten was 3.8% boys in 2004 which is reduced to 1.6% in 2011 and for girls the corresponding figures were 6.8% and 3.0% respectively. The overall picture of dropout is at table 5.18. In the baseline survey lowest rate of dropout was 13.4% in class six and 45.1% in class ten (page 4 of baseline survey report).

Table 5.18: Percentage of Dropout Students

Class	2004		2005		2006		2007		2008		2009		2010		2011	
	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl
VI	4.5	4.7	3.3	4.2	3.7	3.0	2.9	3.7	3.8	3.1	2.8	3.9	2.5	3.0	1.8	2.4
VII	3.7	4.7	3.2	4.5	3.0	4.3	3.7	4.5	3.1	3.7	3.0	3.6	2.8	3.1	1.9	2.6
VIII	3.5	4.7	4.6	4.9	3.2	4.6	3.0	3.9	3.2	4.2	2.8	3.8	3.2	3.9	2.0	5.0
IX	3.6	5.5	3.2	4.3	3.2	4.6	3.4	4.5	2.9	5.1	3.0	4.7	2.4	3.5	1.9	2.9
X	3.8	6.8	4.1	7.3	3.3	6.4	3.1	6.5	3.7	6.2	2.8	5.9	2.3	4.2	1.6	3.0

113. The head teachers mentioned some reasons for dropout of the students. They mentioned the reasons of dropout as poor economic condition, involvement in household/economic activities, lack of awareness of the guardian, bad transport communication system, behaviours of the teachers in classroom, early marriage, eve teasing, failed in the annual examination, lack of interest in education, personal reasons, uncertainty of future employment and study elsewhere. The distribution of their opinion is at table 5.19.

Table 5.19: Reasons for Dropout the Students from the School

	Reasons for dropout	Before Project		After Project	
		Number	Percent	Number	Percent
1	Poor economic condition	134	72.0	142	76.3
2	Involvement in household/economic activities	124	66.7	130	69.9
3	Lack of awareness of the guardian	119	64.0	119	64.0
4	Bad transport communication system	80	43.0	75	40.3
5	Behaviours of the teachers in classroom	63	33.9	58	31.2
6	Early marriage	89	47.8	86	46.2
7	Eve Teasing	66	35.5	60	32.3
8	Failed in the annual examination	69	37.1	62	33.3
9	Lack of interest in education	72	38.7	67	36.0
10	Personal reasons	58	31.2	55	29.6
11	Uncertainty of future employment	6	3.2	7	3.8
12	Study elsewhere	34	18.3	33	17.7

114. Repetition rate of students per class is also decreased during the period of project implementation. It varied from 3.3% to 9.3% in 2004 and from 2.4 to 5.5 in 2011 for different classes and genders. Repetition rate for boys and girls follow almost the similar pattern and trend however, repetition rate of girls was a little higher than the boys. The repetition rate is at table 5.20.

Table 5.20: Percentage of Student Repeated in the Same Grade

Class	2004		2005		2006		2007		2008		2009		2010		2011	
	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl
VI	4.9	4.4	3.5	3.9	3.5	2.9	4.0	4.1	3.2	3.0	3.0	3.9	3.7	3.0	2.5	2.4
VII	3.8	5.1	3.6	4.1	3.5	4.1	3.1	3.7	3.3	3.8	2.8	3.6	2.9	3.2	2.4	2.7
VIII	3.9	5.0	3.6	4.7	3.2	4.2	3.8	3.5	3.2	3.9	2.8	3.8	3.6	4.6	3.9	4.9
IX	3.4	3.8	3.3	3.4	3.2	3.5	4.0	4.0	3.5	3.5	2.9	3.7	3.3	3.5	2.8	3.4
X	7.3	9.3	6.1	9.0	5.5	8.3	6.8	7.8	5.4	8.8	5.5	7.2	4.3	7.0	3.8	5.5

115. Attendance of students is increased from 2004 to 2011. Average attendance rate of boys in 2004 was around 74% and girls 75% while these rates were found around 80% for both boys and girls in 2011. The rate of attendance of students is at table 5.21.

Table 5.21: Average of Attendance of the Students

Class	2004		2005		2006		2007		2008		2009		2010		2011	
	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl
VI	73.9	76.1	75.3	85.0	75.8	77.6	75.9	76.7	89.5	77.8	77.6	78.0	78.7	79.2	80.0	80.7
VII	74.1	74.7	75.5	74.2	81.1	76.1	76.6	76.6	75.7	76.3	77.6	77.1	79.6	78.9	78.7	79.1
VIII	74.3	74.5	74.4	80.4	79.5	76.4	78.7	77.0	77.2	76.7	76.1	77.9	77.9	77.8	80.1	80.9
IX	73.2	74.0	84.1	75.2	75.2	76.6	76.1	76.6	76.3	77.4	77.1	77.8	77.0	78.2	78.3	79.1
X	74.5	74.3	74.5	75.0	77.7	76.2	75.9	77.0	76.2	76.9	76.5	77.5	78.0	78.0	78.5	79.7

116. The head teachers assessed the TQI-SEP from different aspects and rated TQI as motivating poor girl for education, motivating for science education, help to increase quality of education, ensuring community participation, encouraging for self employment and encouraging the learners to bring their talent. Their assessment is at table 5.22.

Table 5.22: Acceptance of the Different Opinion about TQI Project

	Particulars of assessment	Agree		No comment		Disagree	
		Number	Percent	Number	Percent	Number	Percent
1	Motivated poor girl for education	148	79.6	17	9.1	11	5.9
2	Motivated for science education	126	67.7	14	7.5	31	16.7
3	Help to increase quality of education	154	82.8	3	1.6	17	9.1
4	Ensured community participation	98	52.7	44	23.7	25	13.4
5	Encouraged for self employment	75	40.3	45	24.2	45	24.2
6	Encouraged the learners to bring their talent	160	86	4	2.2	3	1.6

117. The head teachers suggested for making the TQI-SEP more effective in future. Their suggestions are: more responsibility taking by the head teacher for school management, educational system to be changed, measure to be taken to improve educational quality and increase number of teachers, ensuring availability of teaching materials, more close communication with the guardian and school, improving the student-teachers relationship, accountability and transparency of relevant personnel to be ensure, providing poor and talent students scholarship if needed, providing stipend to all the secondary school, bring student-teacher ratio at 1:40, encouraging participatory learning among the student, arrange to take feedback from direct inspection by the trainers of TQI Project. Distribution of their suggestion is at table 5.23.

Table 5.23: Suggestions for Making the TQI Project more effective

	Suggestions	Number	Percent
1	More responsibility taking by the head teacher for school management	80	43.0
2	Educational system to be changed	30	16.1
3	Measure to be taken to improve educational quality and increase number of teachers	94	50.5
4	Ensuring availability of teaching materials	35	18.8
5	More close communication with the guardian and school	57	30.6
6	Improving the student-teachers relationship	37	19.9
7	Accountability and transparency of relevant personnel to be ensure	43	23.1
8	Providing poor and talent students scholarship if needed	39	21.0
9	Providing stipend to all the secondary school	18	9.7
10	Bring student-teacher ratio at 1:40	82	44.1
11	Encouraging participatory learning among the student	17	9.1
12	Arrange to take feedback from direct inspection by the trainers of TQI Project	3	1.6

118. The consultants collected feedback about the impact of teaching Quality Improvement in Secondary Education Project (TQI-SEP). The team interviewed 300 school management committee (SMC) members. Among the respondents 264 were male and the rest 36 were female. The ratio of male female is 7.3:1. The feedback of the SMC members about TQI-SEP is presented in the following paragraphs.

119. SMC is consists of people of wide range of age group from 26 years to 92 years. Although age range is wide but 84% of them are within the age range of 36-60 years. Occupations of the SMC are different but occupation of majority (51%) respondents is business followed by private service (17%), agriculture (14%), Government service (7%) and house wife, social worker, journalist and physician (10%). Level of their education is varied widely from primary to tertiary levels. Level of higher education of female members is better than male members. Level of education of about 73% SMC members are SSC or higher. In the baseline survey educational qualification of SME members of rural schools were 4% Maters degree, 32.3% bachelor degree, and 14.1 percent hold educational qualification below SSC (reference: baseline survey report page 16). Distribution of level of education of SMC members by gender in the present study is at table 5.24.

Table 5.24: Educational Qualification of the Members of the SMC by Gender

	Level of Education	Male		Female		Total	
		Number (n = 264)	Percent	Number (n = 36)	Percent	Number (n = 300)	Percent
1	Up to class 5	20	7.6	3	8.3	23	7.6
2	6-9	47	17.7	12	33.3	59	19.7
3	SSC	66	25.0	5	13.9	71	23.7
4	HSC	63	23.9	2	5.6	65	21.7
5	Bachelor	54	20.5	9	25.0	63	21.0
6	Master	14	5.3	5	13.9	19	6.3
	Total	264	100	36	100	300	100

120. The TQI project provided training to different stakeholders including SMC members. It is found from their feedback that 88% of them received training from the project. Number of training varied from one to six times. Length of working as SMC members of the respondents varies from one to 40 years. About 24% of them have experience one year or less.

121. Number of meeting of the SMC varied widely in last one year. One meeting was held in one percent school while more than 12 meetings were held in about 16% schools. One SMC meeting held in each month in more than 40% schools. Frequency of SMC meeting is increased from baseline situation six or more meetings was held in 31.4% schools (page 16 of baseline survey report) while this is found 89.6 during the present study. In the baseline Number of SMC meeting is more or less satisfactory. Distribution of SMC meeting is at table 5.25.

Table 5.25: Number of Meetings of SMC Hold in last one Year

	Number of Meetings Held	Number	Percent
1	1-6	71	23.7
2	7-11	61	20.3
3	12	121	40.3
4	More than 12	47	15.7
5	Average meeting per year	11.38	

122. Most of the members of the SMC members (98%) attended the SMC meeting in the last one year. Average number of attending meeting was 9.9 in last year. About 81% respondents opined that they were attended in six or more meetings in the last year. The SMC members assessed the role of head teacher about ensuring help, cooperation and support for participation of guardian and community. They assessed the role of head teachers for preparing strategic plan of the school, preparing development plan of school, monetary transaction and Communicate with the guardians. Role of head teachers as assessed by the SMC members is at table 5.26.

Table 5.26: Role of Head Teachers for Pursuing Participation of Guardian and Community

	Areas of getting help	Number	Percent
1	Strategic plan of the school	85	28.3
2	Development plan of school	187	62.3
3	Monetary Transaction	8	2.7
4	Communicate with the guardians	1	0.3

123. Most of the respondents have the idea of present academic system in secondary education. SBA system is known to 85% respondents and the rest have no idea about SBA system. Implementation of the Teaching Quality Improvement Project is known to more than 81% SMC members. They provided opinion about activities of the head teachers. Their assessment was in the area of institutional leadership, manpower and financial management, vision and initiative on development of school, initiative for development of school, social interaction and social support. They also ranked the indicators as excellent, good, not bad and bad. More 60% rating is observed in favor of good for all the indicators while one respondent rated as bad for initiative social aspects. The assessment of SMC members is at table 5.27.

Table 5.27: Opinion of SMC Members about Activities of Head Teachers

	Indicators	Excellent		Good		Not Bad		Bad	
		No.	%	No.	%	No.	%	No.	%
1	Institutional Leadership	74	24.7	207	69	7	2.3	0	0
2	Manpower and financial management	57	19	219	73	12	4	0	0
3	Vision and initiative on development of school	63	21	214	71.3	11	3.7	1	0.3
4	Initiative for development of school	65	21.7	209	69.7	10	3.3	1	0.3
5	Social interaction	53	17.7	218	72.7	12	4	1	0.3
6	Ensure the social support	51	17	205	68.3	16	5.3	1	0.3

124. A number of functions related to the school management performed by the members of the SMC. Among the functions the major ones are arranging regular monthly coordination meeting, taking multipurpose initiatives for improving quality of education, supervising management of school, monitoring the classes, taking role in building of social awareness, playing effective role for development of school, helping head teachers in solving different problems. Their role is at table 5.28.

Table 5.28: Role Played by the Members of SMC

	Role played by SMC Members	Number [n = 300]	Percent
1	Arranging regular monthly coordination meeting	272	90.7
2	Taking multipurpose initiatives for improving quality of education	191	63.7
3	Supervising management of school	186	62.0
4	Monitoring the classes	195	65.0
5	Taking role in building of social awareness	149	49.7
6	Playing effective role for development of school	181	60.3
7	Helping head teachers in solving different problems	178	59.3

125. The respondents opined that facilities and opportunities of the students are improved due to implementation of TQI. They identified areas and opportunities of education of the students as increased scope of science education, use of improved quality of textbook, better furniture in the class, book in the library, facilities of laboratory, better quality teachers, trained teacher, more scope of education and more scope of education for girls. They also ranked the opportunities and the ranking is at table 5.29.

Table 5.29: Improvement of the Facilities of the Student due to TQI Project

	Improvement of the Facilities of the Student due to TQI Project	Number	Percent
1	Increased scope of science education	212	70.7
2	Use of improved quality of textbook	140	46.7
3	Better furniture in the class	103	34.3
4	Book in the library	96	32.0
5	Facilities of laboratory	61	20.3
6	Better quality teachers	154	51.3
7	Good quality trained teacher	189	63.0
8	More scope of education	115	38.3
9	More scope of education for girls	126	42.0

126. The SMC members assessed the success of achievement of the objective of the TQI Project as fully achieved the objectives (30%), partially achieved the objectives (59%) and failed to achieve the objectives (11%). They identified the reasons for fully and partially achievement of the objectives of the TQI as financial support and free tuition fees, improvement of school environment, increasing number of trained teachers, arrangement of science education, developing curriculum and textbooks and imposing different conditions and using teaching materials and aids. The reasons of achievement are at table 5.30.

Table 5.30: Reasons for Achieving Fully or Partially the Objectives of the TQI Projects

	Reasons for achieving fully or partially objectives of TQI projects	Number	Percent
1	Financial support and free tuition fees	167	55.7
2	Improvement of school environment	213	71.0
3	Increasing number of trained teachers	239	79.7
4	Arranging science education	139	46.3
5	Developing curriculum and textbooks	97	32.3
6	Imposing different conditions	28	9.3

127. The respondents evaluated the activities and role of students under the TQI project. They assessed role of students as good (48%), more or less good (41%) and bad (11%). The reasons they identified for playing better role by the students for increasing scope of science education, use of improved quality of textbook, better furniture in the class, book in the library, facilities of laboratory, better quality trained teachers, more scope of education and more scope of education for girls. Reasons for playing better role by the student in implementing the TQI Project are at table 5.31.

Table 5.31: Reasons for Playing Better Role by the Student in Implementing the TQI Project

	Reasons for playing better role by the students	Number	Percent
1	Increased scope of science education	183	61.0
2	Use of improved quality of textbook	138	46.0
3	Better furniture in the class	107	35.7
4	Book in the library	104	34.7
5	Facilities of laboratory	65	21.7
6	Better quality trained teachers	192	64.0
7	More scope of education	143	47.7
8	More scope of education for girls	115	38.3

128. Some of the respondents evaluated activities of the students as bad and they made some recommendations for overcoming the drawbacks. Their recommendations are increasing number of classroom and teacher, increasing teaching quality and its utility, creation of favorable social environment, creation of favorable classroom environment, creating interest in science education and providing technical education. Distribution of their recommendations is at table 5.32.

Table 5.32: Suggestions for Removing Drawback of Activities of Student

	Recommendation for remedial measure for improving students	Number	Percent
1	Increasing number of classroom and teacher	25	8.3
2	Increasing teaching quality and its utility	25	8.3
3	Creation of favorable social environment	16	5.3
4	Creation of favorable classroom environment	12	4.0
5	Creating interest in science education	14	4.7
6	Providing technical education	13	4.3

129. The respondents provided their opinion for sustaining effectiveness of TQI. They have given emphasis on a number of factors for sustaining effectiveness of TQI. Their suggestions are changing structure of secondary education, increase number of teacher, system for improvement of quality of teachers continuously, availability of teaching materials easily, increasing communication between guardians and schools, improving student teacher relationship, increase accountability and transparency of the personnel involved with education, providing stipend to the poor and talent student in the light of need, bringing all the secondary school under stipend program, opportunity of using modern equipment (computer, multimedia OHP, etc.) in the classroom, non-government teachers may be included in MPO, difference of salary between government and non-government teachers may be minimized, residential arrangement may be made for the teacher, teacher is to be more careful in teaching, regular evaluation of teaching quality, providing electricity connection and provision of transfer of teacher from one school to another school may be made. Major suggestions of SMC members for sustaining effectiveness of TQI activities are at table 5.33.

Table 5.33: Suggestions of the SMC Members for Sustaining Effectiveness of TQI Activities

	Recommendation for making TQI activities sustainable	Number	Percent
1	Changing structure of secondary education	170	56.7
2	Increase number of teacher	212	70.7
3	Continuous system for improve quality of teacher	194	64.7
4	Easy availability teaching materials	166	55.3
5	Communication Increase communication of the guardian with school of the guardian with school	153	51.0
6	Improve student teacher relationship	121	40.3
7	Increase accountability and transparency	103	34.3
8	Giving stipend to the poor and talent student	157	52.3
9	Bring all the school in stipend program	112	37.3
10	Modern equipment in classroom (Computer, Multimedia OHP, etc),	125	41.7

Section VI Performance of Classroom Teachers

130. The section is devoted to assess the educational and professional background of the teachers of the secondary schools, trainings received for their professional developments and methods and techniques used by them in their class. Contribution of the TQI project in professional development of the teachers that improved the efforts in the teaching quality has been analysis.

1. Educational and Professional Background of the Teachers

131. Number of school surveyed for the study was 186 and total number of respondent's teachers of the surveyed school was 1854. Target to take interview from 10 teachers from each school, but actual respondents was slightly less than the target. Out of 1,854 teachers 71.57% were male and rest 28.43% were female. Maximum number of surveyed schools (60.5%) was Private Co-education high schools.

132. It was found that 38.1% of the teachers had master degree in different subjects of arts, science and commerce and rest 61.9% have bachelor degree. However, master degree among the female (44.2%) was slightly higher than the male (35.7%) teachers.

133. All of the teachers have M. Ed or B. Ed/ Honours degree. Among them 7.6% female and 7.5% male received M. Ed degree. So there is no difference in professional degree of the male and female teachers. In total 1243 (67.0%) teachers received either certificate course or B. Ed degree from the TQI project. Of them 95.2% received training on certificate courses and rest 4.8% did B. Ed degree. Among the female teachers 3.4% and male 3.2% got their B. Ed degree through TQI project.

2. Experience of the Teachers

134. An attempt was taken to get an idea about the experience of the teacher of secondary school. The findings showed that majority (32.65) of the teachers had less than 10 years experience and 2.5% had more than 35 years experience. Among the female teachers 44.2% had experience less than 10 years compared to 28.0% among the male (Table 6.1). Reason for less experience of the female teachers might be that female of the country as a whole came to the job in the recent past.

Table 6.1: Total Teaching Experience as Teachers of Secondary School

	Years of Experience	Male		Female		Total	
		Number	Percent	Number	Percent	Number	Percent
1	Below 10	372	28.0	233	44.2	605	32.6
2	11-15	233	17.6	96	18.2	329	17.7
3	16-20	320	24.1	93	17.6	413	22.3
4	21-25	170	12.8	64	12.1	234	12.6
5	26-30	115	8.7	20	3.8	135	7.4
6	31-35	75	5.7	16	3.0	91	4.9
7	35+	42	3.2	5	0.9	47	2.5
Total		1327	100.00	527	100.00	1854	100.00

135. Again experience of the teachers in the surveyed school also tired assessed and it was found that 44% of the teachers had less than 10 years experience in the surveyed school. Among the female

teachers more than half (53.5%) had less than 10 years of experience compared to 40.2% male had same experience Length of experiences of other teachers in different durations (Table 6.2)

Table 6.2: Teaching Experience in the Surveyed School as Teachers

	Years of experience	Male		Female		Total	
		Number	Percent	Number	Percent	Number	Percent
1	Below 10	534	40.2	282	53.5	816	44.0
2	11-15	204	15.4	91	17.3	295	15.9
3	16-20	282	21.3	77	14.6	359	19.4
4	21-25	123	9.3	46	8.7	169	9.1
5	26-30	99	7.5	12	2.3	111	6.0
6	31-35	58	4.4	15	2.8	73	3.9
7	35+	27	2.0	5	0.9	32	1.7
Total		1327	100.0	528	100.0	1855	100.0

3. Training Received from TQI Project

136. The respondents (teachers) mentioned that they received several training from the TQI Project. The major types training were TOT, CPD-1, CPD-2, digital contents, creative, cluster training, inclusive education, computer, communication, administration, SBA, CPD (Mathematics), STC, unified education, preparation of questionnaire, management, LTP, English Language, pre-service, follow up, increase skills, Lab. Maintenance, etc. The teachers received the training in different venues. The major venues were TTCs, HSTTIs, NAEM, Out Reach Centers (ORCs), district level hired venues and abroad.

137. It was found that 87.9% of the teachers received the training in the same subject which they teach in the class. It is 88.4 and 86.7% among the male and female teachers respectively. The findings indicate that most of the cases the trainings were given to the proper persons.

4. Use of Lesson Plan, Record Keeping and Home Task

138. In this section use of lesson plan and its benefit will be discussed. Before discussing the matters assessment was done about number of classes was taken by the teachers per week. Because use of modern techniques depends on the number of classes take by the teachers. It was found that highest number (around 42%) of both the male and female teachers took 26-30 classes per week. Second highest number 21 to 25 classes took by 31.5% male and 34.2% female teachers. Around 2% teachers took 36-40 classes per week (Table 6.3). The above findings show that the teachers of secondary school take around 5 classes per day which seems to be quit high.

Table 6.3: Number of Theoretical and Practical Classes Taken by the School Teachers per Week

	Number of classes	Male				Female			
		Theoretical		Practical		Theoretical		Practical	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
1	10 or less	23	1.7	389	29.3	12	2.3	136	25.8
2	11-15	36	2.7	3	0.2	8	1.4	1	0.2
3	16-20	92	6.9	1	0.1	33	6.3	1	0.2
4	21-25	418	31.5	0	0	180	34.2	0	0
5	26-30	567	42.8	0	0	222	42.1	0	0
6	31-35	156	11.8	0	0	61	11.6	0	0
7	36-40	35	2.6	0	0	11	2.1	0	0
	Total	1327	100	393	29.6	527	100	138	26.2

5. Lesson Plan

139. Use of lesson plan is one of the key instruments to improve the teaching quality. Special emphasis has been given by the TQI project on preparation of lesson plan of all the classes. It was found that around 88% of both the male and female teachers were using lesson plan for their classes (Table 6.4). It is good sign that most of the teachers are using lesson plan. However, the rest of the teachers should be motivated or trained to use the lesson plan before go to the class.



140. An attempt was taken to know in how many classes the teachers are using the lesson plan. It was found that majority of the teachers (Male 45.5% and female 43.5%) used lesson plan in 61 to 80% classes and around one-fourth of the teachers (Male 23.2% and female 24.8%) used for 41 to 60% classes. It was found that around 85% teachers use lesson plan for more than 40% classes (Table 6.4). The school authority and project should take measures to motivate and trained the teachers to use lesson plan for all the classes to ensure a planned lesson in the class.

Table 6.4: Percentage of Classes Use Lesson Plan by the School Teachers

	Percentage of classes use lesson plan	Male		Female		Total	
		Number	Percent	Number	Percent	Number	Percent
1	20 or less	113	8.5	41	7.8	154	8.3
2	21-40	105	7.9	24	4.6	129	7.0
3	41-60	308	23.2	151	28.7	459	24.8
4	61-80	604	45.5	203	38.5	807	43.5
5	81-90	154	11.6	84	15.9	238	12.8
6	91-100	43	3.2	24	4.6	67	3.6
	Total	1327	100.0	527	100.0	1854	100.0

141. The teachers were asked what benefit they derived from using the lesson plan in their classes. More than 85% mentioned that the effective lessoning made possible for using the plan and more than 80% said it helped them to set the objective of the lesson. Other benefits were it ensured use of proper materials, use proper teaching techniques and identification of the weaknesses through continuous

evaluation. More than 60% of the respondents made the comments of the benefit of the lesson plan (Table 6.5).

Table 6.5: Benefit of Lesson Plan in Presentation in the Class

	Benefits of use of lesson plan	Male		Female	
		Number	%	Number	%
1	Setting the lesson objective before lesson	959	82.5	386	82.7
2	Effective lessoning made possible	1008	86.7	400	85.7
3	Ensuring use of the materials	846	72.8	320	68.5
4	Identifying weakness through continuous evaluation and removes weakness	725	62.4	299	64.0
5	Effective lessoning by using proper teaching technique	640	55.1	281	60.2
6	Giving relevant homework for innovative development of the student	626	53.9	267	57.2

142. Broken down the lesson time is one of the important steps of preparing the lesson plan. More than 91% of the teachers of both the sex mentioned that in the lesson plan they broke down the lesson time.



143. It was tried to find out the benefit got by the teachers for breaking the lesson time. More than 72% of both the male and female teachers mentioned it helped them to practice all the steps and use effective methods and techniques. More than 65% said that it facilitated for using proper materials and giving feedback to the students by making proper evaluation. More than 50% mentioned that it benefited to complete all the steps of the lesson in time and help this to motivate the students and developed leadership among them through group work (Table 6.6).

Table 6.6: Ways of Helping the Effective Lesson Due to Broken down of Lesson Time

	Ways of helping	Male [n=1327]		Female [n=527]	
		Number	Percent	Number	Percent
1	Practicing all the steps	972	73.2	379	71.9
2	Using effective methods and techniques	999	75.3	400	75.9
3	Using proper teaching materials	875	65.9	343	65.1
4	Making proper evaluation and giving feed back	828	62.4	355	67.4
5	Motivating the student and developing leadership through group presentation	781	58.9	328	62.2
6	Completing all the steps of lesson in time	681	51.3	279	52.9

6. Record Keeping

144. Record keeping of the student's performance is very much instrumental to help the students for improving their performance. So it was tried to get an idea how far the teachers are using the techniques and in what extent they are getting benefit from this exercise. Around 88% of the teachers of both the sex mentioned that they were using records of their students' achievement and progress (Table 6.7).

145. The teachers were asked what types benefits they got from keeping record of their students. Among the female teachers 46.5% and male 39.1% mentioned that record helped them to improve the quality of their students by giving feedback them from the records. Among male teacher's 26.4% and female 24.3% used the records to give the progress to the guardians to take care of their children. Around 20% male and 17% female teachers used the record for improving their lessons (Table 6.7).

Table 6.7: Use of the Record of Achievements and Progress of the Student

	Use of records	Male [n=1327]		Female [n=527]	
		Number	Percent	Number	Percent
1	Helping to improve educational quality of the student through feed back	519	39.1	245	46.5
2	Improving the lesson of the teacher by evaluating own teaching techniques	267	20.1	88	16.7
3	Awarding the guardian to teach their children by getting progress report	350	26.4	128	24.3
4	Use in quality development of the students	14	1.1	3	0.6

7. Home Work

146. Giving homework to the students is a widely used and effective method to get feedback about the understanding of the students of the subjects. About half of the teachers gave homework every day and around one-fourth gave weekly thrice. Among male 6.9% and female 4.2% give the homework occasionally. Other gave it once in a week, or weekly four times (Table 6.8).

Table 6.8: Frequency of Giving Students Home Tasks

	Frequency of giving home tasks	Male		Female	
		Number	Percent	Number	Percent
1	Every day	656	49.4	258	49.0
2	Weekly once	143	10.8	58	11.0
3	Weekly thrice	310	23.4	129	24.5
4	Weekly four time	127	9.5	60	11.3
5	Sometime	91	6.9	22	4.2
Total		1327	100.0	527	100.0

8. Use of Techniques for Ethnic Students and Gender Sensitive

147. In some of the survey schools ethnic students are available. Around 42% of the respondents teachers informed that ethnic students were available in there class. Students of the ethnic communities need special methods and techniques to teach them. Among the male teachers 67.9% and female teachers 64.3% said that they used special methods and techniques for the students of the ethnic community.

148. Now a day's use of gender sensitive materials is given special attention to minimize the gender disparity from the society. It was found that 38.4% of the male teachers and 33.6 female teachers used

gender sensitive materials (Table 6.19). Findings indicate that male teachers are using more gender sensitive materials than the female. However, the difference is not at significant level. This area should be given more attention.

9. Use of Teaching-Learning Materials



149. Use of teaching materials in the classroom makes the class more attractive and effective to learn. It was found that Most of the teachers (male 97.6% and female 95.1%) were using the materials like map, chart and diagram. Model also used by more than 70% of the teachers. Use of computer was around 12% which is very much encouraging. Slide also used by 13.5% male and 9.3% female teachers. Other materials like slide projector, overhead projector, etc were also used by a very insignificant number of teachers (Table 6.9).

Table 6.9: Use of the Materials and Equipment in the Class

	Name of materials and equipment	Male		Female	
		Number	Percent	Number	Percent
1	Map/Chart/Diagram	1295	97.6	501	95.1
2	Model	967	72.9	370	70.2
3	Slide	179	13.5	49	9.3
4	Slide Projector	53	4.0	15	2.8
5	Overhead Projector	31	2.3	10	1.9
6	Computer	157	11.8	65	12.3
7	Use no materials or equipment	23	1.7	7	1.3

150. Benefit of using the teaching materials was also assessed. Around 92% of the teacher of both sex said that by using teaching materials the lesson became effective and easier to understand by the students. More than 83% mentioned that the teaching materials helped the students to get the clear concept of the subjects. Around 60% said that it facilitates to present more contents in short time and it help to enter in the depth of the subjects (Table 6.10).

Table 6.10: Benefit of Using the Teaching Materials and Equipment

	Benefits of using teaching materials and equipment	Male		Female	
		Number	Percent	Number	Percent
1	Lessoning became easier and effective	1224	92.2	484	91.8
2	Getting clear concept about the subject	1112	83.8	450	85.4
3	Making the unclear concept to clear	827	62.3	351	66.6
4	Present more things in short with deep concept	783	59.0	307	58.3
5	It is long lasting, can understand well	24	1.8	10	1.9

10. Sharing Knowledge of TQI among the Teachers

151. Sharing of knowledge of the TQI training is one of the most important aspects to update the knowledge of the teachers. It is a continuous process to help each other and update knowledge and skill of the teachers. More than 91% of both the male and female teachers said that they shared their training knowledge with other colleagues.

152. It was tried to assess the benefits of sharing the knowledge. Opinion of majority of the teachers (male 88.2% and female 86.3%) that it helped them to develop their skill within the institute. Second highest majority (77.4% male and 75.6% female) mentioned that it contributed in developing their class teaching. A good number of the teachers (Around and more than 70%) said that it helped to develop helping attitude among each other and increase confidence of own knowledge and skill. The above findings indicate that sharing of training knowledge is very import for the teachers to build up themselves as a team and improve their individual skill and knowledge (Table 6.11).

Table 6.11: Contribution of Knowledge Sharing in Professional Development of Colleagues on Teaching

	Contribution in knowledge sharing	Male		Female	
		Number	Percent	Number	Percent
1	Developing professional skill within the institute	1076	88.2	417	86.3
2	Developing the class teaching	944	77.4	365	75.6
3	Increasing confidence in own knowledge and skill	840	68.9	337	69.8
4	Developing helping attitude among the colleague	871	71.4	357	73.9
5	Others	12	1.0	6	1.2

11. Evaluation of Teachers Performance

153. Teacher's performance evaluation is one of the important mechanisms to help them in developing their skill and knowledge by identifying the strong and week areas. More than 96% of the respondents said that their Head Teacher do the performance evaluation of the teacher's regular basis.

154. The teachers who mentioned that their performance was evaluated, among them views of around 70%, 20% and 10% said that it encouraged them by getting positive comments and suggestions, comments of Head Teacher's helped them to corrects the mistakes and help to improve the future lesson respectively (Table 6.12).

Table 6.12: Influence of the Evaluation of the Head Teacher on Teaching Learning

	Influence of Evaluation	Male		Female	
		Number	Percent	Number	Percent
1	Encouraging the positive comments and suggestion	867	67.9	359	70.0
2	Helping to correct my mistakes	276	21.6	102	19.9
3	Helping to improve the future lesson	130	10.2	49	9.6
4	Other	4	0.3	3	0.6

12. Teaching subjects and Use of Training before and after TQI Training

155. It was tried to find out in the survey whether any changes in teaching subjects of the teachers after getting subject-wise training through TQI project. No significant changes were found in teaching subjects of the teachers after getting training from TQI except economics and social sciences (Table 6.13). A big change of teaching subjects in economics and social sciences were found. This might be due to changes in syllabus of these two subjects.

Table 6.13: Teaching Subjects before TQI Project and Presently

	Subject	Male				Female			
		Before Project		Presently		Before Project		Presently	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
1	Bengali	501	37.8	501	37.8	285	54.1	309	58.6
2	Mathematics	484	36.5	484	36.5	89	16.9	87	16.5
3	English	413	31.1	426	32.1	158	30.0	161	30.6
4	Agriculture	193	14.5	190	14.3	41	7.8	47	8.9
5	Geography	119	9.0	126	9.5	54	10.2	47	8.9
6	Chemistry	170	12.8	171	12.9	24	4.6	25	4.7
7	Physics	164	12.4	166	12.5	22	4.2	21	4.0
8	Biology	136	10.2	135	10.2	42	8	44	8.3
9	Higher Mathematic	94	7.1	93	7.0	12	2.3	10	1.9
10	Economics	43	3.2	275	20.7	27	5.1	200	38.0
11	Social Science	58	4.4	282	21.3	33	6.3	205	38.9
12	Home Economics	19	1.4	22	1.7	102	19.4	102	19.4
13	Religion	230	17.3	239	18.0	79	15.0	78	14.8
14	Management	33	2.5	31	2.3	13	2.5	12	2.3
15	Accounting	80	6.0	82	6.2	20	3.8	20	3.8
16	Computer	61	4.6	63	4.7	34	6.5	37	7.0
17	Business Education	70	5.3	74	5.6	27	5.1	27	5.1
18	History	115	8.7	118	8.9	69	13.1	64	12.1

156. Training received by the teachers in their own subject is very much important for their professional development. It was found that around 18% of the teachers got training on specific subjects before the TQI project and it had been sharply increased to more 86.1% of the male and 83.7% to female (Table 6.14). It is a very good achievement of the TQI project to provide specific training for the teachers to improve their knowledge and skill in their own subject.

157. It was found that more than 82% of the teacher received training on Continuous Professional Development (CPD) which indicates the trust of the TQI project on the teaching quality improvement of the teachers. Cluster training also received by around 24% of the teachers. This training is sharing of knowledge and skill among the teachers at local level who received training from the training institute. However, around 7% of the teachers received TOT who will work as trainer in their areas (Table 6.14).

Table 6.14: Training Received by the School Teachers from TQI Project inside the Country

	Type of training received	Male		Female		Total	
		Number	Percent	Number	Percent	Number	Percent
1	Certificate Course	232	17.5	101	19.2	333	18.0
2	TOT	101	7.6	34	6.5	135	7.3
3	CPD	1096	82.6	432	82.0	1528	82.4
4	Clustered	441	33.2	191	36.2	632	34.1

158. There is a provision of foreign training as incentive for those teachers who showed excellent performance. The findings showed that 14 male and 9 female teachers received foreign training of the surveyed schools. Among them 4 male and 1 female did mater degree and rest 10 and 8 participated in certificate courses respectively. Findings showed that 1.1% male and 1.7% female teachers received foreign training from TQI project.

159. Among the teacher who received training 89.5% and 87.9% female stated the training of TQI as effective. However, 19.1% male and 21.6% female teachers among those who received training before TQI project said the trainings were effective and rest of them stated the trainings as not effective one. This indicates that the effectiveness of the TQI training is much higher than the training providing before (Table 6.15).

160. The teachers were asked how far the trainings of TQI and previous training were effective. Among the male teachers who received TQI and those who received training before TQI project graded the trainings as very much effective by 36.4 and 17.0% respectively. Same comment was given by 33.9% and 13.2% female teacher respectively. Majority of the both the male (56.4%) and female (53.8%) teachers teacher said the TQI trainings were effective and 43.5% and 40.4% of the teachers mentioned training before the TQI project also effective (Table 6.15). The findings indicate the training of TQI was more effective than before.

Table 6.15: Degree of Effectiveness of the Training Received by the School Teachers

	Effectiveness	Male				Female			
		Before Project		Presently		Before Project		Presently	
		No.	%	No.	%	No.	%	No.	%
1	Very much effective	43	17.0	433	36.4	15	13.2	157	33.9
2	Effective	110	43.5	670	56.4	46	40.4	249	53.8
3	Less effective	38	15.0	16	1.3	14	12.3	13	2.8
4	Effective in some cases	60	23.7	69	5.8	39	34.2	43	9.3
5	Not effective at all	2	0.8	0	0	0	0	1	0.2

161. It was tried to identify the helping areas of the training. More than 65% of the teachers of both the sex mentioned that TQI training helped them in using modern methods, preparing lesson plan, developing teaching materials and use them, increasing knowledge in the subject. More than 60% made the statement that they learned the participatory learning process of the student through group work. A good number (More than 40%) also learned innovative methods, assessment techniques, assessing student's competence and techniques to build good relationship with the students. However, less than 10% of the teachers mentioned about development of the mentioned areas from training received before the TQI projects. This indicates a great achievement of TQI project in improving teaching techniques and methods and learning process in the secondary education (Table 6.16).

Table 6.16: Helping the Lesson Areas of Effective Training

	Helping Areas	Male				Female			
		Before TQI		Presently		Before TQI		Presently	
		No.	%	No.	%	No.	%	No.	%
1	Teaching in modern method	78	5.9	1033	77.8	31	5.9	404	76.7
2	Preparing lesson plan	107	8.1	1012	76.3	38	7.2	370	70.2
3	Preparing and using the teaching materials	72	5.4	896	67.5	37	7.0	344	65.3
4	Developing subject-wise knowledge	107	8.1	901	67.9	33	6.3	342	64.9
5	Learning innovative methods	56	4.2	534	40.2	25	4.7	201	38.1
6	Assessing the methods students competency	57	4.3	668	50.3	25	4.7	259	49.1
7	Participating the student in learning process	92	6.9	794	59.8	63	12.0	337	63.9
8	Using different assessment methods	32	2.4	529	39.9	11	2.1	233	44.2
9	Making good relationship with the students	78	5.9	611	46.0	59	11.2	289	54.8
10	Others	3	0.2	21	1.6	3	0.6	8	1.5

162. Those who did not thought the training were not effective they were asked to mention the reason behind it. A few of them (Around 1%) said there is no scope of use the methods in the school, school does have fund to effort the cost of the materials, head teacher/SMC/ guardian do not interested to use the methods, the methods can not use for the irregular attendance of the students, etc. (Table 6.17). The reasons mentioned above seem to be lame excuse to not use the methods.

Table 6.17: Reasons for ineffectiveness of the Training

	Reasons for ineffectiveness	Male				Female			
		Before TQI		Presently		Before TQI		Presently	
		No.	%	No.	%	No.	%	No.	%
1	No Scope in the school to use the training skill	26	2.0	16	1.2	2	0.4	12	2.3
2	School does not have fund for effort the cost of training materials	10	0.8	13	1.0	2	0.4	7	1.3
3	Head Teacher/SMC/ Guardian do not interested to use the new methods	3	0.2	8	0.6	0	0.0	1	0.2
4	Irregular presence of the student in the class	6	0.5	13	1.0	1	0.2	6	1.1
5	Very difficult to use the methods	19	1.4	4	0.3	1	0.2	3	0.6
6	Other	0	0.0	6	0.5	0	0.0	3	0.6

163. It was tried to assess the improvement of the quality and performance of the students after receiving training by the teachers. More than 88% of teachers of both the sex stated that quality and performance of the students improved after they got training from TQI project. However, same statement also given about the training received before TQI project by 25.9% male and 29.8% female teachers. That means all the trainings have a benefit, but the benefit came from TQI project much higher than before. Areas of improvement are getting more concepts about the subject, can speak and write more about the subject, can give right answer of the question, can participate in discussion, and can help the classmate in group work. Distribution of opinion about quality of education of students is at table 6.18.

Table 6.18: Areas of Quality Improved of the Student after Receiving Training by the Teachers

	Areas of quality improved of student	Male				Female			
		Before Project		Presently		Before Project		Presently	
		No.	%	No.	%	No.	%	No.	%
1	Getting more concept about the subject	109	31.7	505	43.2	47	29.9	259	55.7
2	Can speak more about the subject	122	35.5	443	37.9	53	33.8	232	49.9
3	Can write more about the subject	70	20.3	285	24.4	37	23.6	175	37.6
4	Can give right answer of the question	99	28.8	300	25.6	44	28.0	117	25.2
5	Can participate in discussion	93	27.0	219	18.7	59	37.6	129	27.7
6	Can help the classmate in group work	31	9.0	164	14.0	15	9.6	94	20.2
7	Other								

164. Some of them provided opinion about not improving quality of the students after the teachers receiving training from TQI. The mentioned some reasons in favor of their opinion. These reasons are students are not interested in new method of teaching, irregular presence of most of the students in the class, no scope of interaction due to large size of class and students are more interested in private tutor rather than classroom teaching.

165. The teachers were asked to mention the indicators to assess the improvement of the students. More than 75% of both the male and female teachers mentioned that after TQI training the had able to make then spontaneous participation in group work, doing the home work properly, result of tutorial examination and solving the problems in the class. Other indicators are result of school and public examinations. However, before the TQI project the participation of the student was below 10% and other ranges from 7.6% to 25.2% (Table 6.19). That means the TQI project has given a thrust in educational system and improvement of result in the public and school examinations.

Table 6.19: Methods of Assessing the Improvement of the Student by the Teachers

	Methods of assessing	Male				Female			
		Before TQI		Presently		Before TQI		Presently	
		No.	%	No.	%	No.	%	No.	%
1	Participating spontaneous in discussion	93	7.0	1004	75.7	51	9.7	436	82.7
2	Doing the home work	303	22.8	1033	77.8	133	25.2	434	82.4
3	Conducting tutorial examination	206	15.5	1035	78.0	76	14.4	437	82.9
4	Solving problems in the class	181	13.6	997	75.1	108	20.5	405	76.9
5	Assessing through school examination	187	14.1	728	54.9	68	12.9	284	53.9
6	Assessing through the public examination	101	7.6	381	28.7	41	7.8	154	29.2
7	Others	12	0.9	48	3.6	5	0.9	18	3.4

166. The teachers were asked about the use of skill and knowledge they received from the training. Among the male 86.7% and female 63.9% said that they are using all the skill and knowledge they are using which learned from TQI training. In the other hand, only 11.2% male and 11.8% female could use the skill and knowledge which they gathered from the training before TQI project.

167. Around 10% of the teachers gave the reasons for not using the skill of TQI project were scarcity of teaching materials, insufficient classroom facilities and large class size. A few of them stated the reasons like no facilities of group work, lack of supports from the authority and low attendance of the students. However, as very limited number of the teacher used the skill of knowledge received before TQI project, so their statement is not so important (Table 6.20).

Table 6.20: Reasons for Not Using the Skill and Knowledge Received from the Training

	Reasons for not using skill and knowledge	Male				Female			
		Before TQI		Presently		Before TQI		Presently	
		No.	%	No.	%	No.	%	No.	%
1	Scarcity of teaching materials	42	3.2	145	10.9	18	3.4	54	10.2
2	Insufficient facilities in the classroom	47	3.5	157	11.8	20	3.8	62	11.8
3	Large number of students in the class	27	2.0	144	10.9	12	2.3	52	9.9
4	No facilities for group work	34	2.6	87	6.6	16	3.0	28	5.3
5	Lack of support from the authority	10	0.8	38	2.9	2	0.4	10	1.9
6	Low attendance in the class	7	0.5	26	2.0	1	0.2	8	1.5

168. Remarkable changes in the classroom found by the teachers are participation in group work (male 89.7% and female 88.4%); participate in group work by turn around (male 75.1% and female 72.5%), leadership development through presentation (male 56.9% and female 58.6%) (Table 6.21).

Table 6.21: Remarkable Changes in the Classroom as the Effect of TQI Project

	Changes in the Classroom	Male		Female	
		No.	%	No.	%
1	Participation of the student in group work	1190	89.7	466	88.4
2	Turn around to participate in group work	997	75.1	382	72.5
3	Leadership development through presentation of work	755	56.9	309	58.6
4	Other (Please specify)	24	1.8	13	2.5

Note: Percentage of all the teachers.

169. Group work is a very strong method of learning and sharing knowledge, so the teacher was asked to get their observation and experiences of group work. More than 86% mentioned that it encourage the learning. More than 61% stated that group work develop the confidence among the student, innovate the new things, leadership develop through work each other, create helping attitudes and the week student learn from their talented classmates (Table 6.22).

Table 6.22: Learning Process of the Student through Group Work

	Learning Process	Male		Female	
		No.	%	No.	%
1	Encouraging in Learning	1142	86.1	454	86.1
2	Developing the confidence	880	66.3	347	65.8
3	Innovating the new things	812	61.2	331	62.8
4	Developing the leadership	816	61.5	324	61.5
5	Developing the helping attitude	860	64.8	366	69.4
6	Less talented students learn from talented students	861	64.9	360	68.3

170. At the end the teacher were asked to give their recommendation to improve the teaching quality of the school. They made a number of recommendations. Majority of them (Around 60%) emphasized on the development of the teacher through continuous training. An important recommendation made by around 45% of the teacher that the difference treatment between the urban and rural school should be minimized. They also gave importance to provide training materials (More than 40%) and prepare training materials by the teachers and students. A good number of teachers also had given emphasis to prepare themselves for the class. Other recommendations are improve facilities of TTCs, provide incentive package for the good teachers by assessing the performance through public examinations, etc (Table 6.23).

Table 6.23: Recommendations of the Teachers to Improve Teaching Quality of the School

	Recommendations	Male		Female	
		No.	%	No.	%
1	Improving the practical teaching	349	26.3	117	22.2
2	Improving the capacity of TTC and providing continuous support	195	14.7	79	15.0
3	Providing training on teaching materials development to the teacher	577	43.5	215	40.8
4	Developing skill of the teacher through continuous training	764	57.6	320	60.7
5	Providing package of incentive for the good teachers by assessing the result of public examination	211	15.9	86	16.3
6	Participating both the teachers and students in Development of teaching materials	293	22.1	129	24.5
7	Minimizing the difference of teaching facilities between the rural and urban areas	613	46.2	237	45.0
8	Increasing the school libraries and collection of books	141	10.6	59	11.2
9	Taking care by the teachers for preparing themselves	506	38.1	189	35.9
10	Other	128	9.6	78	14.8

13. Performance of Trained Classroom Teachers - Feedback on Classroom Observation

171. The team of consultants observed class during teaching by the teachers of the respective schools. During the classroom observation a number of items were noticed in light with the objectives of the Teaching Quality Improvement in the Secondary Education Project. In total 34 classes were observed during the study period. Out of these observation two classes of Government boys high schools, six classes of government girls high school, one of government coeducation high school, one class of private boys high school, nine classes of private girls high schools and 15 classes of private coeducation high schools. The observed feedback is presented in the following paragraphs.

14. Conduction of Class

172. Most of the teachers (91%) attended in the class timely. About 62% classes the students submitted the previous home tasks in the class. All the teachers with a few exceptions were well dressed. Presentation of about one third of the teachers was very attractive while presentation of half of the observed teachers was good and that of rest of the teachers was more or less good and not good. More than three quarters of the teachers highlighted the objectives of the session relating the previous lesson nicely.

Presentation

173. Quality of delivery of the majority teachers in the classroom was good while delivery of some teachers (35%) was very good. Delivery of about 9% teachers was more or less good and that of 3% teachers was not good. Picture of movement of the teachers in the classrooms was followed almost the same pattern of delivery in the classroom. Good attraction of students in about 91% classes was created due to movement of teacher in the classroom.

174. All teachers except a few used black board in the classroom. The observers noticed the quality of using blackboard. They noticed clearness of writing, margin, space, size of writing words, correctness of writing, sufficiency of writing and pictures use in board. In most of the classes the teachers used the board properly. Quality of use the black board in the classroom is at table 6.24.

Table 6.24: Quality of Using the Black Board in the Classroom

	Quality	Clearness of writing [n=33]		Margin/space/size of writing words [n=33]		Correctness of writing [n=33]		Sufficiency of writing and pictures use in board [n=33]	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
1	Very good	10	30.3	13	39.4	25	75.8	5	15.2
2	Good	20	60.6	15	45.5	7	21.2	24	72.7
3	More or less good	2	6.1	4	12.1	1	3.0	4	12.1
4	Not good	1	3.0	1	3.0	0	0	0	0

Use of Teaching Materials

175. Use of teaching materials in the classroom is one of the objectives of the project. About two-thirds of the teachers used teaching materials in the classroom. The used teaching materials included chart, poster, model, leaflet, picture and practical materials but in most cases chart and posters were used. The observers assessed the relevancy of the used materials in terms of the topics taught in the class and found that (87%) teaching materials were relevant and the rest was more or less relevant. They also assessed the level of attraction of the students in the classroom towards the used teaching materials. About one-fourth classes, level of attraction was very good and half of the classes were good and in the rest of the classes it was more or less good.

Method used

176. The teachers used multiple methods of presenting the lesson in the classroom. The used methods were lecture, discussion, individual work, group work and demonstration. Among the methods lecture and discussion were common. Group work was more than individual work. This is one of the new styles of teaching introduced during the project implementation period. Methods used by the teacher for presenting the lesson in the class are at table 6.25. All the methods were very good and good as assessed by the observers.

Table 6.25: Methods Used by the Teacher for Presenting the Lesson

	Methods used	Number) [n=34]	Percent
1	Lecture	23	67.6
2	Discussion	27	79.4
3	Individual work	15	44.1
4	Group work	24	70.6
5	Demonstration	5	14.7

177. Use of modern equipment (overhead projector) was found only in two classes and effect of using modern equipment was very good in one class and good in another class. Quality of demonstration in the class was good and more or less good in most of the classes while demonstration in one class was not good.

Participation

178. About two-third teachers provided scope to the students for participation while in the rest of the teachers did not provide scope to the students for participation. Techniques of participation was question and answer session, individual assignment, group activities, providing writing assignment, thorough discussion, presentation by students, role play, giving exercise on Mathematics in exercise book, giving exercise on Mathematics on black board warming or refreshing sessions. Pattern of participation is at table 6.26.

Table 6.26: Type of Participation of the Student in the Lesson

	Type of participation	Number [n=25]	Percent
1	Question and answer session	19	76.0
2	Individual assignment	7	28.0
3	Group activities	11	44.0
4	Giving writing assignment	9	36.0
5	Thorough discussion	1	4.0
6	Presentation by students	1	4.0
7	Role play	1	4.0
8	Giving exercise on Math in exercise book	3	12.0
9	Giving exercise on Math on black board	2	8.0
10	Warming or refreshing sessions	1	4.0



179. In about one third classes most of the students asked questions to the teacher and another one-third classes a good numbers of students asked questions while about one-tenth classes students did not ask questions at all. The teachers provided instruction for performing group work to the students and the observers assessed the instruction in terms of clearness and simplicity. The instruction was clear and simple for about 50% of the concerned teachers. During group work teachers supervised the work and provided instruction as needed and provided scope for

presentation of group work in about 50% cases. All the group works were presented in the class in front of all the students in the class. The remarkable areas of group work were presentation of written output, participation of other students and comments given by the students. Presentation was good in most of the cases. In all the observed classes the participation was very good.

180. Level of participation and interaction of the student in the lesson was generally good in most of the classes. Teachers were attentive to listen to the question and answers of the students in 85% classes. The answers of the questions were appropriate in about 80% classes. Relationship between teachers and students in the class was found very good and good in about 82% classes. The teachers in most (77%) of the classes could make the students attentive to their lessons and completed the lesson timely in 85% classes. It was noticed during observation that 88% teachers could make the students interested to know more at the end of the class. Their level of interest made was very good and good. In some classes the teachers could not make the students interested to know more at the end of the class.

Evaluation and Wrap up

181. The majority teachers (85%) made evaluation of the students in the class and the techniques of evaluation were both oral and written. The oral questions were quiz, narrative, thoughtful and descriptive type. Questions of evaluation were relevant to the lesson in 94% of the classes the questions were accurate and simple in almost all the cases.

182. The teachers wrap up the classes following various techniques such as orally presenting summary of session, writing the main sections of lesson in board and giving homework/assignment to the students. Some teachers followed more than one technique at the time of closing the class. The process of wrap up of the class is at table 6.27.

Table 6.27: Process of Wrapping up the Session by the Teacher

	Wrapped up with	Wrapped up [n=34]	
		Number	Percent
1	Orally presented summary of session	29	85.3
2	Wrote the main sections of lesson in board	27	79.4
3	Gave homework/ assignment	32	94.1

183. The teachers end up the class following different process. The process were leave the session room by giving the homework, only conveyed thanks and suddenly leave the room after ringing the bell. The process of end up class is at table 6.28.

Table 6.28 Process of End the Session by the Teacher

	Process of end the session by the teacher	Number [n=34]	Percent
1	Leave the session room by giving the homework	25	73.5
2	Only conveyed thanks	8	23.5
3	Did not make any conclusion	9	26.5
4	Suddenly leave the room after ringing the bell	4	11.8

C. Comments of Observers

184. The observers of the classes have some observation at the end of the class. The major observations class was interesting, made the student happy, students participated actively, and the teachers could make the student understand clearly, students were encouraged, presentation was aided by real things, good writing mechanism, students were not attentive, and they could not understand all things and developing helping attitude to each other. The details of the observation are at table 6.29.

Table 6.29: At the End of the Session Remarkable Reaction Observed by the Observer of the Session

	Observation	Number [n=34]	Percent
1	Class was interesting, made the student happy	19	55.9
2	Active participation	9	26.5
3	The teacher could make the student understand clearly	6	17.6
4	Students were encouraged	8	23.5
5	Presentation was aided by real things	2	5.9
6	Good writing mechanism	1	2.9
7	Students not attentive could not understand all things	2	5.9
8	Development of helping attitude to each other	1	2.9

1. Teaching Quality Index

185. Education quality is the ultimate result of significant contribution by each stakeholder in an education system. Teachers' quality has direct bearing on improving and sustaining quality in education. There are several quality attributes that influence the efficiency of a potential teacher while guiding his/her students towards a positive and value added academic outcome. Different attributes may have different weightage according to their priority of significance while evaluating quality of a teacher. In the present study multi-criteria-decision making is used in order to evaluate performance of a teacher. The teaching quality index is measured using five point scale. Overall teaching quality index is found 3.86 while this is 4.04 for male teachers and 3.56 for female teachers. During baseline survey the teaching quality index was 2.36 for male and 1.91 for female teachers (page 38 of baseline report). Remarkable improvement in teaching quality index is noticed during the evaluation survey.

2. Strengths and Weaknesses

186. The observers have assessed the strengths of the observed classes. The strengths included teachers were good in English, behavior with the students was excellent, teacher was good and skilled, performed question-answer session smoothly, presentation systems were introduced, mode of speaking was good, discussed in details and writing on the board. The strengths are at table 6.30.

Table 6.30: Comments of the Observers about Strengths of Teaching of the Teacher

	Observers Comments	Number [n=34]	Percent
1	Good in English	2	5.9
2	Behavior with the students were excellent	3	8.8
3	Teacher was good and skilled	11	32.4
4	Performed question-answer session smoothly	2	5.9
5	Presentation systems were introduced	10	29.4
6	Mode of speaking was good	5	14.7
7	Discussions ere in details	2	5.9
8	Writing on the board	6	17.6
9	Students were not attentive	2	5.9

187. The observers have assessed the weaknesses of the observed classes. The weaknesses included less materials were used, weak in English speaking, made hurry to teach in the class, lesson plan was not prepared, weak in time management, students were not attentive, teacher himself wrote on the board, he did not give scope of discussion, teacher did not attend the class in time and many students could not understand the lesson. During baseline survey there was little evidence of lesson planning and additional teaching and learning resources were scarce (page 38 of Baseline Survey Report, 2007). The details of the weakness are at table 6.31.

Table 6.31: Comments of the Observers about Weakness of Teaching of the Teacher

	Observers Comments	Number [n=34]	Percent
1	Less materials were used	8	23.5
2	Weak in English speaking	2	5.9
3	Made hurry to teach the class	2	5.9
4	Lesson plan was not prepared	3	8.8
5	Weak in time management	4	11.8
6	Students were not attentive	2	5.9
7	Teacher wrote on board, did not give scope of discussion	2	5.9
8	Teacher did not attend the class in time	4	11.8
9	Many student could not understand the lesson	2	5.9

Section VII Perceptions of the Students about Improvement of the Teaching-Learning in School

188. The team of consultants desired to assess the impact of TQI on students of the secondary schools and accordingly interviewed 1855 students of class six to ten. Out of these students 327 were of class six, 390 were of class seven, 385 were of class eight, 372 were of class nine and 381 were of class ten. Group of students are not applicable for class six to eight. Among the students of class nine and ten 342 were of science group, 229 were of arts group and 182 were of commerce group.

189. The students opined that the teachers followed various techniques of teaching. These techniques are lecture, question-answer, discussion, story telling, role play, pair learning, participation in lesson, learning by doing, lesson by using materials, observation on participation in work and observation on participation in group work. More than three-fourth (76%) students opined in favor of discussion followed by question and answer (68%), lecture (55%). Role play, participation in lesson and use of materials are inadequate. These methods and techniques lead the students towards self learning. The details of techniques used by teachers are at table 7.1.

Table 7.1: Lesson Techniques Used by the Teachers

	Techniques used	Number [N=1855]	Percent
1	Lecture	1026	55.3
2	Question-answer	1262	68.0
3	Discussion	1418	76.4
4	Story	606	32.7
5	Role play	169	9.1
6	Pair learning	698	37.6
7	Scope of participation in lesson	436	23.5
8	Learning by doing	855	46.1
9	Lesson by using materials	587	31.6
10	Observation on participation I work	417	22.5
11	Observation on participation in group work	571	30.8

190. The students opined that the methods used by the teachers in the classroom help them in learning. The ways of help are active participation in lesson, help in understanding the lesson easily, good relationship and helping attitude with the classmates, scope of exposing the weakness in group work and increasing self confidence. About 93% students opined that they are benefited in understanding the lesson easily followed by active participation in lesson. Working environment in the class and creating interest in undertaking practical job outside the class. In these ways they are learning by doing and with the help of teacher they can develop a clear understanding of the lesson. Ways of help are at table 7.2.

Table 7.2: Help in Learning Process by the Methods Used in the Classroom

	Help in Learning Process	Number [N=1855]	Percent
1	Active participation in lesson	1041	56.1
2	Help in understand the lesson easily	1716	92.5
3	Good relationship and helping attitude with the classmate	974	52.5
4	Scope of expose the weakness in group work	603	32.5
5	Increase in self confidence	638	34.4

191. Almost 100% students opined that the trained teachers are careful to make the concept of the subject clear to the students and they also informed that teaching of trained teachers is attractive. The students ranked their attraction by subject of teaching. According to their ranking Mathematics is the most attractive subject in the class. The in the public examination fail in Mathematics is reduced than the fail in earlier years. This might be due to attraction created through the TQI. The next interesting subject is English followed by Bangla. It is observed from the opinion of the students attraction of students in other subject is less. It is the time to give emphasis on other subject before happening catastrophe. Ranking of opinion of students on attraction in different subjects is at table 7.3.

Table 7.3: Ranking of Opinion of Student on Attraction in Different Subjects

	Subject	Number [N=1855]	Percent
1	Bengali	1392	75.0
2	Mathematics	1551	83.6
3	English	1439	77.6
4	Religion	836	45.1
5	Economics	64	3.5
6	Social Science	597	32.2
7	General Science	824	44.4
8	Home Economics	60	3.2
9	Business Education	70	3.8
10	Agriculture	248	13.4
11	Accounting	143	7.7
12	Education Science (Pedagogy)	5	0.3
13	Chemistry	207	11.2
14	Physics	205	11.1
15	Biology	168	9.1
16	Elective Mathematics	66	3.6
17	Geography	107	5.8
18	History	100	5.4
19	Computer	50	2.7

192. The students provided the level of development of teaching through training of Teaching Quality Improvement (TQI) in secondary Education Development Project. They assessed the level as very good, good, more or less good and not good. The areas of the assessment were confidence of teachers on presentation, skill of use the lesson techniques, skill on selection and use of materials, making the participation of the student in lesson, skill on of making attentiveness of the student and keep it up and

conclude the session with following the steps properly. Level of assessment of majority areas were good followed by very good, more or less good and not good. Areas of development of teaching of the teachers through TQI training according to the opinion of students are at table 7.4.

Table 7.4: Areas of Development of Teaching of the Teachers through TQI Training

	Area of Development	Very good [N=1855]		Good [N=1855]		More or less good [N=1855]		Not good [N=1855]	
		No.	%	No.	%	No.	%	No.	%
1	Skill of use the lesson techniques	967	52.1	745	40.2	140	7.5	3	0.2
2	Skill on selection and use of materials	690	37.2	1010	54.4	153	8.2	2	0.1
3	Making the participation of the student in lesson	624	33.6	1010	54.4	206	11.1	15	0.8
4	Skill on of making attentiveness of the student and keep it up	670	36.1	959	51.7	219	11.8	7	0.4
5	Conclude the session with following the steps properly	657	35.4	969	52.2	219	11.8	10	0.5

193. Study noted that about 15% students are not aware enough on introduction of School Based Assessment (SBA) system. Students of all the classes replied that SBA was not introduced although they are doing learning following SBA. The majority students (81%) replied that the teacher provide advice to the students based on the results of SBA.

194. The students opined about of use of SBA. They opined about component and use of components as more marks shall be allotted for SBA, happy with the use of SBA, more SBA shall be done, attraction in study increases due to SBA, inspired in class test due to SBA, quality improves using the SBA components, imitations of using SBA components, increases creativity, good, attractive, help in learning, debating, question and answer session, demonstration of teaching materials, rearrangement of class seating, quiz, apply different methods of teaching, problems due to shortage of time, easy to understand and know, teachers need to be more active attendance of school and attendance increased due to SBA.

195. The students opined that some steps are taken to increase the attendance of students in class. These steps are introducing prize on attendance, giving marks on percentage of the attendance, encouraging by giving certificate, realizing fine for the absence, making the classroom work attractive, giving punishment or warning, advising for attending, taking care, informing guardians, causes of absence are to be explained, taking prior permission for leave and object in giving admit card, class routine and examination. Steps taken to increase attendance in the class are at table 7.5.

Table 7.5: Steps taken to Increase Attendance in the Class

	Steps taken	Number [N=1855]	Percent
1	Introducing prize on attendance	1108	59.7
2	Giving number on percentage of the attendance	871	47.0
3	Encouraging by giving certificate	371	20.0
4	Fine for the absence	856	46.1
5	Making the classroom work attractive	711	38.3
6	Provision for punitive measures	241	13.0

196. Majority of the students opined the steps very good (59%), well (39%) and not needed (2%). The student expressed their opinion about implementation of activities of SBA. The important activities of SBA are introduction of class examination, addition of marks of class examination in annual examination, individual assignment given by the teacher and providing group assignment in the class/homework. Use of different steps of School Based Assessment is at table 7.6.

Table 7.6: Use of Different Steps of School Based Assessment

	Use of different components of SBA	Yes		No	
		Number	Percent	Number	Percent
1	Introduction of Class Examination	1722	92.8	133	7.2
2	Addition of marks of class examination in annual examination	877	47.3	978	52.7
3	Individual assignment given by the teacher	1259	67.9	596	32.1
4	Group assignment in the class/ homework given	1605	86.5	250	13.5

197. The students informed that they undertook group assignment in last year and average number of assignment was 18.7. A mixture of good and bad picture is seen in case of performing group assignment. Some students informed that they completed 163 assignments in last one year while about 22% students reported that no group assignment undertaken in last one year. This is one threat of implementation of SBA in schools. Picture of undertaking individual assignment is almost similar to the group assignment. The picture of undertaking individual and group assignment is at table 7.7.

Table 7.7: Number of Individual and Group Assignment Undertaken in the Last Year

	Number of assignment	Individual assignment		Group assignment	
		Number	Percentage	Number	Percentage
1	0	688	37.1	402	21.7
2	1	43	2.3	31	1.7
3	2	72	3.9	72	3.9
4	3	102	5.5	76	4.1
5	4	98	5.3	117	6.3
6	5	106	5.7	138	7.4
7	6	47	2.5	116	6.3
8	7	25	1.3	33	1.8
9	8-10	249	13.4	304	16.4
10	11 +	425	22.9	566	30.5
	Average	10.6		18.7	

198. In case of bad result of the students the teachers undertake various steps for improvement. The common steps are informing the guardian, arranging special classes, monitoring the works and giving extra home work. Distribution of opinion is table 7.8.

Table 7.8: Steps Taken by the Teachers In Case of Bad Result of Class Test

	Steps Taken	Number	Percent
1	Informing the guardian	1729	93.2
2	Arranging special classes	1164	62.7
3	Monitoring the works	1272	68.6
4	Giving extra home work	1119	60.3
5	Other (please specify)	241	13

199. Practical class in science subject is inadequate and about 38% students informed that practical class on science is taken and availability of equipment in about 34% classes. Most of the teachers (98%) take initiative for leadership development in the class. Several types of initiatives are taken for leadership development. The major initiatives are selection of class captain (98%), formation of BNCC (14%), formation of scout (54%), arrangement of drama (15%), group-wise debate competition (43%) and Girl's Guide (3%).

200. The students identified some areas on which teacher give importance in the class. The students also ranked the areas according to importance. Their rankings are initiatives for making the concept clear (76%), help in learning (53%), practical work (50%), and active participation in group learning (48%) and memorizing the subject (38%).

201. The students provided opinion about attendance of teachers and understanding the lesson. Most of the teacher are regular (88%), some teacher are slightly irregular (11%) and the rest are irregular. Majority teacher (76%) understand subject fully while some teachers understand partially (24%). The students assessed the quality of teaching in terms of spent all the class time on the lesson, use of proper teaching materials and enjoy the class of the teacher. Students' assessment is positive but there is scope of improvement. Teaching Quality at the Classroom is at table 7.9.

Table 7.9: Teaching Quality at the Classroom

	Number of teacher	Spent all the class time on the lesson		Use of proper teaching materials		Enjoy the class of the teacher	
		Number [n=1855]	Percent	Number [n=1855]	Percent	Number [n=1855]	Percent
1	Mostly	1483	79.9	1086	58.5	1351	72.8
2	Some teachers	372	19.8	751	40.5	487	26.3
3	None	5	0.3	18	1.0	17	0.9

202. More than half of the teachers give home task always (55%); some teacher give home tasks sometimes (44%) and the rest never give home tasks. Pattern of providing feedback on home task is similar to the home work. Most of the students (98%) informed that the feedback on home tasks is helpful for their improvement.

203. Head teachers inspect the classroom frequently (44%), sometimes (54%) and never (2%). Through close supervision of class the head teachers can identify the teaching learning problems and through feedback s/he can help the colleague to overcome the problems of delivery lesson. TQI-SEP's method of supervision and feedback of lesson are very effective for teachers' skill development. Sufficient books are available (70%) in the school library and books are issued to the students. Students of the school participate in co-curricular activities (97%) and types of co-curricular activities are games, debate, singing and dance and drama. Participation in co-curricular activities develops teachers' creativity and improving relations among them. Distribution of opinion of students is at table 7.10.

Table 7.10: Distribution of Opinion of Student about Participation in Co-Curriculum Activities

	Type of activities	Number [n = 1855]	Percent
1	Games	1733	93.4
2	Debate	1127	60.8
3	Singing and dance	890	48.0
4	Drama	628	33.9

204. The students identified some constraints for getting quality education. Major constraints are scarcity of quality teachers (39%), scarcity of quality of classroom (58%), inadequate book in the school library (47%), inadequate modern equipment (64%), scarcity of facilities for getting information (63%) and lack of playground and canteen (9%).

205. The students opined the teachers take several methods for measuring knowledge, skills and outlook. The important measures are : discussion, presentation, teach attentively, repeated to make the subject clear, undertake practical classes, use materials and teaching aids, projectors, multimedia and computers, role play, dances, songs, dramas, set examples, story telling, question and answer sessions, exercises, individual works, assignments, commit to memory, home tasks, examinations, quiz (annual, quarterly, monthly, weekly and daily), awareness raising, encourage, advice, inspire, award giving, attendance, regularity, sincerity, responsibility, neat and clean, good environment, attitude, behavior, activity, manner, and relation with students and popularity.

206. Other important measures include: keep contact with students, inform over mobile phone, arrange free extra classes for the weak students, lesson plan, group activities, identify the trained teacher, advise to participate in sports, inform the guardians, take part in the creative activities, discuss the recent activities and occurrences, advise to read newspapers, check the lesson from the student regularly, everyday checking the complete the work of the day, fair and correct writing, try to develop the quality, participate in debate, using SBA components, instruct the student to show the guardians after completing the homework, review the previous class lesson, involve in social activities, involve in cultural activities, provide up-to-date information and report, encourage for correction of misinformation, giving solution of problem, perform proper evaluation through different methodology, ask for writing on board, presentation by a good student, prefer reading text books, arrangement for teaching of strong and week students together, discuss displaying writings on a large poster, help in understanding, competition on general knowledge, well prepared before teaching and take care of the students.

207. The students identified the difference of teaching between trained and untrained teachers. According to them the differences are trained teacher follow certain methodology, good presentation, make the subject clear in understanding, easy to understand, excellent in teaching, use teaching aids,