

Contract No. C08-286(Revised)  
**Final Report**  
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**Evaluation of Capacity Building  
Of  
Centre for Environment Education (CEE), Ahmadabad.**

Prof M N Deshmukh,

Commonwealth of Learning (COL)  
August, 2008

**M & E Report**  
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**Evaluation of Capacity Building of Centre for Environment Education (CEE), Ahmadabad.**

Prepared by Prof M N Deshmukh, COL Consultant.  
Submitted to: Professor Asha Kanwar, Vice-President and Program Director (VP&PD), Commonwealth of Learning (COL) on August 31<sup>st</sup>, 2008.

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**Preamble:**

The Commonwealth of Learning (COL) engaged Prof M.N.Deshmukh (see Annexure-1) as consultant to evaluate the Capacity Building of Center for Environment Education (CEE), Ahmadabad.

As per the TOR of Contract (Annexure -2.), the consultant was expected to (1) assist the Vice President and Programme Director (VP&PD) to develop and implement an evaluation plan, (2) prepare and review the draft evaluation plan with the VP&PD, (3) identify appropriate data and develop data collection strategies, (4) implement the evaluation plan as agreed with the VP&PD, (5) conduct preliminary investigation showing the initial observations and detailed plan for further investigation and reporting, and (6) produce draft and final report(s) according to the Monitoring and Evaluation Report Format prepared by COL.

To complete these tasks successfully, a plan of action for evaluation was prepared and submitted by the consultant on May 31<sup>st</sup>, 2008 for the review of the VP&PD which was approved by her on June 02nd, 2008 (Annexure -3.)

Accordingly, evaluation work is completed and the draft report was prepared in the format prescribed by COL and submitted to VP&PD for feedback, on August 20<sup>th</sup>, 2008. Also, the draft was personally discussed with Ms Shivani Jain, CEE, on August 24<sup>th</sup>, 2008 in the meeting at Jamnabai Narsi School, Mumbai.

After this discussion with CEE representative and after considering the feed back received from Dr. Abdurrahman Umar, Education Specialist-Teacher Education, COL on August 28<sup>th</sup> 2008, the draft was suitably updated, modified and the final report is submitted to COL on August 31<sup>st</sup>, 2008.

## **REPORT**

### **Evaluation of Capacity Building Of Centre for Environment Education (CEE), Ahmadabad.**

## List of Abbreviations

Following abbreviations are used in the report quite frequently:

CEE:	Centre for Environment Education (CEE), Ahmadabad.
COL:	Commonwealth of Learning
EE:	Environment Education
GOI:	Government of India
GT:	Green Teacher
GT (On-line):	Green Teacher program delivered On-Line
ICT:	Information and Communication Technology
IGNOU:	Indira Gandhi National Open University, New Delhi
LCMS:	Learning Content Management System
LMS:	Learning Management System
L3 Groups:	Life Long Learning Groups
M&E:	Monitoring and Evaluation
NCERT:	National Council for Educational Research and Training, New Delhi
NCTE:	National Council for Teacher Education
NIOS:	National Institute of Open Schooling, New Delhi
ODL:	Open and Distance Learning
OER :	Open educational Resources
R&D :	Research and Development
SIM	Self Instructional Material
Tech-MODE:	Technology Mediated Open and Distance Education
TOR:	Terms of Reference
VP&PD:	Vice-President and Program Director, COL
YCMOU:	Yashwantrao Chavan Maharashtra Open University, Nasik

## 1. Executive Summary

### **Project Description:**

Center for Environment Education (CEE) is a unique institution with a great background, tradition and concrete contribution in the field of Environment Education. It was started before quarter of a century (in 1984) as a “Center of Excellence” with the support of Government of India (GOI) to promote environment awareness and translate it into positive public action on environmental issues when EE was some how neglected area in the country.

In last 24 years, CEE has built itself into a strong potent environment education institution, with a missionary team of dedicated young workers and a network of offices established all over the country promoting its Environment Education (EE) programs and activities for masses.

With a conviction that education is a major instrument for social reconstruction and that the teacher is pivotal to such a social restructuring program; school and the teacher were the focal points for CEE activities and the teacher training activities were always a priority area for CEE.

### ***Genesis of Green Teacher Program (GT)***

The CEE has designed Green Teacher (GT), a Diploma course in Environment Education, as an in-service teacher training program, a capacity building, open and distance learning (ODL) program of one year duration, for teachers and education professionals with the object to enable them to take up environmental issues and concerns and prepare their students for practical, action oriented Environment Education (EE) activities and programs. This program was offered by CEE as Open and Distance Learning (ODL) program without much professional insight in ODL. However, for last few years, the CEE has embarked on capacity building in developing and delivering ODL programs with international partnerships and collaboration. The GT program is the main COL collaboration with CEE.

Any teacher can join this program. The number of students admitted for the program in last three batches at the six study centers comes to 165 (52, 90, 23 respectively) and 120 completed the program successfully.

The curriculum of the program includes the study of four modules written in SIM format to be studied by self in six months (about 240 hours) viz. Basics of Ecology and Life Support Systems, Understanding Sustainable Development, Environmental Education in Schools, Resources and opportunities for EE. It also includes module end assignments and two contact sessions of about five days each and a field related Project, to be completed in about five months. The instructional system design is based on the latest pedagogy- Constructivist theory and the Situated Learning Design. Learning resources provided include a package of printed learning material comprising of a Learner's Handbook, a set of four modules, essential readings for two modules and an interactive Green Teacher CD. The CEE is in the process of digitization of this material.

The GT program is delivered through dual mode-Face to Face, as well as distance mode-through six study centers in a decentralized manner, and the program schedule includes first contact session and practicing with the activities in classroom situation during first quarter (June-July-August), to be followed by self-study, completion of the tasks and assignments prescribed in the course, submission of the module-end assignments and thinking of the action project in the second quarter (August to October). The third and the fourth quarters (November to February) are devoted mainly for planning and implementing a major action project. Written course end examination is held in the month of May to June along with project presentation and viva voce examination

The school based action project is an important component and strength of the program.. This activity serves dual purpose-it provides opportunity to apply knowledge gained in the GT program in the school settings, and, it further provides practical training in conducting small activities to a full fledged EE program in the school. The learner is expected to maintain the record of activities, at least in the context of project work.

Students are supported through a small library and CEE publications kept at the study centers for sale and the two contact sessions. Student queries are responded through e-mail, fax or post. Formative assessment of the student performance is done which includes assessment of assignments, participation in the contact sessions, project work and written examination. The weightages to different components of the program is 30% assignments, 30% written examination, 10% Contact sessions and 30% project work, making total credit of 200 marks. Passing is at 40% of marks in each of these heads.

#### **Intended out puts and outcomes:**

Though no specific out puts and out comes are defined by CEE for GT except a few objectives of the program, logically it seems the short term outputs and outcomes expected of GT include (1) A well designed ODL based teacher training program and field tested and validated courses, (2) Capacity development of CEE functionaries for development and implementation of ODL based program and

material, (3) Large number of teachers trained in EE, at their work-place, (4) Field related action projects, (5) Infrastructure and (6) Effective partnerships.

The long-term outputs expected of GT are (1) Strengthened process of teaching-learning of environment education integrated with national school curriculum and school system (2) A networked Tech-MODE for functionaries and teachers (3) A knowledge platform for teachers and functionaries in the field of EE to share their ideas and knowledge with the larger educator community and (4) Life Long Learning communities of teachers and educators in EE

### **M & E purpose**

COL has selected “Learning for Development” as a focal theme for the period 2006-9. Human environment is one of the three priority sectors of activity during this period for COL. GT of CEE is one of a major initiatives in EE sector along with out put and out come statements defined , for the results expected in terms of policy, systems and models/materials and knowledge management. The monitoring and evaluation of GT will provide an insight to the partners of the collaboration i.e. COL and CEE, in the strengths of the program and the aspects where more attention is needed.

COL has evolved a Corporate Logic Model for this purpose. The performance indicators are defined in the model in order to evaluate achievement of the outputs, outcomes and impacts that are sought in the project by the organizations. This model is used for evaluation of CEE.

### **Findings-expected & unexpected**

(1) CEE has clarity of ideas and sound planning. GT is a very strong and potent program in EE. The instructional design of the GT is based on a sound pedagogic framework. Specifically, the learning activities and project work are considered as of high quality. The assignments are also conceived well. But the criteria for assessment of the assignments and project work need to be worked out properly.

(2) CEE has mainly produced and used conventional print material with one interactive CD which is considered adequate in quantity and is of good quality. No other multimedia or digital materials or OERs are considered by CEE. This issue assumes greater significance particularly in the light of CEE’s decision to go on-line.

(3) There is a good network of CEE centers all over the country, equipped with the administrative support available to GT. If equipped with proper ICT and academic support of experts, the network can deliver the program in a much effective manner to a larger number. If available, network of learners, other experts, resource persons, functionaries and organizations will facilitate group learning and better output of the program.

(4) Student support seems to be available only during two contact programs of a very short duration. A strong, ICT based, continuous students' support system is a need of GT for improving out put, out come, as well as, impact-both qualitatively and quantitatively.

(5) A continuous evaluation of the student performance is being attempted. Application type questions are used requiring students to reflect. But there is a need to evolve simpler and well defined evaluation criteria and to inform it to students, at the beginning of the program.

(6) Besides partnership with COL for developing GT as an ODL program for institutionalizing Tech-MODE, including production of study material and delivery, CEE has also established contacts with the apex institutions of national and state level education system like National Council for Educational Research and Training (NCERT), National Institute of Open Schooling( NIOS), Yashwantrao Chavan Maharashtra Open University ( YCMOU) , Indira Gandhi National Open University (IGNOU), National Council for Teacher Education ( NCTE) etc. to deploy the GT in regional languages like Gujarati, Marathi and Hindi. These partnerships need to be expedited and strengthened.

(7) In three batches only 165 students registered and about 120 completed the course successfully. For the ODL program, this is a very small number and a meager out put. Enrollment is reduced to negligible number and is a matter of concern, particularly when there is a potential in CEE a plan for going on-line, and when there is a dire need of training of teachers in EE. Perhaps the CEE has not marketed the program as aggressively as required for a new program like GT. Many people are not even aware of the program. It needs a strong propaganda.

(9) An important impact of the program is observed in positive change in personal and professional attitude of the learners and transfer of training in to field action which is a strength of the program and it should be appreciated in tangible terms to motivate the students further to work in EE with continued activities resulting in sustainable development.

(10) There needs to have a strong system and a serious provision made for quality assurance in GT with continuous R & D activities as integral component of the program development and delivery system.

## **Conclusions / recommendations**

Some important conclusions/ recommendations are given below:

- (1) The program has got a great potential and strength, but the delivery mode needs further strengthening in operations.
- (2) Infrastructure is available to CEE. However, it may not be adequate and relevant when GT (On-line) is launched. It may need to be further augmented with relevant ICT back up.
- (3) A stronger and continuous support to students needs to be provided. L3 groups have to be formed for taking advantage of group learning and cooperative and collaborative learning.
- (4) Serious attempts are required to improve enrollment and out put of the program. However, the percentage of students completing the course within stipulated period of one year is much better.
- (5) The partnerships are at operational level and for extending out reach of the GT. But such partnerships can be explored for designing, development and delivery of the program activities also, capitalizing on the strengths of the partner institutions. It is suggested for CEE to have stronger collaboration with other ODL systems and national institutions like NCERT, IGNOU, YCMOU, NIOS etc. Exploring a possibility of creation of an international consortium for EE is also strongly recommended.
- (6) The GT has got all the potential and strengths required for sustenance of a powerful ODL, on –line, Tech-MODE program. It needs chanzalizing that potential for best possible out put. It also needs a strong quality assurance mechanism inbuilt in the program.
- (7) Systematic intensive training of course writers in Instructional Design suitable for Constructivist pedagogy and Situated Learning Design (SDL) adopted for GT by CEE may be earnestly taken up
- (8) While digitizing the material, provision for mass personalization of the study material useful for ODL and Tech-MODE delivery system, and development of repository of relevant OERs in different formats, may be considered as a next immediate step of development. Considering the potential of the CEE and the GT program, and considering the fact that so far COL support has resulted in capacity building of functionaries, manpower development and creation of essential

material production facilities with required technology, COL may consider continuing support for digitization and on-line delivery of GT.

(9) An integrated, blended learning approach to study this Tech-MODE program with flexibility of choosing the appropriate accessible ICT is considered preferable in the Indian conditions where digital divide and disparities of resources, are pre dominant. Distributed Classroom and Networked Learning may be encouraged.

(10) A manual for designing and implementing the projects related to local environmental issues including a proper evaluation criteria and strategy may be developed and used for better out come, impact and sustainable development of the local community.

(11) Maintaining and assessing the Portfolio of students' learning activity, a best suited evaluation strategy for constructivist pedagogy, may be adopted for comprehensive evaluation in GT along with clear, well defined criteria.

(12) For improving the enrollment and output of GT program, a professional approach may be adopted to plan an effective strategy to increase the outreach and to propagate GT in a wider field, particularly in rural areas.

(13) A sound financial model to make GT economically viable and sustainable has to be developed involving public-private-community partnership with a win-win position.

(14) The Research & Development (R&D) activities should be integral part of GT- particularly during its formation phase. It would be much appreciable to conduct Academic audit of CEE every alternate year by an expert group with a couple of members from alumni included.

### **Limitations**

Present evaluation is in the context of mainly GT which was the program for which COL-CEE collaboration came in to existence. Evaluation is restricted to Qualitative analysis of project and process components of GT as a ODL program. Not much statistical analysis was involved because the available data itself was very small.

## 2. Project Context

### **Objectives:**

The Green Teacher is a unique capacity-building, distance learning programme aimed to enable teacher-learners to:

- Enhance their understanding of:
  - Science of Environment, concept of Sustainable Development and related issues
  - Environmental Education (EE) —theory, approaches and methods
- Strengthen their skills in:
  - Teaching textbooks ‘environmentally’
  - Utilizing interactive and experiential teaching-learning methodologies for transacting EE
  - Developing locale and situation specific EE projects, activities, materials, etc. to suit requirements.

### **Intended out puts and outcomes:**

The CEE has not defined the out comes and out puts of the GT program in specific terms. Only some objectives of the program are given as above. However, expected out comes are logically inferred from the literature about CEE and discussions with CEE office bearers and GT functionaries (without deliberating about the out put in terms of specific number).

The short term outputs and outcomes expected of GT could be -

- a. A well designed ODL based teacher training program and courses.
- b. Capacity development of CEE functionaries for development and implementation of ODL based program and material
- c. Teachers trained in EE
- d. School projects related to local environmental issues for creating positive attitude in teachers and students to transfer knowledge in to action for development
- e. Infrastructure for longer training support to teachers who implement EE in their schools
- f. Effective partnerships with other organizations

The long-term outcomes expected of GT include-

- g. Strengthened process of teaching-learning of environmental education integrated with national school curriculum and school system.
- h. A networked tech-MODE platform for functionaries and teachers to share while engaged in teaching-learning of environmental issues.
- i. A knowledge platform to teachers for sharing their ideas and knowledge of EE with the larger educator community.
- j. Creation of Life Long Learning communities of teachers and educators in EE

### **Activities Implemented To Achieve these Out comes:**

#### **(1) Enrollment**

Every year fresh batch of students is admitted during summer vacation and the new session starts in the month of June. Any teacher can join this program. The number of students admitted for the program in three batches at the six study centers comes to 165 (52, 90, 23 respectively) and so far 120 students completed the program successfully. Quality of the product seems to be good –out of 120 declared successful, more than 50 percent passed with Gold and Silver leaf.

Number of students seeking this course suddenly has declined to meager 23 in the last batch from first batch of 52 which was a pilot batch, and from the first batch of full fledged GT of 90 students. For the ODL program, this is a very small number and a meager out put. Enrollment is reduced to negligible number of 23 in just three years which is a matter of concern, particularly when there is a potential in CEE a plan for going on-line, and when there is a dire need of training of teachers in EE.

#### **(2) ODL Capacity Building Activities:**

##### **(A) Capacity to Design and Develop Courseware:**

The GT has five program components viz. Course modules, Study material, Learning activities, Assignments and Project work.

Four modules of the GT program were developed by the CEE staff members, guided by a multidisciplinary team of experts and reviewed by practitioners and experts in instructional design, as well. Two of those four course writers are still with GT staff available for further revision.

All the course writers were trained in development of SIM for ODL in three workshops conducted by the national and international experts provided by COL as consultants like Dr. Som Naidu from the University of Melbourne, Australia; Dr. Murugan from the University of West Indies; Dr.B. Phalachandra and Dr. Vasant Bhatt from NCERT, New Delhi, etc. The workshops focused on ODL and SIM and the latest theories of teaching and learning and provided different options in instructional design to course writers. These modules were reviewed and revised in 2006, by a group of 40-50 practicing teachers engaged in EE activities in schools, in a workshop facilitated by Dr. B.Phalachandra. These revised modules are being used at present.

Over 15 CEE staff members were oriented in ODL and SIM; about 5, actually trained in the skills of designing, developing and using SIM for ODL. The CEE keeps its staff exposed to various programs like conferences, seminars and workshops, related to ODL. This brings in an understanding of the updates and advances in ODL to the CEE team.

(B). Capacity to design and develop Learning Resources:

Material development is a core activity of the CEE with a fully dedicated group assigned to it. At present the CEE is using a set of four printed booklets for four modules with two essential readings and a Learners' Handbook. An interactive CD on GT is also included in the package. This material is considered adequate and of good quality by the learners.

This material was developed by 6-8 CEE team members, trained in preparation of SIM, with external expert support. It was reviewed in 2006 by a group of practicing teachers in a workshop. This revised material is being used for GT, at present.

CEE teams were sponsored by COL to attend a few workshops-one at ICRISAT, Hyderabad on VSAT and OERs; one on monitoring and evaluation in New Delhi; one on e-learning at Cochin, and a few more on ODL for SD at Ahmadabad, India. A visit of CEE staff member was also sponsored by COL to MAFSU to understand their work in ICT and education.

Such exposure provided CEE members with opportunities to hone up their skills in ODL and to keep them updated about the developments in ODL around the world.

CEE has also procured a full time in-house facility of a graphic design studio, which has a digital printing and screen printing facility attached to it. A video-editing facility has also been provided by COL to CEE. Orientation programme in this regard was conducted for CEE staff in 2007 by Dr. David Walker.

CEE feels need of advanced level training in using the Casablanca video editing facility, as well as, training in using OERs

(C). Delivery system and Deployment strategy:

Dual mode of delivery is adopted by CEE for GT. Face-to-face inputs are kept to minimum, mostly confined to two contact programs. Mostly, students study themselves for the modules and project work is conducted at their work place-school.

CEE has a network of over 40 offices in the country, which include 5 regional offices and a Delhi Office. The GT program is run in a decentralized manner through six study centers housed in six of CEE offices. The infrastructure available at these offices is used for the deployment of the programme.

At each of the six study centers, one full time project officer and a part time project coordinator is available for GT. At the Secretariat, there is a team of one full time Project Officer; one full time Admin Officer and a part time Project Director. This skeletal staff takes care of Mentoring, Tutoring and Counseling in GT. There are no separate Mentors/Tutors/Counselors appointed at the study centers.

Many a students felt need of more F2F inputs. For them only two contact sessions were not adequate. They feel more interaction is necessary as attitudinal change and transfer of training in to action, is involved. ICT can provide the immediate support much needed in this kind of ODL program. They appreciated and liked most, the field based learning experiences such as field visits, observations etc.

(D). Student support:

The program is run in a decentralized manner through six study centers. Students are asked to choose a study center of their convenience and their requirements are generally met by the study center. Students' queries are mainly attended through e-mails and phone calls by the staff at the Study Centers; unless otherwise required, the Secretariat does not get involved in communication with learners, except for the initial communication soon after the registration.

The second contact session is used as a forum to discuss problems and learning of the students. In the bigger cities like Delhi and Bangalore, where there are many local (within city) registrations, counseling sessions (once a month) are also organized, based on the needs of the learners. All mentoring/tutoring/counseling is done at the contact sessions by the co coordinators and staff of the CEE. They attend to all the queries of the students-personally, as well as, through e-mail.

All Academic services, including evaluation and assessment of project and assignments are the functions assigned to Study Centers. In most cases the Study Center staff is trained in those functions except some times when there is a change of staff at a centre

In the staff available with CEE for Mentoring, Tutoring and Counseling included are Five-six Counselors trained in ODL, nine trained and five-six untrained resource persons and nine trained and three untrained tutors. Many of them function in multiple roles. No separate arrangement for mentoring / tutoring / counseling is made for GT.

As a feedback system for monitoring the program, the CEE uses annual meetings of all GT teams, clubbed with the annual meeting of CEE to provide a forum for programme review and improvement. Any new element of the programme is first suggested to all Study Centre teams, over e-mails, and their opinions and suggestions are sought before finalizing a change in the system, or introducing a new element in the system.

CEE runs a portal for teachers, [www.greenteacher.org](http://www.greenteacher.org), for on-line communication. This is a functional and updated website with one person looking after the site. As mentioned earlier, CEE is working with COL towards institutionalization of Tech-MODE at CEE under the “Livelihood and Human Environment theme”. Also for the last 2 years, CEE has worked with COL to digitize the GT material and work towards launching GT online.

Perpetual license is procured by CEE for the customized LMS, called Adventus which is available to staff. But none is fully trained to use it. About 6-8 persons are oriented to OERs and their use.

No other technological support is yet available with CEE for GT, such as tools like tailor made Learning Content Management System (LCMS), Content Development and Operations Tool (CDOT), On -Line Examination System, etc. The CEE will need to train its functionaries to develop and use such tools for better learning. It seems in phase II of the Tech-MODE work, capacity building is envisaged by CEE as a major focus with the arrangements for staff training and retraining, on cards.

Even though, there was no systematic provision for connected learning community, some students themselves formed the self-help group and members supported each other. Weekly meetings, virtual as well as real time, of this group did wonders for many of the students, handicapped in their learning. Such an initiative was found to be very rewarding and motivating by many learners.

(E). Evaluation strategies:

Formative assessment of the student performance is done which includes module end assignments, participation in the contact sessions, project work and written examination. Assessment is done by two independent evaluators separately to maintain objectivity of the evaluation. The weightages to different components of evaluation is- 30% assignments, 30% written examination, 10% Contact sessions and 30% project work, making total credit of 200 marks. Passing is at 40% of marks in each of these heads. Those who secure 40-60% marks are awarded Bronze Leaf certificate. Silver Leaf is for 60-70 % and Gold leaf for securing more than 70% marks. These details are given to the Learner's in Handbook. Student is expected to keep record of all the project work and submit at the time of project presentation.

(F). Global linkages and partnerships:

There are established linkages abroad for extending GT globally. There is an extended partnership between COL and CEE for developing and delivering the GT. The nature of these partnerships is supportive and development oriented.

Besides COL's involvement, number of other national and international institutions, in India and abroad, seems to be interested in adopting GT. National Teachers' Institute, Nigeria plans to adapt and offer GT in Nigeria. A training programme is already conducted by CEE for formal education practitioners from Nigeria. The CEE was also involved in developing the EE component of curriculum framework of NCTE for teacher education.

(G). Sustainability:

It is too early to comment about the sustainability of the GT program and its impact. It is just three batches old. In the short span of five years since its inception in 2002-3, the program has passed through different phases like F2F to ODL to now On-Line. Different systems are in the process of stabilization. Now the CEE has decided to switch over to Tech-MODE from conventional ODL technologies.

Offering the programme in regional languages of the country is the key strategy being adopted at CEE for sustenance of this impact. But the initiatives are yet to take off.

**Partners involved**

Partners involved in this project were mainly COL and the CEE but in the process of development and implementation of the project many national bodies were involved like NIOS, NCTE, GSCERT, YCMOU etc

## **Limitations of the evaluation**

Evaluation is restricted to CEE capacity related to ODL, Qualitative analysis of project and process components is conducted. Not much statistical analysis was involved because the data itself was very small.

CEE has various activities and programs being conducted at various places. But present evaluation is in the context of mainly GT program which was the program for which COL-CEE collaboration came in to existence.

## **Acknowledgements**

The consultant would like to place on record his appreciation and gratefulness towards different people who helped him in the conduct of this project.

Firstly, I thank Prof Mohan Menon, Commonwealth of Learning (COL) for initiating this project and for his contribution in conceptualizing it. After he left COL, the actual finalization of the evaluation project was done under the leadership of Prof Asha Kanwar, VP&PD, COL. I sincerely thank her for her considerate support in completing this work.

I am grateful to Shree Kartikeya V Sarabhai, Director, Center for Environment Education (CEE), Ahmadabad for providing his insight into the philosophy and practice at CEE. He impressed me by his strong pragmatic approach to various issues related to CEE programs, particularly his perception of GT and its implementation.

I must thank the CEE staff and functionaries at different places, particularly at Ahmadabad and Bangalore, for providing me the basic information and data about GT and interacting with me and sharing their insights about GT.

I record my sincere gratitude to Ms Shivani Jain, Green Teacher Course Coordinator, CEE at Ahmadabad and Dr. Ravindranath, at CEE South, Bangalore, who provided me with all administrative support and coordinated my visits to their offices for meetings. Their help and cooperation facilitated my work during the project period and preparation of various reports, including this one.

Lastly, I am grateful to all those past students of the GTC and experts involved in the program who responded to my queries and provided the relevant information and helped in enriching my insight into the project.

Prof M N Deshmukh

### **3. Monitoring & Evaluation Purposes**

COL has selected “Learning for Development” as a focal theme for the period 2006-9. During this period, number of initiatives related to this theme were taken up all over the commonwealth by organizations like CEE in partnership with COL. These initiatives are to be evaluated and their progress to be monitored systematically.

COL has evolved a Corporate Logic Model for this purpose. The performance indicators that will be monitored are defined in the model in order to evaluate achievement of the outputs, outcomes and impacts that are sought in the project by the organizations.

Human environment is one of the three priority sectors of activity during this period for COL. GT program of CEE is one of such initiative in EE sector along with out put and out come statements for the results expected in terms of policy, systems and models/materials and knowledge management. The monitoring and evaluation of GT will provide an insight to the partners of the ventures i.e. COL and CEE, in the strengths of the program and identify the aspects where more attention is required to be paid.

### **4 Monitoring & Evaluation Design & Implementation**

After perusal of the documents like information brochures and annual program reports of CEE, particularly of GT, original project proposal and operational details of GT, previous review reports of GT like that of Prof B N Koul and of Prof. B. Phalchandra and their findings and follow up action etc were studied in details and available statistics like enrollment, pass percentage, alumni, achievements, contributions, success stories regarding GT etc was also obtained.

Then the consultant visited the CEE Head quarter at Ahmadabad on 12<sup>th</sup> June, 2008 and had separate meetings and discussions with CEE authorities like the Director, CEE Shree Kartikeya V. Sarabhai, Senior Program Coordinator (Net working and Capacity Building) Ms Shivani Jain, and the staff handling the GT project, for better understanding and insight into their goals and objectives, process of evolution of GT, their experiences, expected short-term and long-term outcomes & outputs, resources used to implement the project, and for analysis of the ODL processes involved and identification of required data to finalize the Evaluation Plan in consultation with CEE.

The evaluation of CEE’s capacity in ODL involved the data regarding the various components of ODL related to GT such as intended outputs/ outcomes, project

activities designed to achieve the goals, and achievements in terms of objectives- outputs- outcomes- impact and their indicators, partners involved and evaluation of partnership for win-win conditions-whether mutually beneficial, common grounds for partnership, value addition by partnership etc.

For evaluation of the outcome of the COL-CEE contract for CEE Capacity building in the area ODL, besides the obvious output of the course i.e. Enrollment and pass percentage of students in GT course, data about the following inputs, output, outcomes and impact and related success indicators was collected:

1. **Courseware-** (i) Number and Quality of modules, course components and contents, like activities, assignments and field/project work etc.(ii) Capacity to develop and update the courseware for ODL-number of functionaries trained, type and quality of training, frequency of training, specific training needs etc
2. **Learning Resources-**(i) Quantity and quality of study material in SIM format, both, print-based and digitized (ii) Capacity to develop and use, print, as well as, digital-textual and multi media study material (iii) Capacity to develop the training material for trainers/mentors/tutors.
3. **Delivery System and Deployment strategy-**(i) Dual mode of curriculum transaction-Face to Face and Distance Mode (ii) Capacity of functionaries to deliver the program in dual mode. ( and in Networked learning-training and retraining of functionaries in using ICT and different media)
4. **Student Support System-** (i)Skilled manpower for Mentoring / Tutoring / Counseling (ii) Website and mechanism to attend to student queries ( Capacity to develop and use ICT interventions and software tools like LMS/LCMS/CDOT etc for better learning through Tech-MODE-) (iii) network of study centers with adequate learning facilities like library and other learning resources( Other networks of L3 groups/ building learning communities of teachers/experts/social workers/alumni/functionaries for group work and facilitation) (iv) Learner satisfaction regarding quality and quantity of contents / study material / support system / mentoring / pedagogic inputs / practicum and assignments etc.
5. **Evaluation and feedback strategies-**(i) Continuous assessment system and feedback mechanism-feedback to and from students(ii) Capacity to assess and evaluate objectively as per pre-determined criteria and to provide feedback to students, as well as, receiving, analyzing, interpreting and using the feedback from students for improving GT.
6. **Infrastructure created** (and ICT support / interventions to be arranged)- Infrastructure and development, deployment and delivery systems built to facilitate course development and implementation

7. **Global linkages-** Linkages abroad for extending GT globally, Partnerships involved, No. of institutions and NGOs in India and abroad
8. **Sustainability-R & D activities** Impact of CEE and GT by ODL on Indian school system. Awareness / involvement / translation–transfer of training in to action / in to classroom teaching practices / attitudinal change

The data was also collected for the different inputs related to various components of the project like Program components, Process components-ODL systems and Development, Deployment and Delivery systems, as well as, Student support system components using suitable data gathering devices and procedures.

**Following data gathering devices** were developed:

- (i) **Fact sheet ( Annexure 4)** to collect basic data and statistics for the CEE & GT regarding infrastructure, resources, technology level and systems being used, especially ODL systems, enrollment and pass percentage etc.
- (ii) **Interview schedule (Annexure 5)** for different respondents to understand and document the details regarding the perceptions of different stakeholders about various components of the project.
- (iii) **Questionnaires (Annexure 6)** for students to assess the level and types of learning inputs they received and their ratings on the pre-determined criteria such as Accuracy, Adequacy, Relevance-social & educational, Sustainability of outcome etc.

**Respondents for data collection:**

The respondents for data collection included the representatives of CEE Management and functionaries at HQ, stake holders and beneficiaries like Students-Present & Past at Bangalore center and at ad hock Nasik center, providers such as Coordinator and staff of Study Centre at Bangalore who functioned as mentors/tutors etc also (no separate mentors or tutors were involved), experts involved in development of the program, contacted virtually-on line.

The YCMOU faculty group was important for two reasons. Firstly, they were senior faculty members of the State Open University, with on and average, about 10 years of experience with the ODL principles and practices. Secondly, they all completed the GTC in the first attempt, excepting one who could not complete the course for personal and professional reasons. Their experiences with the course components evolved the professional reactions of experienced ODL functionaries who were able to use ODL perceptions and insights to evaluate the component.

### **Data collection strategies**

1. First, the primary sources like available office records and literature, products-materials, visits to CEE-HQ and Study Centers, specially designed Fact Sheet etc were used.
2. Then the functionaries of the GT like coordinators and staff of the study / regional centers, students who completed the GT as well as who did not complete-were interviewed. The specially designed interview schedules and questionnaires were used to conduct these structured interviews. The students took about 15 minutes to fill in the questionnaire and then the interview followed in the context of their responses to questions for about an hour or so. They provided valuable information about the perceptions, experiences, reactions of respondents to the various components and the impact data. Since the project is conducted at various sites, the sites and the anticipated variation across the sites was also considered while collecting data.
3. The respondents were asked to rate the different components according to their own feelings and experiences using the pre-determined criteria.

The data thus collected was consolidated, analyzed, observations made, conclusions drawn and recommendations made.

## 5. Findings

The CEE, established in 1984 and working in the area of EE for last quarter of a century, entered in collaboration with COL in 2002-3 for the development of the Green Teacher – a Diploma course in Environment Education for teachers and launched it as an ODL program in 2005.

After the review of the CEE and GT activities for last few years, observations are made about:

- 5.1 The management and implementation of the activities,
- 5.2 Achievement of intended Outputs/Outcomes, and the
- 5.3 Unexpected Outputs/Outcomes,

as well as, the present status of CEE / GT on ODL components and capacity building, on the basis of information provided by CEE in the Fact Sheet filled in collectively by the staff at HQ of GT, validated against other corroborating documents and the data collected from the Questionnaire filled in by the students and from the interviews of the experts and functionaries of CEE.

These findings are reported below:

### 5.1 Findings about the management and implementation of the activities

**5.1.1** Four modules of the GT program were developed by the CEE staff members who were trained in development of courses and the SIM for ODL in three workshops conducted by the COL consultants. The modules are of a good quality. However the number of trained staff needs to be increased. A couple of them available with CEE may not be adequate to maintain and keep the courses updated.

**5.1.2** Many a students felt need of more inputs. Meeting the CEE staff in only two contact sessions of 3-5 days was not found adequate. More interaction is necessary as attitudinal change and transfer of training in to action, is involved. ICT can provide the immediate support. There is a good network of centers all over the country, equipped with the administrative support available to CEE The GT program is run in a decentralized manner through six study centers. If equipped with proper ICT and academic support of experts, the network can deliver the program in a much effective manner

**5.1.3** Dual mode of delivery is adopted by CEE for GT. The skeletal staff at Study Center takes care of Mentoring, Tutoring and Counseling in GT. There are no separate Mentors/Tutors/Counselors appointed at the study centers. The student support system needs to be augmented by ICT use and experts on panel from various areas.

**5.1.4** An attempt is being made for continuous evaluation of the student performance. Application type questions are used requiring students to reflect rather than reproduce memorized learning, which is a good practice.

But there is a need to evolve simpler and well defined evaluation criteria for evaluation of participation in contact program, learning activities, assignments, project work and over all learning of the students and added to the Handbook for information of the students. CEE feels the need of training of functionaries in better assessment techniques for evaluation of learning outcomes

**5.1.5** CEE has already established partnership with COL for developing GT as an ODL program including production of study material and delivery. The nature of these partnerships is supportive and development oriented. It has also established contacts with the apex institutions of national and state level education system like NCERT, IGNOU, NCTE etc.

Attempts are initiated by CEE to deploy the GT in regional languages in Gujarat (GCERT) for GT Gujarati, in Maharashtra (YCMOU) for GT Marathi and at national level (NIOS) for GT Hindi. The proposals are under consideration of various partners.

**5.1.6** Infrastructure is available to CEE. However, it may not be adequate and relevant when GT (On-line) is launched. Also, at present, academic support through mentors/tutors and counselors seems to be adequate because of a very small number of students and this work is done by CEE staff itself. When the program is scaled up, this facility will have to be augmented on a large scale including international expertise, using suitable communication technologies.

**5.1.7** The present CEE support to students through F2F facilitation, Workshops, Tutoring, e-mail and telephone, needs to be strengthened by technological support.

**5.1.8** Arrangement of regular feedback from and to the field needs to be integrated with the program components

**5.1.9** Not many efforts are seen for adopting Tech-MODE in GT and for creation of technology platform for on line delivery of the program. But planning and action has been initiated in this direction

**5.1.10** A full time in-house facility of a graphic design studio and editing facility for designing and production of material is available with CEE which is an asset to the institution.

**5.1.11** Working with community and involving the beneficiaries is attempted. In case of the GT programme, involvement of teachers (representing the teaching community) right from module development to material review to utilizing their expertise in the programme is ensured.

Another indicator of the CEE commitment to development is the ‘GT Action project’ which all the GT students have to undertake with their students in local schools. It ensures that the learning from GT and its benefits reach the local community—directly or indirectly

**5.1.12** Since it is an ‘all CEE’ programme, CEE’s quality assurance mechanism is presumed to work for GT as well. No separate mechanism is maintained in GT for quality assurance in the entire “inputs-through puts-outputs-impact” process.

Besides annual meeting of all GT team members where an attempt is made to review the working of GT during the year and to identify the grey areas, no serious R & D activity is observed, which is a matter of concern, particularly at the time when GT is poised to take shape of a potent, international, on-line EE program.

**5.1.13** Reactions of both, passed outs and the students who could not complete the course, are very important because of their implications for quality of course contents, study material, student support systems, pedagogy used and practiced. During all the contact sessions, feedback exercises are conducted and feedback forms are submitted by the learners, regularly. But there is no system designed by CEE to receive continuous feedback from the field.

**5.1.14** CEE has created a good data base of the alumni for reaching out to them whenever needed. This data base need to be regularly updated from time to time CEE team writes to them on relevant occasions, but no formal Alumni Association has been formed. The organized group form of the alumni might give an organ to its individual as well as group contribution. This work can be assigned to the Study Centers as it is the contact point for the students.

Besides acting as a resource person in subsequent GT courses, the alumni can be involved in GT in many more ways. Success stories and follow up activities of the past students may be prominently appreciated with wide publicity.

More tangible motivation to students to take up this program can be provided. The alumni can be requested to share their experiences with others more often. If a network of like minded people is formed where alumni automatically become a member and this forum is available to students, they will be benefited.

## **5.2 Findings about the Achievement of intended Outputs/Outcomes**

**5.2.1** In three batches of GT, only 165 students registered and 120 completed the course successfully. For the ODL program, this is a small number and it creates a question mark on sustainability of the program. The enrollment in the last batch came down to mere 23. No apparent reason is being seen or forwarded for this decline by CEE. However it seems perhaps the CEE has not marketed the program as aggressively as required for a new program like GT. Many people are not even aware of the program. Poor marketing strategy, maintaining a very low profile, no propaganda and advertisement of the program, as well as, lack of continuous strong student support system for learners of GT program, might be possible reasons for the decline in the enrollment

The CEE will have to analyze the situation more critically and plan its marketing strategy more aggressively

**5.2.2** From the interactions of the students it is observed that the CEE was successful in creating awareness movement-motivating, prompting students to transfer/translate training in to action for change in personal and professional attitude of the individuals. Many expressed their pleasant surprise on this positive change. They also want to belong to CEE and participate in improving the program.

**5.2.3** It is observed that the CEE has developed a very strong and potent program in EE. The instructional design of the GT is based on a strong pedagogic framework. The program components are adequate and also considered as of high quality. All the program components are rated as excellent or good by CEE, as well as, most of the respondents. Specifically, the description of learning activities to be conducted in the class room setting is much appreciated. The assignments are also conceived well but it was felt that the criteria for assessment of the assignments need to be worked out properly and informed to the students. The assessors need to be trained in using those criteria for assessment. The CEE also feels the need of training in techniques for assessment of learning.

**5.2.4** However, there were a few good observations coming from the students like there should be more 'education' than 'environmental science' (might be referring to bias for environmental science contents than pedagogy). Most of them felt that it would be beneficial if additional inputs and more in-depth orientation in

designing and implementing the Action Project is provided to both, students and their guides, towards the end of the first contact session.

**5.2.5** It has been observed that most of the activities and assignments are essentially related to classroom settings. This being teacher training program, it is logical also. But if the GT is to be on-line for the consumption of general public, who ever is interested in EE, provision for some activities related to the fields, other than teaching, also will have to be made.

**5.2.6** It has been observed that the GT mainly produced and used conventional print material with one interactive CD. Learners appear to be happy with the quantity and quality of the material. However, SIM, Video cassettes, Text on CDs, and Multimedia material seems to be their choice of material. But no other multimedia or digital materials are considered by CEE. Even the use of OERs, or internet, is not emphasized. However, the CEE seems to be aware of OERs as a great source of learning resources and its value. Also, CEE is in the process of digitizing the study material and also to deliver the GT on line. It will be prudent to revise these materials to make them suitable for these delivery modes.

### **5.3 Findings about the unexpected Outputs/Outcomes,**

**5.3.1** Some unanticipated issues like issue of motivation-why should one do this course, required mindset change for Tech-MODE, Partnerships-establishment and maintenance for mutual benefit and win win situations arose during implementation. They were suitably addressed and discussed thoroughly.

**5.3.2** There was a point raised during discussion about the authority of CEE to confer the diploma on the students. It is neither a University nor a statutory body like examination board to have that authority. It may be worth considering conducting this program as a partnership venture, in collaboration with some statutory authority like universities.

## **6. Conclusions**

From the above findings and observations conclusions are drawn about the appropriateness of the intended Outputs / Outcomes, about project context, appropriateness of the activities, role of the partners, quality of the management & implementation of the activities, effectiveness of COL's direct and indirect contributions to this project and lessons learnt –regarding the program and / or the conduct of M&E.

Those conclusions are presented in the following captions.

### **6.1 Appropriateness of the intended Outputs / Outcomes**

**6.1.1** Output of GT in terms of number of students enrolling is low for a ODL program and has further declined last year. Serious attempts are required to improve enrollment and out put of the program to make it viable, on-line program. Perhaps CEE's decision to go on-line will help to improve the enrollment. However, on another success indicator, that is good completion rate, GTC fared well. The percentage of students completing the course within stipulated period of one year is much better as compared to the programs of other ODL systems.

**6.1.2** The GT has got all the potential and strengths required for sustenance of a powerful ODL, on -line tech-MODE program. It has enormous content on EE-a product of dedicated work of about quarter of a century in the field of EE. It is equipped with a highly motivated and dedicated team of young workers, a strong instructional design and pedagogical foundation. It needs chenalizing that potential for best possible out put. It needs a strong quality assurance mechanism in place at the earliest.

**6.1.3** From the interactions of the students it is observed that the CEE was successful in creating awareness about EE, motivating students to take action for change and in bringing change in personal and professional attitude of the individuals. Many expressed their pleasant surprise on this positive change.

**6.1.4** There should be a system and serious provision made for quality assurance in GTC Quality learning resources and work books etc can help maintaining quality. But there should be bench marks defined for them. Guidelines designed for project selection and implementation and documentation and portfolio development and evaluation may also help in improving the quality of out put.

## **6.2 Project context, appropriateness of the activities ETC**

**6.2.1** CEE has clarity of ideas and a sound planning for program activities.

However it is necessary to synchronize and integrate different initiatives so that they become supportive to each other. Since the GT-on-line and another initiative of CEE for institutionalizing Tech-MODE are complementary, both of them may be integrated and development of the Tech-MODE be expedited so that the Tech-MODE system is established and available, by the time GT on-line is instituted. It will help to operationalise GT-On-line.

**6.2.2** The program has got a great potential and strength, but the delivery mode needs further strengthening in operations. That might happen once Tech-MODE is adopted and ICT support is available to the GT. These courses and program activities will also need revision and digitization of the course ware; to make them suitable for Tech-MODE and for on-line delivery of GT.

**6.2.3** The CEE has the benefit of solid pragmatic experience base of about 25 years in the field of EE, material production facilities available with technical know how, and the manpower, sensitive to the developments in the field. Therefore, it is in an ideal position to redraft the material in different multi media formats after orientation of functionaries in development and use of action oriented ODL material in these formats.

**6.2.4** Purposeful attempt needs to be done for taking advantage of group learning and cooperative and collaborative learning. For this L3 groups have to be formed and made operational. It may involve a new work culture and change in mind set for adopting ICT for self- and collective learning.

**6.2.5** Evaluation system and activities are designed for smaller number and will need to be revised for the large number of students expected to join GT (On-Line). These strategies may not be equally efficient for Tech-MODE and on-line mode of delivery where larger number of learners might be involved. They will require some modifications in the kind of assessment questions and techniques adopted.

**6.2.6** The mentors, guiding and assessing course work, assignments and project reports, will have to be thoroughly trained in new assessment techniques and feedback-writing. The assessors and examiners will have to be oriented thoroughly in the evaluation criteria and procedures.

## **6.3 Effectiveness of COL's direct and indirect contributions to this project**

**6.3.1** COL support has resulted in capacity building of functionaries and manpower development. It also exposed them to the latest in the field and

equipped them with essential material production facilities and required technology. It has provided a strong base to GT to start with. Put to proper use it will help GT to achieve better outputs in terms of quality and quantity of material.

**6.3.2** The COL Consultants like Dr Som Naidu, Prof Phalchandra and others, could help CEE to base GT on a very sound theoretical frame work

**6.3.3** COL's support indirectly helped bringing about change in the mindset of functionaries at CEE HQ resulting in another initiative at CEE to institutionalize Tech-MODE. It will be complementary to GT On-line.

#### **6.4 Lessons learnt**

**6.4.1** The present partnerships are generally at operational level and for increasing out reach of the GT. But such partnerships can be explored for designing, development and delivery of the program activities also, capitalizing on the strengths of the partner institutions..

**6.4.2** The progress of these partnerships is also found considerably slow. A new organizational set up and arrangement, different from the set up of any specific partner institution, will be required to operationalise such partnerships. Legal implications of such partnerships in the context of international laws and copyright provisions also will have to be considered.

**6.4.3** Such partnerships need some common value system, objectives and interest as a common base to bring partners together. Willingness to share assets, as well as, the profits accrued out of such partnerships, proportionate to their contribution in the program, is required. It has to be a "Win- Win" position all around.

**6.4.4** While planning for the program on-line, one has to consider the issue of access. The visit of the Consultant to Gauhati had to be postponed twice-once for inclement weather-a common climatic feature of the region- and the second time due to lack of adequate communication technical facilities at the disposal of the center.Those were the precise reasons of selecting the Gauhati study center for visit with extreme conditions, farthest from the HQ and the center which faces compulsions of using ICT for the delivery of the course. This visit could not materialize.

## **7. Recommendations:**

Based on the conclusions-drawn from the findings and observations - reported in preceding captions, following recommendations are made for the consideration of COL and CEE:

**7.1** In view of the latest ruling of the Supreme Court of India, law of the land, mainstreaming EE in school system, necessitating training of millions of teachers required to teach this subject, and considering the fact that CEE has unique potential to lead in this matter, it is strongly recommended that launching GT-On-line may be taken up on priority basis. The existing course components may be reviewed and restructured / updated in the context of new National Framework for School Curriculum of NCERT and the international developments in EE before launching GT (On-line)

**7.2** Education in environment issues is not only a national need but a matter of international concern. Therefore increased demand for environment education in near future is projected. CEE is required to equip itself to meet this global demand adopting Tech-MODE and by going for more and more ICT interventions for scaling up the GT program and for going global, establishing a large techno-pedagogical system, making various delivery modes as available alternatives.

**7.3** An integrated, blended learning approach to study this Tech-MODE program with flexibility of choosing the appropriate accessible ICT is considered preferable in the Indian conditions where digital divide and disparities of resources, are pre dominant. An effective learner support system based on useful ICTs, easily accessible to both, students and mentors, for ensuring continuous support to a larger number of students, is strongly recommended.

**7.4** Distributed Classroom and Networked Learning: Most of the CEE regional centers used as study centers for GT are at the State Capitals where a better access to technological resources is available. The capacity and capability of the Study Center staff and infrastructure can be well augmented by operating more and more academic as well as administrative activities on-line, and by training and retraining of the functionaries.

**7.5** Finding and involving pedagogues, well versed in environmental concerns and issues, to integrate content with methodology of teaching, with more on-line student support from experts in various fields across the globe, with self help groups formed, functional and helping each others for better learning, may be a strategy the CEE should look for.

**7.6** It is recommended that GT (on line) should make systematic efforts to provide for group learning / collaborative and cooperative learning, and create “Life Long Learners groups” and “build learning communities” of teachers / experts / functionaries etc like self-help groups, to support each other, with efficient functioning and effective group learning, CEE may continue to work with COL on institutionalizing Tech-MODE at CEE to support such groups and communities.. It is suggested to expedite this work on priority basis so that on-line delivery is facilitated.

**7.7** Another important step that can be considered is to develop repository of relevant OERs- accessible, appropriate, accredited and affordable-in different formats, by selecting the best that are available in the field and by developing the once not available; and orientation of the functionaries and students in using those OERs for better learning.

**7.8** For improving the enrollment and output of GT, a professional approach may be adopted to plan an effective strategy to increase the outreach and to propagate GT in a wider field, particularly in rural areas. A sound marketing strategy for fielding GT on line is required, more for propaganda of such a program-many don't even know about it-rather than for promotion of it. Local media can be used for propaganda of the GT like cable net work, news papers, display boards at public places, distribution of small mementos etc.

**7.9** It is recommended to have stronger collaboration with other ODL systems and national institutions like NCERT, IGNOU, YCMOU, NIOS etc and professional entrepreneurs in the market of e-education, having rich experience in these activities, and borrowing their strengths for designing and development of learning resources. While digitizing the material, provision for Mass personalization of the study material useful for ODL and Tech-MODE delivery system, may be considered as a next immediate step of development.

**7.10** An initiative in establishing an International Consortium of like minded organizations and institutions for EE may be undertaken and led by CEE under the patronage of COL. The COL also might support such a consortium in the context of its growing concern about environmental issues, and human environment being one of the three focal areas of COL.

**7.11** An effort to change traditional mindset of students and functionaries for adopting Tech-MODE is necessary. For this purpose capacity building of CEE as an institution, as well as, of functionaries, individually and collectively, through work shops, orientation programs, building technology infrastructure and learning resources etc be taken up forthright. COL may consider supporting fully, such efforts of CEE.

**7.12** A manual for designing and implementing the projects related to local environmental issues including a proper evaluation criteria and strategy may be developed and used for better impact and sustainable development of the local community.

**7.13** Not only the project record, but maintaining and assessing the Portfolio of students' learning activity, best suited evaluation strategy for constructivist pedagogy, may be considered for evaluation of student learning. Training of examiners in Portfolio evaluation technique should follow.

**7.14** An exercise to design a well thought of feedback system and quality assurance mechanism is expedient for CEE. It would be much appreciable to conduct **Academic Audit** of the program every alternate year by an expert group with a couple of members from alumni included.

**7.15** The Research & Development (R&D) activities should be an integral part of GT program- particularly during its formation phase. The CEE may involve local experts, as well as, seek professional support from the well known reputed research institutions like Center for Advance Study in Education (CASE), Baroda, Indian Institute of Management (IIM), Ahmadabad, and Indian Space Research Organization (ISRO) etc.

**7.16** Involvement of NGOs, as well as, of beneficiaries, in program planning and implementation is very important for local environment context and to create the ownership feeling in the local communities. The program should provide for the training of functionaries of such NGOs working in the field of EE.

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## **1. List of Annexure**

Annxure-1 Pen picture of the COL consultant-Prof M N Deshmukh

Annxure-2 Contractor terms of reference (TOR) - CO8 -286(Revised)  
(PROVIDED IF REQUIRED)

Annxure-3 Evaluation Plan approved by VP&PD

Annxure-4 Data collection instruments-Fact Sheet

Annxure-5 Interview Schedule

Annxure-6 Questionnaire for students

Annxure-7 Schedule of visits

Annxure-8 Contributors

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**Positions held:**

**Presently:**

***Hon. Secretary***, Indian Consortium for Educational Transformation (**I-CONSENT**), a non-profit voluntary organization, c/o MKCL, Pune, since 2005.

***Education Consultant*** (Virtual work environment-Tech-MODE)), Maharashtra Knowledge Corporation Ltd. (MKCL), Govt of Maharashtra sponsored Corporation, International Convention Center (ICC Towers), "A" -Wing, 5<sup>th</sup> Floor, Senapati Bapat Marg, Pune, Maharashtra State, India, PIN - 411 016.

***Adjunct Professor***, Department of Education, University of Mumbai, Mumbai, an honorary position, w.e.f. 08-08-2006.

**Formerly:**

- (1) ***Senior Advisor (ODL)***, NMIMS University, Mumbai, in 2007.
- (2) ***Visiting Research Professor***, Ali Yawar Jung National Institute of Hearing Handicapped (AYJNIHH), Mumbai, GOI, New Delhi, w.e.f. 08-06-2006.
- (3) ***UGC Visiting Professor***, Amaravati University, Post-Graduate Teaching Department of Education, in 2003, and also in 2001-02)
- (4) ***Professor and Principal***, Somaiya College of Education, Mumbai, (1990-2000)
- (5) ***Director, Distance Education Program of DPEP (DEP-DPEP)***, Indira Gandhi National Open University (IGNOU), MHRD, New Delhi (1996-1998)
- (4) ***Hon. Director***, IGNOU. and Yashwantrao Chavan Maharashtra Open University Study Centers, Somaiya College of Education, Mumbai (1990-2000).
- (5) ***Professor***, Institute of Banking Personnel Selection (IBPS), Mumbai, former PSS unit of NIBM, a premier institute for recruitment in banking industry

Co-coordinating the recruitment projects of the various banks, including Reserve Bank of India (RBI) and NABARD, both the apex banks of the country, (1986-1989)

- (6) **Principal**, University College of Education, Nagpur (1980-86 and 1989-90).
- (7) **Hon. Director**, Extension Services Department, University College of Education, Nagpur (1980-86 and 1989-90).
- (8) **Head**, Dept. of Adult and Continuing Education, Nagpur University (1980-82).
- (9) Expert **Member**, Program Advisory Committee of State Resources Centre, Indian Institute of Education (IIE), Pune (1980-83).
- (10) **Member**, Executive Council of Indian Adult Education Association, New Delhi (1980-81).
- (11) **Chairman**, Board of Studies in Education, Nagpur University (1981-84).
- (12) **Member**, Faculty of Education, Nagpur University (1981-84), Ravishankar University, Raipur, (1984-87) and SNTD University (1998-2001). & Academic Council, University of Nagpur (1981-84) and Mumbai (1993-94).

### **International Exposure**

- (i) Coordinated the presentation of Prof Ram Takwale in the Distributed Learning Environment prepared with the help of Prof Mohan Menon, COL, Prof Som Naidu, Melbourne University, Shree Vivek Sawant, MD, MKCL and Prof Martand Deshmukh, in the International Conference on e-Learning organized by IATE, in joint collaboration with Delhi University and sponsored by COL at New Delhi, on 26-28, February, 2007.
- (ii) Invited by Commonwealth of Learning (COL), Vancouver, Canada, and Participated and presented an orchestrated group session, at their cost, along with Prof Ram Takwale, Former Vice-Chancellor, Indira Gandhi National Open University (IGNOU) and Chairman, I-CONSENT, MKCL, Pune, and Prof. Mohan Menon, COL, in the **Pan Commonwealth Fourth Forum (PCF4)**, an **International Conference** held in **Jamaica**, on *Oct.30-5 Nov., 2006*.
- (iii) Participated in the **World Conference** on "Teacher Education for Excellence", Organized at **Aurangabad**, by *Marathwada University* on 08-10 May, 1999.
- (iv) Participated and contributed a paper in the **International Conference** on Partnership and Networked learning', organized by IGNOU, at *Hamdard University, New Delhi* on 16<sup>th</sup> -18<sup>th</sup> Feb.1998.
- (v) Participated in **World Conference** on "Education India: The Next Millennium," Organized by *IAET* at *New Delhi* on 12<sup>th</sup> - 14<sup>th</sup> Nov., 1997
- (vi) Contributed a paper in the **World Conference** of *Association of Asian Open Universities (AAOU)* held in *Kuala Lumpur, Malaysia*, in 1997.

- (vii) President's Honored Guest to visit **Rajbhat Institute, Thailand** to guide Ph.D. Scholars and Master's Degree students in Sept., 1997.
- (viii) Nominated member of the **World Bank Delegation** from India to participate in **18<sup>th</sup> World Conference** of *International Council for Distance Education (ICDE)* on "The New Learning Environment - A Global Perspective" at *Pennsylvania State University, New York, USA* on 2<sup>nd</sup> -6<sup>th</sup> June, 1997.
- (ix) Nominated member of the **World Bank Delegation** from India to participate in **International Symposium** on "Distance Education and National Development – Research perspective", organized by *World Bank at Pennsylvania State University, New York, USA* on 29<sup>th</sup>-31<sup>st</sup> May, 1997.
- (x) Participated and presented a paper in the **Second International Conference** on "Environmental Education" held at Vigyan Bhavan, **New Delhi**, 4-9 March, 1985
- (xi) Participated and contributed a paper in the **International Seminar** organized by *Indian Adult Education Association* in joint collaboration with *Friedrich Ebert Foundation, West Germany*, on 28 Feb.-3 March 1982.

### **Publications:**

**Thirty Six** publications which include **Six** books and **Thirty** papers.

### **Professional Expertise:**

Provided professional expertise to Universities of Nagpur, Amaravati, Mumbai, Pune, Baroda, Cuttak, State and National open universities i.e. YCMOU and IGNOU, institutions such as I.I.E, NCERT, FICCI and NMIMS, as well as, International organizations such as COL, UNESCO and World Bank etc.

### **Work experience in Distance Education and Open Learning**

While working in the field of education in general and Teacher Education in particular, for more than 47 years, mainly as a Teacher Educator, Administrator and a Researcher, actively engaged and closely associated with the Distance Education activities and academic programs of the National Open University (**IGNOU**) and the State Open University (**YCMOU**), Nashik, for sixteen (17) years.

#### **(i) Director, DEP-DPEP at IGNOU sponsored by MHRD**

The major involvement was working as **Director** of the Distance Education Program - District Primary Education Program (**DEP-DPEP**), now *Sarva Shiksha Abhiyan* (Education for All) a nationwide project sponsored by *MHRD*, Govt. of India and

financially supported by the **World Bank**, a joint collaborative project of NCERT and IGNOU, at (IGNOU), New Delhi, on deputation, (1996-1998).

The project was designed for creation of a sustainable system of in-service training of primary education personnel and was targeted at the training of about 5 lakh primary teachers, about 9.5 lakh Village Education Committee members, about 12 thousand CRC/BRC coordinators, about 2500 DIET/DPO personnel and about 9500 Resource Persons working in more than 100 Districts of about 16 states of the Indian republic. The cost of the project came to more than Rs.10 Crores for five years of the project period.

After its tenure, the project is institutionalized and integrated with **Sarva Shiksha Abhiyan**, (Education for All), a centrally sponsored scheme of MHRD, Govt.of India.

(ii) **Director of IGNOU/YCMOU Study Centers**

Worked as Director of the Study Centers of the National Open University (IGNOU) and the State Open University (YCMOU), Nashik, for more than a decade of years i.e. from 1990 to 2000.

(iii) **Expert for establishing IDEA at Amravati University**

While working as University Grants Commission's Visiting Professor at Amravati University during 2001-2002 (and again in 2003-04), prepared the proposal for establishing the Institute of Distance Education of Amravati University (IDEA), to adopt the distance education mode as a parallel strategy to run their academic programs in various disciplines, to cater to more than 40,000 external students, almost 45% of the total student enrollment of the university.

The proposal was approved by the university authorities and the Distance Education Council (DEC), New Delhi and IDEA is started in 2004.

Nominated expert member on the committee to establish **Institute of Distance Education, Amravati (IDEA)** at Amravati University, Maharashtra, since 2001.

(iv) **Founder Member-Secretary, I-CONSENT**

Instrumental in developing the Indian Consortium for Educational Transformation (I-CONSENT) along with Prof Ram Takwale and in developing an on-line Tech-MODE, teacher education program viz. e-B.Ed., as its first major program since 2005.

(11112007)

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Contract No. C08-286(Revised)

**Evaluation of Capacity Building of Centre for Environmental Education (CEE), Ahmadabad.**

(COL- CEE Cooperation)

Evaluation Plan: Prepared and submitted by Prof M N Deshmukh.

Submitted to: Professor Asha Kanwar, Vice-President and Program Director (VP&PD), Commonwealth of Learning (COL) on 31<sup>st</sup> May, 2008.

Approved by VP & PD on 02nd June, 2008.

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**Statement of work**

The Commonwealth of Learning (COL) engaged Prof M. N. Deshmukh as consultant to evaluate the Capacity Building of Center for Environment Education, Ahmadabad.

As per the contract (Ref. No. C08-286), the consultant is expected to:

1. Assist the Vice President and Programme Director (VP&PD) to develop and implement an Evaluation Plan for the COL-CEE cooperation
2. Prepare and review the draft Evaluation Plan with the VP&PD
3. Identify appropriate data; develop data collection strategies and an Evaluation Plan.
4. Implement the Evaluation Plan as agreed with the VP&PD.
5. Conduct initial investigations showing the initial observations and detailed plan for further investigation and reporting.
6. Produce draft and final report(s) according to the Monitoring and Evaluation Report Format prepared by COL.

To complete these tasks successfully, the following plan of action is prepared and being submitted for the review of the VP&PD:

**1. Understanding the Project:**

- (i) Procure and study the relevant literature about the CEE and the Green Teacher (GT) course. (Completed)
- (ii) Preliminary Discussion with CEE authorities for better insight into their goals and objectives, evolution of GT, expected short-term and long-term outcomes & outputs, resources used to implement the project, analysis of the processes involved and identification of required data/variables, previous reviews conducted in past, their findings and follow up action etc and to finalize the Evaluation Plan in consultation with CEE. (Planned in the first week of June, 2008)

## 2. Project context

The evaluation of CEE will involve the data regarding the intended outputs/outcomes, project activities designed to achieve the goals, and achievements in terms of objectives- outputs- outcomes- impact and their indicators, partners involved and evaluation of partnership for win-win conditions-whether mutually beneficial, common grounds for partnership, value addition by partnership etc.

For evaluation of the outcome of the COL-CEE contract, the data about the following inputs, output, outcomes and impact indicators will be collected:

- (i) Quality of the program components, course contents, activities, project work etc.
- (ii) Materials produced-Learning resources- study materials-quantity, quality-print and e-material etc.
- (iii) Networks created and ICT interventions-Tech-MODE
- (iv) Capacity building of functionaries in
  - Development of ODL material both, Print-based and digitized, identification and use of OER, multi-media, and
  - Design and use of learner support system like mentoring, tutoring, counseling, group work etc.
- (v) Infrastructure and development, deployment and delivery systems built to facilitate course development and implementation
- (vi) Capacity building of CEE in dual mode of delivery and networked learning
- (vii) Enrollment and pass percentage of students in GT course
- (viii) Reactions of both, passed outs and failed students - implications for quality of course contents, study material, student support systems, pedagogy used and practiced.
- (ix) Partnerships involved
- (x) No. of Institutions, in India and abroad adopting GT
- (xi) Linkages abroad for extending GT, globally
- (xii) Impact of CEE and GT by ODL on Indian school system.

Limitations of Evaluation like what could not be done and why, also will be noted.

## 3. Design and implementation

- a) The data will be collected for the different components of the project like Program components, Process components-ODL systems and Development, Deployment and Delivery systems, as well as, Student support system components using suitable data gathering devices and procedures.

**b) Preparation of data gathering devices:**

- (i) Fact sheet to collect basic data and statistics for the CEE & GT regarding infrastructure, resources, technology level and systems being used, especially ODL systems, enrollment and pass percentage etc.
- (ii) Interview schedules for different respondents to understand and document the details regarding the perceptions of different stakeholders about various components of the project.
- (iii) Questionnaires(s) for different respondents assessing the level and types of learning inputs they have received and their ratings on the pre-determined criteria such as Accuracy, Adequacy, Relevance-social & educational, Recency, Sustainability of outcome etc.

**c) Respondents for data collection:**

The respondents for data collection will include the representatives of CEE Management, stake holders and beneficiaries like Students-Present & Past, Mentors, Teachers, Counselors, Providers such as Coordinators and staff of Study Centre, Organizers, Course writers, experts involved in development of the program like Prof Som Naidu, Prof Mohan Menon, Prof B. Phalchandra etc. to be contacted virtually-on line.

**d) Data collection strategies**

1. First, the primary sources will be tapped like available office records, products-materials, visits to CEE-HQ and Study Centers etc. using the specially designed Fact Sheet.
2. Then secondary sources like interviews and questionnaires will be used to know the reactions of respondents to the program and to collect impact data. Since the project is conducted at various sites, the sites and the anticipated variation across the sites will also be considered while collecting data.
3. The respondents will be asked to rate the different components using the pre-determined criteria.

If any unanticipated issues arise during implementation, they will be suitably addressed to and the action taken will be noted for further reference.

The data thus collected will be subjected to suitable qualitative and quantitative analysis for drawing conclusions and making recommendations.

**4. Report**

Finally, the consultant will prepare evaluation report in the M & E Report Proforma developed by COL on the basis of his findings about:

- 1) the management and implementation of the activities
- 2) the achievement of intended out puts and outcomes

- 3) unexpected outputs and outcomes
- 4) the strengths and limitations of the project.

The report will also include a brief section pertaining to the effectiveness of COL's direct and indirect contributions to this project, as well as, Lessons learnt-regarding the program, conduct of M & E etc.

#### **5) The time Activity Schedule**

Considering a very short time at the disposal of the consultant, Time activity schedule for implementation of this plan is proposed as follows:

- 1) Preparation and submission of the Draft Evaluation Plan to VP&PD on 31<sup>st</sup> May, 2008
- 2) Review of the Draft Evaluation Plan with VP&PD and its finalization on 5<sup>th</sup> June, 2008
- 3) First visit to CEE HQ at Ahmadabad for Preliminary meeting for planning- First week of June, 2008
- 4) Development and finalization of tools for Data collection: Second week of June,2008
- 5) Visit to Project location and implementation sites- Two Study centers- at Bangalore and Gauhati for evaluation of delivery system, student support, students' reactions to these services etc.: Third & Fourth week of June, 2008
- 6) Data collection: First and second week of July, 2008
- 7) Analysis of the Data: Third and fourth week of July, 2008
- 8) Second visit to CEE HQ for mid-program meeting for validation of data for adequacy relevance and accuracy - First week of August, 2008
- 9) Preparation of the first draft of the report: Second week of August, 2008
- 10) Submission of the draft to VP & PD and also to CEE for feedback: Third week of August, 2008
- 11) Finalization of the report: Fourth week of August, 2008
- 12) Submission of the Final report to COL: 31<sup>st</sup> August, 2008

Monitoring- As required, the consultant will report to VP&PD every fortnight on the status of the activities proposed above.

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**FACT SHEET**

**FOR**

**COL EVALUATION  
OF  
CEE CAPACITY BUILDING FOR ODL**

**(Questionnaire for collecting basic data from the staff at Head Quarters)**

*Please fill in completely and return to:*

**Prof M N Deshmukh**

**COL Consultant**

**[mndeshmukh11@hotmail.com](mailto:mndeshmukh11@hotmail.com)**

## COL-CEE Cooperation

### FACT SHEET

#### FOR EVALUATION OF THE CEE – GT CAPACITY BUILDING FOR ODL

The Head of the Program is requested to provide the following factual information to the COL Consultant within a week, from the receipt of the Fact Sheet, in any case not later than **July 02, 2008**.

Information in the Fact Sheet is to be filled in, in consultation with all the concerned functionaries so that the facts are complete.

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#### I. GENERAL INFORMATION:

1. Date and Year of Establishment : CEE 1984  
GT 2005

2. Date and year of commencement of the COL-CEE collaboration: 2002-03

3. Name and designation of Head Mr. Kartikeya V. Sarabhai

e-Mail Address: kartikeya.sarabhai@ceeindia.org

Telephone / Mobile No. : 00 91 79 26858011

CEE: 00 91 79 268 58002

GT: 00 91 79 268 44755

4. What are the other certificate / diploma programs run by CEE, besides GT?  
Certificate course in environment and development for media professionals

5. Which of these programs are supported by COL? NONE

## II. ACADEMIC DETAILS:

1. Goal and objectives set for GT : The Green Teacher is a unique capacity-building, distance learning programme aimed to enable teacher-learners to:

- Enhance their understanding of:
  - Science of Environment, concept of Sustainable Development and related issues
  - Environmental Education (EE) —theory, approaches and methods
- Strengthen their skills in:
  - Teaching textbooks ‘environmentally’
  - Utilizing interactive and experiential teaching-learning methodologies for transacting EE
  - Developing locale and situation specific EE projects, activities, materials, etc. to suit requirements.

:

2. What are the short term outputs expected of GT?

1. To impart training in EE for teachers at their work-place
2. To provide longer duration training support to teachers who are involved in implementing EE in their schools
3. To held teachers take up environmental improvement action projects in their schools with curricular linkages established

3. Are they achieved? If not, why?

Yes

4. What are the long-term outputs expected of GT?

1. To strengthen teaching-learning of environment in Indian schools
2. To provide a networking and sharing platform to teachers engaged in teaching-learning of environment
3. To provide knowledge platform to teachers for sharing their ideas and knowledge of EE with the larger educator community

5. Are they achieved? If not, Why?

Too early to make a comment

## III CEE CAPACITY IN ODL AND ITS PRESENT STATUS:

### (A) Capacity to design and develop Courseware:

1. How many Courses/Modules are developed for GT?

FOUR

2. Who developed these Courses/Modules?  
(Professionals/Experts/Scientists/Educators/Practitioners/Any one else)  
AUTHOR (CEE TEAM MEMBER) guided by a multidisciplinary team of experts; reviewed by experts in instructional design as well
  
3. How many of course writers were involved?  
4 Authors;
  
4. How many of the existing staff of the CEE involved in development of these Courses / Modules?  
2
  
5. How many of them were trained in development of SIM for ODL?  
ALL
  
6. How many training programs were arranged by CEE during all these years to train the course writers in SIM for ODL?  
3 workshops
  
7. What type of the training was given? Please describe the course contents briefly.  
The workshops focused on ODL and self-learning material. Different workshops discussed different theories of learning and thus different options in instructional design
  
8. Who conducted those training programs? Like IGNOU-STRIDE/SEMCA/CEE staff/the Professionals, or any one else?  
Dr. Som Naidu from the Univ of Melbourne; Dr. Murugan from the University of West Indies; and Dr. Phalachandra and Dr. Bhatt from NCERT
  
9. When these modules were last reviewed and revised?  
2006
  
10. Who reviewed, revised and updated those modules?  
Review was done by practicing teachers (a group of 40-50 teachers from the KVs) in a workshop facilitated by Dr. Phalachandra
11. What was the reviewers' orientation and experience in reviewing SIM for ODL?  
Practicing teachers. Since the modules have been developed for teachers, it was found most relevant to have these reviewed by teachers
  
12. Total number of people available to CEE, trained in designing, developing and using SIM for ODL?

Over 15 staff members oriented to ODL and SIM; about 5 actually trained in the skills

13. How frequently such training is arranged?  
NA

14. When was the last training program conducted?  
**2004-05**

15. What are the other efforts CEE has undertaken to increase the capacity for designing and development of course contents-please describe in brief.  
CEE staff members have been attending a number of relevant events (mainly workshops, seminars etc.) on the theme of ODL. This brings in an understanding of the global and national updates and advances in ODL to the CEE team

16. Are there any specific training needs of CEE for GT? Please specify.  
Evaluation and Assessment of Learning

17. How would you rate the Quality of the program components such as:  
(Please tick mark)

<b>Program Components</b>	<b>Excellent</b>	<b>Good</b>	<b>Average</b>	<b>Poor</b>	<b>Very poor</b>
<b>Course contents</b>	√				
<b>Study material</b>		√			
<b>Learning activities</b>	√				
<b>Assignments</b>		√			
<b>Project work etc.</b>	√				
<b>Delivery Mode</b>		√			

**(B). Capacity to design and develop Learning Resources:**

18. What type of SIM / ODL material is produced and being used in GT?

<b>Learning Resources</b>	<b>Type of material being used (Please tick mark)</b>	<b>No of items</b>
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**Print:**

- (a) Plain Text: 2 essential readings**
- (b) SIM: 4 course modules**
- © Audio Cassettes**
- (d) Video Cassettes**

**Digital:**

- (e) Text on CD**
- (f) VCD: 1 Green Teacher CD**
- (g) Audio CD**
- (h) Multi-Media**

**OERs:**

- (i) Open Educational Resources**
- (j) Any other type (Please specify)**

19. Who developed these Learning Resources? (Professionals/Instructional Systems Designers/Technicians /Practitioners/Any one else)  
CEE team members with external review and inputs

20. How many of them were involved?  
6-8

21. How many of the existing staff of the CEE involved in development of these Learning Resources?  
3

22. How many of them were trained in development of such resources?  
4-5

23. When the existing learning resources for GT were last reviewed and revised?  
2006

24. Who revised and updated those resources?

Review was done by practicing teachers (a group of 40-50 teachers from the KVs) in a workshop facilitated by Dr. Phalachandra

25. Total number of people available to CEE, trained in designing, developing and producing such resources for GT through ODL
26. There is full time in-house facility of a graphic design studio, which has a digital printing and screen printing facility attached to it.
27. Any other effort CEE has undertaken to increase the capacity for designing, developing and producing such resources for GT through ODL. Please describe in brief.

A video-editing facility has also been provided by COL to CEE, the first orientation programme in this regard was also done in the year 2007 by Dr. David Walker

28. Are there any specific training needs of CEE to increase the capacity for designing, developing and producing such learning resources for GT through ODL? Please describe in brief.

Advance level training in using the Casablanca video editing facility; training in using OERs

29. How would you rate the Quality of the Learning resources being used in GT program?( Write NA against the resources not used in GT)

<b>Learning Resources</b>	<b>Excellent</b>	<b>Good</b>	<b>Average</b>	<b>Poor</b>	<b>Very Poor</b>
<b>Print</b>		√			
<b>Plain Text</b>					
<b>SIM</b>		√			
<b>Audio Cassettes</b>					
<b>Video Cassetes</b>					
<b>Digital</b>					
<b>Text on CD</b>					
<b>VCD</b>		√			
<b>Audio CD</b>					
<b>Multi Media</b>					
<b>OERs</b>					
<b>Any Other</b>					

30. Any effort for Capacity building of functionaries in developing and using the ODL Materials and development of Repository of Accessible, Appropriate, Accredited, Affordable RLOs / Open Educational Resources.

CEE team was sponsored by COL to attend a few workshops—one at ICRISAT, Hyderabad on VSAT and OERs; one on monitoring and evaluation in New Delhi; one of e-learning at Cochin and a few more

on ODL for SD at Ahmedabad India. Such opportunities provide CEE members with an opportunity to not only build our skills but also get an understanding of the updates in ODL around the world and the country. Under a project of TechMODE, supported by COL, a team of CEE staff member also visited MAFSU to understand their work in ICT and education.

31. Any effort for Capacity building to develop and use the Training Material and Support material for Teachers / Mentors / Tutors etc. Please describe in brief

Material development is a core activity of the Centre with one of the programme group fully dedicated to such tasks and also a graphic and exhibit design studio as well as press facilities.

**(C). Delivery system and Deployment strategy:**

32. Which is the delivery mode preferred by CEE for GT-Dual Mode, On-line, Face to Face or, any other mode? Why?

Dual and on-line: Face-to-face makes it difficult for practicing teachers to leave their jobs and attend training.

33. Is the website of CEE-GT being regularly updated and maintained? Is there any dedicated staff for this purpose?

There is no web-site for the GT programme, but CEE does run a portal for teachers, also called as [www.greenteacher.org](http://www.greenteacher.org); this is a functional and updated website with one person looking after the site.

34. What are the development, deployment and delivery systems built and infrastructure created by CEE to facilitate course development and implementation?

CEE has over 40 offices in the country, which includes 5 regional offices and a Delhi Office. These are in fact the 6 study centres of the programme and the infrastructure available at these offices is used for the GT programme on needs basis.

35. What efforts are made by CEE to build capacity in the preferred mode of delivery of the program? For example, for dual mode of delivery and networked learning-training and retraining of functionaries for developing capacity and skills to use ICT and variety of media.

CEE continues to work with COL on institutionalizing TechMODE at CEE. This effort, being taken up in a phased manner, is ensuring deeper thinking and newer ICT related activities at CEE.

36. What is the available skilled manpower for Mentoring, Tutoring and Counseling in GT? What facility is created for their training and retraining?

At each of the 6 study centres, one full time project officer and a part time project coordinator is available for GT; at the Secretariat there is a team of one full time Project Officer; one full time Admin support and a part time Project Director

**(D). Student support:**

37. What is the system to respond to students' queries? What is the capability and efficiency of this arrangement?

Mainly e-mails and phone calls; primarily attended at the Study Centres; unless otherwise required, the Secretariat takes a back seat in communication with learners, except for the initial communication soon after the registration.

38. What is the learner support system designed and used for GT- like arrangements for mentoring, tutoring, counseling, group work etc.?

The second contact session acts a forum to discuss problems and learnings of the teachers; in cities like Delhi and Bangalore, where there are many local (within city) registrations, counseling sessions (once a month) are also organized based on the needs of the learners.

39. Trained and Skilled manpower available with CEE for Mentoring, Tutoring and Counseling: NA

	<b>Trained in ODL</b>	<b>Not trained in ODL</b>	<b>Total</b>
<b>No. of Mentors</b>			
<b>No. of Tutors</b>			
<b>No. of Counselors</b>			
<b>Total No.</b>			

40. What is the feedback system used for monitoring the program?

While annual meetings (of all GT team, clubbed with the annual meeting of CEE) provides a forum for programme review and improvement; any new element of the programme is first suggested to all Study Centre teams, over e-mails, and their opinion and suggestions on it are sought before finalizing a change in the system or introducing a new element in the system

41. What are the ICT interventions used in designing, developing, delivering and monitoring the GT?

E-mails and a multimedia CD

42. What are the efforts made by CEE for adopting Tech-MODE for GT?

As mentioned earlier, CEE is working with COL towards institutionalization of TechMODE at CEE. Also for the last 2 years, CEE has worked with COL to digitize the GT material and work towards launching GT online

43. What is the technological support available with CEE for GT? What tools are available- like Learning Management System (LMS) Learning Content Management System (LCMS), Content Development and Operations Tool (CDOT) etc?

Perpetual license for the customized LMS called Adventus is available to CEE.

44. How many functionaries are trained to develop and use such tools for better learning?

NONE fully trained, about 6-8 persons oriented to OERs and their use

45. What are the arrangements for their training and retraining?

In the phase II of the TechMODE work, capacity building is envisaged as a major focus

46. What is done to create the network of study centers /Life Long Learners' ( L3) groups / teachers / experts / functionaries etc to provide for building learning communities?

GT online will provide opportunity for lifelong learning of green teachers through a Blog

47. How many Study Centers are established for GT? Are they networked?

6. Yes

48. What are the functions assigned to Study Centers?

All Academic services, including evaluation and assessment of project and assignments

49. Is the Study Center staff oriented in to those functions? How?

In most cases yes, except some times when there is a change of staff at a centre

50. What are the provisions for group learning/collaborative and cooperative learning? How many L3 groups formed for learners/ Mentors/Counselors?

Planned for 2009; through GT online

51. **Enrollment and Out put of the GT program**

**Separate database being sent by Chitra**

	2007-08	2006-07	2005-06	2004-05	Total
<i>No of applicants:</i>					
<i>No registered:</i>					
<i>No of students Passing out with:</i>					
<i>Gold leaf</i>					
<i>Silver leaf</i>					
<i>Bronze leaf</i>					
<i>Total pass outs</i>					
<i>No of schools where GTs are working</i>					

52. In what other ways and activities, CEE supports learners of ODL such as exposure to and interaction with visiting experts, Students/teachers exchange programs etc, please specify.

In most cases, the graduates of GT are invited to the new programmes as resource persons. A few green teachers were also provided opportunity to participate in the 4<sup>th</sup> international conference in EE; 3 Green Teachers were

invited as resource persons in EE in Schools for a training programme for formal education practitioners from Nigeria

**(E). Evaluation strategies:**

53. Describe in brief the assessment and evaluation system and feedback mechanisms being used in GT, today.

Available in the Learner's Handbook (copy of which already provided)

54. Will they be equally efficient for ODL mode of delivery where larger number of learners might be involved?

NO, will require some modifications in the kind of assessment questions and techniques adopted

55. Are the mentors, guiding and assessing assignments and project reports, thoroughly trained for assessment and feedback-writing? Are the assessors and examiners oriented thoroughly in the evaluation criteria and procedures?

YES

**(F). Global linkages:**

56. Are there any partner institutions in developing and delivering the GT? Who are they? What is the nature of Partnerships involved?

National Teachers' Institute, Nigeria plans to adapt and offer GT in Nigeria; YCMOU plans to offer it in Marathi; NIOS expressed its willingness to partner for GT Hindi; discussions are going on with GCERT for GT Gujarati

57. What is the number of Institutions, NGOs, in India and abroad, adopting GT? Please list them here.

Please see above

58. What are the established linkages abroad for extending GT globally?

Please see 56.

**(G). Sustainability:**

59. How quality is maintained in GT through the entire”-inputs-through puts-outputs-impact” process?

Since currently it is an ‘all CEE’ programme, CEE’s quality assurance mechanism work for GT as well.

60. Are there any R&D activities for quality assurance in GT? Please specify.

Yes, every year a meeting is done of all GT team members to identify the areas of improvement

61. What is the Impact of CEE and GT through ODL on Indian school system?

Please see Section II Q 3 and 4 on long term goals

62. What efforts are made for sustenance of this impact?

Offering the programme in regional languages of the country is the key strategy

63. What are the efforts being made by CEE for community involvement in GT program and CEE activities?

Working with communities is a way of work for several of CEE’s projects. In case of the GT programme, involved of teachers (representing the teaching community) right from module development to material review to utilizing their expertise in the programme itself has been the way of work for GT.

Further the ‘GT programme project’ which all students have to undertake with their students in their schools, ensures that the learnings from GT and its benefits reach the local community—directly or indirectly

64. Quote a few examples where community resources were used to augment the recourse base of the program?

Special batches of GT have been run for teachers and schools of the Navodaya Vidyalaya Samiti. Given that these are residential schools located in semi-urban and rural parts of the country, teachers very often make use of

community spaces, expertise and resources for many of the Programme Project carried out by them.

65. Is the alumni association of the GT, formed? Has CEE created the data base of the alumni for reaching out to them whenever needed?

Yes database exists and CEE team does write to them on relevant occasions, but no ASSOCIATION has been registered

66. How is the GT Alumni being involved in the program activities?

Already mentioned: As faculty on many of CEE programmes; including the GT

67. Reactions of both, passed outs and failed students, are equally important because of their implications for quality of course contents, study material, student support systems, pedagogy used and practiced. What mechanism is established to get the student feedback for this purpose? What is the feedback received so far? Please describe in brief.

At all contact sessions, feedback sessions are conducted and also feedback forms are submitted by the learners. Available occasions that GT team gets to interact with passed out students are also used for such purposes. For example, in March 2008, when a team of 3 CEE members was in Mumbai to market the 20087 programme, half-a-day alumni meet was conducted for GT pass outs which also acted as a feedback seeking forum for CEE

## Appendix 5-Interview Schedule

COL-CEE Cooperation

### **Interview Schedule for Experts/Functionaries/Mentors etc.**

This schedule was used to collect information/ views of CEE/GT functionaries at CEE HQ at Ahmadabad and Bangalore Regional Center as well as experts involved.

Name of the interviewee:

Designation:

Location:

Job description:

Experience:                      yrs.

Mobile No

Tel No. with STD Code

E-mail I D:

1. What are the objectives set for CEE-GT?
2. Which of these objectives are fulfilled so far?
3. What are the possible hurdles for not achieving some objectives?
4. What were the expected short-term and long-term outcomes & outputs of the program? How far they are achieved?
5. What are the processes involved in developing, planning and implementation of the CEE activities, particularly GT?
6. Are the inputs adequately effective to successfully implement the GT program?
7. What are the resources generated by CEE? Are they adequate to implement the GT? Why?
8. What are the strengths of CEE for GT-on line, according to you?
9. What are the limitations of CEE for GT-on line, according to you?
10. What support you think the organization like COL can provide to CEE in overcoming those limitations?

**CEE CAPACITY IN ODL AND ITS PRESENT STATUS:**

**(A) Capacity to design and develop Courseware:**

1. Do you think the number of Courses/Modules developed for GT, is adequate? Why?
  
2. Who do you think should develop these Courses/Modules? (Professionals/Experts/Scientists/Educators/ Trained Practitioners/Any one else) Why?
  
3. How many of course writers are available for discussion on the contents?
  
4. If only the staff of the CEE is to be involved in development of these Courses / Modules, what kind of training inputs would be required?
  
5. What other efforts CEE should undertake to increase the capacity for designing and development of course contents-please describe in brief.

6. How would you rate the Quality of the program components such as:  
(Please tick mark)

<b>Program Components</b>	<b>Excellent</b>	<b>Good</b>	<b>Average</b>	<b>Poor</b>	<b>Very poor</b>
<b>Course contents</b>					
<b>Study material</b>					
<b>Learning activities</b>					
<b>Assignments</b>					
<b>Project work etc.</b>					
<b>Delivery Mode</b>					

**(B). Capacity to design and develop Learning Resources:**

What type of SIM / ODL material will be useful in GT?  
(Please tick mark)

**Print and AV:**

- (a) Plain Text
- (b) SIM
- © Audio Cassettes
- (d) Video Cassettes

**Digital:**

- (e) Text on CD
- (f) VCD
- (g) Audio CD
- (h) Multi-Media

**OERs:**

**(i) Open Educational Resources**

**(j) Any other type (Please specify)**

**Is the available material, adequate?**

7. Who do you think should develop these Learning Resources?  
(Professionals/Instructional Systems Designers/Technicians /Practitioners-  
Mentors-Tutors/Any one else) Why?

8. If only the staff of the CEE is to develop these Learning Resources, what  
kind of training inputs will be required?

9. What other efforts CEE should make to increase the capacity for designing,  
developing and producing such resources for GT through ODL. Please  
describe in brief.

10. How would you rate the Quality of the Learning resources being used in GT  
program?( Write NA against the resources not used in GT)

<b>Learning Resources</b>	<b>Excellent</b>	<b>Good</b>	<b>Average</b>	<b>Poor</b>	<b>Very Poor</b>
<b>Print</b>					
<b>Plain Text</b>					
<b>SIM</b>					
<b>Audio Cassettes</b>					
<b>Video Cassetes</b>					
<b>Digital</b>					
<b>Text on CD</b>					
<b>VCD</b>					

<b>Audio CD</b>					
<b>Multi Media</b>					
<b>OERs</b>					
<b>Any Other</b>					

**(C). Delivery system and Deployment strategy:**

11. According to you, which is the best delivery mode CEE should prefer for GT- Dual Mode, On-line, Face to Face or, any other mode? Why?

12. Do you think the development, deployment and delivery systems built and infrastructure created by CEE for delivery of GT are satisfactory? Why?

13. What efforts do you think CEE should make to build capacity in the preferred mode of delivery of the program? For example, for dual mode of delivery and networked learning-training and retraining of functionaries for developing capacity and skills to use ICT and variety of media.

14. What suggestions would you make for effective Mentoring, Tutoring and Counseling in GT?



20. In what other ways and activities do you think CEE can support learners of ODL?

**(E). Evaluation strategies:**

21. How do you evaluate the students' performance in GT? Are you satisfied with the evaluation system? Why?

22. Are you satisfied with the orientation given in the evaluation criteria and procedures? Why?

**(F). Global linkages:**

23. What are the established linkages for extending GT globally? Are you happy with these linkages? Why?

**(G). Sustainability:**

24. What can be done to maintain the quality and make GT a still better program?

25. How local community can be involved more in GT program and CEE activities?

26. How can past students help GT program?

27. Reactions of both, passed outs and failed students, are equally important because of their implications for quality of course contents, study material, student support systems, pedagogy used and practiced. What mechanism is established to get the student feedback for this purpose? What is the feedback received so far? Please describe in brief.

## Appendix 6- Questionnaire for Students

COL-CEE COOPERATION EVALUATION

### Questionnaire for Students:

(Followed by personal interview on the basis of responses to questions)

Name of the interviewee:

Designation:

Location:

Job description:

Experience:                      yrs.

Mobile No

Tel No. with STD Code

E-mail I D:

Reactions of both, past and present students are very important because of their implications for quality of course contents, study material, student support systems, pedagogy used and practiced.

Please respond to following questions freely and frankly. It will help us to improve the GT further.

1. How would you rate the Quality of the program components?  
(Please tick mark)

<b>Program Components</b>	<b>Excellent</b>	<b>Good</b>	<b>Average</b>	<b>Poor</b>	<b>Very poor</b>
<b>Course contents</b>					
<b>Study material</b>					
<b>Learning activities</b>					
<b>Assignments</b>					
<b>Project work etc.</b>					
<b>Delivery Mode</b>					

2. What type of SIM / ODL material was available and used by you in GT?  
(Please tick mark)

**Print and AV:**

- (a) Plain Text
- (b) SIM
- © Audio Cassettes
- (d) Video Cassettes

**Digital:**

- (e) Text on CD
- (f) VCD
- (g) Audio CD
- (h) Multi-Media

**OERs:**

- (i) Open Educational Resources
- (j) Any other type (Please specify)

Was the available material, adequate?

3. How would you rate the Quality of the Learning resources provided in GT program?( Write NA against the resources not used in GT)

Learning Resources	Excellent	Good	Average	Poor	Very Poor
<b>Print</b>					
<b>Plain Text</b>					
<b>SIM</b>					
<b>Audio Cassettes</b>					
<b>Video Cassettes</b>					
<b>Digital</b>					
<b>Text on CD</b>					
<b>VCD</b>					
<b>Audio CD</b>					
<b>Multi Media</b>					

<b>OERs</b>					
<b>Any Other</b>					

4. According to you, which is the best delivery mode preferable for GT-  
Duel Mode, On-line, Face to Face or, any other mode? Why?
  
5. Do you think the system to respond to students' queries is satisfactory?  
Why?
  
6. What is the learner support system used for GT- like arrangements for  
mentoring, tutoring, counseling, group work etc.? Are you satisfied? How  
will you rate those services?
  
7. What is the technological support available with CEE for GT? Are you  
satisfied with this support? Why?
  
8. In what other ways and activities do you think CEE can support learners  
of ODL?

9. Are you satisfied with the evaluation system of GT? Why?
  
10. What can be done to maintain the quality and make GT a still better program?
  
11. What are the strengths of CEE for GT-on line, according to you?
  
12. What are the limitations of CEE for GT-on line, according to you?

**Overall impression:**

What is your overall impression about the GT? Write a paragraph expressing your views. How can past students help to make GT program still better one?

## Appendix 7-Schedule of Visits

The consultant planned the visits to CEE Head Quarters / Regional Offices/ Study Centers and conducted meetings with the staff, functionaries and experts as follows:

### SCHEDULE

Sr. No.	Dates	Place	Details of the Meetings
1.	June 11 <sup>th</sup> 2008	Ahmadabad	Meetings with Shree Kartikeya Sarabhai, Director, CEE, Ms Shivani Jain, Mr Babu, Ms Chitra and other functionaries of GT to discuss the proposed evaluation plan and collecting basic information regarding CEE/GT
2.	June 12 <sup>th</sup> 2008	Vadodara	Meeting with Prof Deven Goel at Center for Advanced Study in Education (CASE) to seek expert reaction to GT as ODL on-line program
3.	July 02 <sup>nd</sup> 2008	Banglore	Meetings with Dr. Ravindra, Regional Coordinator and other functionaries of GT to collect basic information regarding CEE/GT
4.	August 08 <sup>th</sup> 2008	Nashik	Meetings and interviews of Prof Anant Joshi-Director, School of Education, as an expert and senior faculty members who completed GT course as ODL student like Dr Kavita Salunke, Dr Sanjivane Mahalle, Madhavi Dharanker and others at YCMOU, for getting feedback from ODL functionaries as students

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**CONTRIBUTORS**

Following scholars and functionaries in the field interacted with the consultant and contributed in completing the task of the evaluation of CEE capacity in ODL:

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3. Ms Shivani Jain, Senior Program Coordinator, CEE, Ahmadabad
4. Mr Kunal ,CEE, Ahmadabad
5. Mr. Babu, Ms Ajanta, Ms Chitra, Mr Santosh etc, the administrative staff from Secretariat at HQ of CEE, Ahmadabad
6. Dr. M.J.Ravindranath, Senior Specialist (Teacher Training) CEE South, Bangalore
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10. Mrs. Vijaya Francis, Past Student of GT, Bangalore
11. Prof Anant Joshi, Director, School of Education, YCMOU, Nashik.
12. Dr. Kavita Salunke, Past student and Faculty, YCMOU, Nashik.
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