

**Minutes of the Project Monitoring and Evaluation Group Meeting held on 27<sup>th</sup> January, 2011 to consider the Computer Education Plans of State Governments of Andhra Pradesh, Orissa, Rajasthan, and proposals from SIET, Pune, SIET Kerala, SIET Hyderabad, SIET Patna under Information & Communication Technology (ICT) in Schools Scheme.**

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The third meeting of the Project Monitoring and Evaluation Group (PMEG) for the Centrally sponsored scheme of 'ICT in Schools' was held on 27<sup>th</sup> January, 2011 at 1000 hrs in the Conference Room under the Chairmanship of Secretary (SE&L) to consider the Computer Education Plans (CEPs) received from the State Governments of Andhra Pradesh, Orissa, Rajasthan, and proposals from SIET, Pune, SIET Kerala, SIET Hyderabad, SIET Patna and proposals of Secondary Education Group of NCERT and also proposal for strengthening of SCERTs/RIEs under "Information & Communication Technology (ICT) in School" Scheme. As no representatives from SIET Patna and CIET were present, the proposals of SIET Patna and proposal for strengthening of SCERTs/RIEs could not be considered. A list of the participants is annexed.

2. At the outset, Director (SE) welcomed all the Members of the PMEG, representatives of the State Governments/UT Administrations/Organizations.

3. Initiating the discussion, Joint Secretary (SE) briefly explained the vision and perspective of Govt. of India on use of ICT in schools and for skill development. He mentioned that use of ICT in the teaching learning process would give a fillip to the constructivist approach to education. He stated that India has the highest percentage of young people in the world and their competence in ICT would enable them to take their rightful position in the global work force. A summary of his observations is as under:-

- The scheme of ICT in Schools Scheme has been revised and Computer Education Plans (CEPs) of the States/UTs for coverage of schools in the concerned States need to be prepared as per the guidelines of the revised ICT Scheme.
- One of the important requirements is the availability of appropriate enabling infrastructure, particularly, availability of electricity and telephone connection. Rajiv Gandhi Vidyutikaran Yojana of the Ministry of Power should be optimally utilized by the State Governments to get the villages having high schools electrified on priority.
- All Govt. and Government aided secondary and higher secondary schools in the country need to be covered under the scheme in the 11<sup>th</sup> Five Year Plan. Therefore, the State Govt. should make plans to ensure electricity and telephone connectivity to all high schools. .
- A dedicated post graduate teacher is required in each higher secondary school offering IT-related subjects as electives.
- CBSE has introduced computer science as an additional subject in classes 9 and 10 and curriculum and textbooks have been developed. However, it is not compulsory. CBSE conducts examination, which is optional, and a certificate is issued to students who appear. State Governments can also think of introducing a similar course with the examination being made optional. This will enable students, who do not continue to pursue higher studies to make use of the certificate which will boost their employability.
- NCERT has prepared model course curriculum for Classes IX and X for ICT. State Governments can use these as starting points and adapt those according to needs. NCERT and CBSE will be happy to extend required assistance to the States.
- The scheme needs to be evaluated by independent agencies, such as, IITs, IITs, IIMs and Engineering Colleges. Also there had to be continuous monitoring by in the short term and impact assessment in the longer run.

- Creation of appropriate and adequate database is vital to the implementation of the programme.
- Under the revised scheme, there is a provision for National Awards to teachers using ICT in teaching. The State Government should initiate action based on the guidelines and should stick to the timelines stipulated.
- There is provision for in service training and induction training for teachers in the revised scheme.
- It is imperative that all the teachers in the Secondary and Higher Secondary schools should be trained to use ICT in teaching. The training for all the teachers should be completed well before the installation of the hardware in the schools.
- As internet connectivity exposes students to the world of information, every school needs to have internet connection. Ministry of Telecommunication has assured to provide broadband connection on priority basis to all high schools. States need to take up the matter with D/o Telecom and BSNL units located in the State. Wherever it is not possible to have broadband, there should be at least dial-up connectivity.
- A nodal officer should be exclusively assigned in each State to implement the scheme. He or she should head a cell to be set up for implementation and monitoring of the scheme
- States must make adequate provision towards both Centre and State shares in their Budget to obviate any difficulty in the fund flow.
- The physical progress under the scheme needs to be reported to MHRD by the State Governments/ UTs on a quarterly basis.
- Most of the States have been preferring BOOT model for its obvious advantages. However, if State Govts. require approvals on outright purchase, suitable justification should be submitted for consideration.

- Smart schools should be proposed generally for large schools, having broadband connectivity and preferably in district headquarters so that these schools can act as a hub and would be a show -case for other schools.
- Every State should set up expert committee for content development. Teachers should invariably be made part of the Committee.

4. Director (ICT), MHRD made a presentation of the proposal received from the State Government of Andhra Pradesh, highlights of which are as under:

#### **4.1. Proposal of Andhra Pradesh**

- There are 11871 schools (11171 secondary schools and 700 higher secondary schools Junior Colleges) in the State.
- 7000 schools (6300 secondary schools and 700 Junior colleges) have already been covered under ICT scheme.
- Out of the remaining 4871 secondary schools, State Govt. has proposed to cover 4031 schools in 2010-11 under BOOT model
- State Govt. has made the requisite budgetary provision of Rs. 138.67 crore in the State budget towards the Central and State share.
- 18.79 lakh students and 18732 teachers have already been trained in ICT.
- Monitoring Committees at District and State Level has been constituted to look after the implementation of the scheme.
- Status of implementation of 700 Junior Colleges is awaited
- Status of report of third party evaluation is awaited.
- State Govt. has sought approval for establishment of 5 smart schools at Warangal; Rangareddy; Vishakhapatnam; Guntur and Chittoor on BOOT model.

4.2. Principal Secretary, Education, Govt. of Andhra Pradesh clarified the following points:

- As regards implementation of 700 Junior Colleges, tenders have been called for and a decision on the implementing agency/vendor will be made soon.
- There is delay in implementation in 700 Junior Colleges. These colleges were earlier part of Department of Higher Education and have recently been transferred to Department of School Education.
- 18732 teachers have been trained in ICT in 5000 schools approved for coverage.
- 6500 teachers have been trained in ICT in respect of 1300 schools approved for coverage.
- Infrastructure is in place in all 6300 secondary schools approved for coverage under ICT.
- State Govt. proposes to cover 116 Junior Colleges in 2010-11. This was in addition to the earlier proposal sent.
- On third party evaluation, Centre for Good Governance has been identified and the report would be submitted shortly.
- Smart school would be established in Krishna District and not in Guntur district as stated earlier.

4.3 JS(SE) stated that third party evaluation should not be a one time exercise and the State Govt. should do the evaluation of the implementation of the scheme every year. This will ensure rectification of drawbacks in the implementation. It was also mentioned that the States should put all the information with details of schools on a Web site which should be regularly updated.

3. JS (SE) pointed out that under the revised scheme of ICT, there is a provision for induction training in ICT to all teachers not conversant with ICT for 10

days. There is provision for annual refresher training of five days for all teachers. It was also stressed that teacher training should not be left to the vendor but the State Government should take pro-active steps to ensure that all teachers are properly trained in order to be able to use ICT tools in their teaching.

4.4. JS(SE) requested the States to establish an ICT Cell with full time officials so that the implementation of the scheme as well as submission of the proposals in time can be ensured. For 2011-12, proposals would be sought from the States for submission by the end of February, 2011 so that PMEG meetings can be held immediately thereafter and the States would have the full year to implement the scheme.

4.5. Dr. Rajaram Sharma, Member, PMEG observed that the State Government have provided students with text books with syllabus and curriculum based on branded software. It was clarified by the Principal Secretary, Education, Govt. of Andhra Pradesh that a Committee has been constituted to amend the syllabi so that only generic software can be mentioned.

4.6. After detailed discussions, PMEG recommended the following:

- i Coverage of 4031 secondary schools under BOOT model for a period of 5 years w.e.f. 2010-11 to 2015-16.
- ii Central share of Rs. 4.80 lakhs for 4031 secondary schools would be released as follows: Rs.1 lakh per school for the first four years and Rs. 0.80 lakh per school for the final year of implementation.
- iii Coverage of 116 Junior Colleges would be taken up in the next financial year.

iv Establishment of 5 smart schools at Warangal; Rangareddy; Vishakhapatnam; Krishna and Chittoor districts on BOOT model.

## 5. Proposal of Orissa:

5.1 1500 schools were approved for coverage in 2007-08, but there has been no progress by the state government due to lack of budgetary provision. Amount could not be released by Ministry of Human Resource Development pending receipt of utilization certificate of earlier release of Rs.909.43 lakhs for the erstwhile ET and CLASS Schemes.

- State Govt. has refunded / sent utilization certificate to the tune of Rs 828.68 lakhs . An amount of Rs.80.72 lakhs is still to be settled.
- There are 7253 secondary schools in the State.
- The State Government of Orissa proposes to implement ICT @ Schools for 4000 secondary schools in 2010-11 under BOOT model.
- State Govt. has not made any budgetary provision for coverage of 4000 schools proposed.

2. Joint Secretary, Department of School and Mass Education, Govt. of Orissa, clarified as follows:

- As on 1.4.2010, there were 7253 were secondary schools. 300 new high schools have been approved under RMSA during 2009-2010 and 365 schools have been proposed under RMSA during 2010-2011, thus taking the total to 7918.
- Out of 7918 secondary schools, 5236 are government schools and 2682 are government aided schools.

- A sum of Rs.16.77 lakhs is pending for refund from the earlier release and not Rs.80.72 lakhs, as stated by Ministry of HRD.
- The locations for establishment of 5 smart schools has not yet been finalized.
- A calendar of training of teachers has been prepared and would be put on web.
- Director, School Education, has been made the nodal officer for implementation of ICT scheme.
- An ICT Cell is being set up.
- Tenders has been called for implementation of the ICT scheme and by 1<sup>st</sup> of March, 2011, the scheme would take off.

3. Secretary (SE&L) directed that the issue of outstanding dues from the State Govt. needs to be reconciled as there is a difference between the Ministry's records and the information given by the state representative.

4. In Orissa, where High/Secondary schools and Higher Secondary schools come under separate departments. Secretary (SE&L) suggested that the school education department should assume the nodal role proposals and progress reports should come to MHRD through the nodal department.

5.4. After detailed discussion, PMEG recommended:-

- i. Coverage of 4000 secondary schools under BOOT model for a period of 5 years w.e.f. 2011-11 to 2015-16.
- ii. Central share of `4.80 lakhs for 4000 secondary schools would be released as follows: Rs.1 lakh per school for the first four years and Rs. 0.80 lakh per school for the final year of implementation.
- iii. Dedicated ICT Cell with full time officials exclusively for implementing the scheme should be established by the State immediately.



- iv. Unspent balance (after reconciliation) would be adjusted at the time of release of 1<sup>st</sup> years' instalment.
- v. 1500 schools approved for coverage in 2007-08 would be cancelled.
- vi. Proposal for 538 Junior Colleges (Senior Secondary schools) may be sent by the state for coverage during 2011-12.

## 6. **Government of Rajasthan**

6.1. Commissioner of Secondary Education, Govt. of Rajasthan, made a presentation, highlights of which are as follows:

- 2000 schools were approved for coverage in 1<sup>st</sup> phase and 2500 more schools were approved for coverage in 2<sup>nd</sup> phase ICT infrastructure is in place in these 4500 schools. Internet connection is available in 4300 schools.
- A separate Computer Science subject has been included in the 12<sup>th</sup> Class syllabus by the State Board.
- Training of teachers is yet to be done systematically.
- An ICT Cell has been established with a Dy. Director in charge.
- For third party evaluation, expression of interest has been called for.
- 2000 schools (1869 secondary and 131 higher secondary schools) are proposed to be covered in 2010-11 under BOOT model.
- Proposal for establishment of smart schools would be proposed in 2011-12.
- State Government requested for allocation of 30% of the requisite amount in the first year.

6.2. After detailed discussion, PMEG recommended as follows:

- i. Coverage of 2000 secondary schools under BOOT model for a period of 5 years w.e.f. 2011-11 to 2015-16.

- ii. Central share of Rs.4.80 lakhs for 2000 secondary schools would be released as follows: Rs.1.50 lakh per school for the first year; Rs.1.00 lakh per school for 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> year and balance Rs.0.30 lakh per school for the 5<sup>th</sup> year of implementation.
- iii. All teachers of covered school should be trained in use of ICT in teaching and learning.

## **7. SIET Pune**

7.1. Deputy Production-in-charge, SIET Pune made a presentation, highlights of which are as follows:

- In 2009-10, 102 video and 103 audio programmes were produced by SIET Pune.
- In 2009-10, 100 learning objects were produced in consultation with CIET.
- SIET Pune has decided to produce audio programmes for Communication Skills in English as it is in great demand.
- Video programmes being produced by SIET Pune are shown on DD.
- Financial assistance is required for production of new video programmes as DD objects to repeat of old video programmes and threaten to withdraw the time slot given to SIET Pune.
- For 2010-11, SIET Pune sought financial assistance of Rs.408.40 lakhs, the break up being as under:

(i) 200 video programmes for TV Rs. 130 lakh

(ii) 100 multi-media learning objects Rs. 90 lakh

(iii) 200 audio programmes Rs. 35 lakh

iv) Training Rs. 4 lakh

- (iv) Workshop Rs. 2.40 lakh
- (v) Digitization of old programmes Rs. 4 lakh
- vi) Equipment repairs Rs. 15 lakh
- vii) Replacement of Centralized AC Plan Rs. 35 lakh
- viii) Purchase of new technology equipment Rs. 84 lakh
- ix) Vehicle Maintenance and fuel Rs. 3 lakh
- (vii) Office expenses Rs. 5 lakh
- (viii) Library Rs. 1 lakh

**Total Rs. 408.40 lakh**

7.2 After the presentation the following observations were made:

- Video programmes on 3 cameras based on panel discussion will not be suitable for school children.
- Objective of SIET Pune should be to create appropriate educational content for use of schools.
- Director, SIET Kerala stated that the video programmes produced by SIET Pune last year were excellent and SIET, Kerala has got copies made of these for use in Kerala.

3. After discussions, the following decisions were taken:

- i. 100 Video programmes (50 nos. simple camera @ Rs.60,000/- each and 50 nos. full fledged drama @ Rs.1,00,000 each) were recommended.

- ii. On Interactive Multi Media Learning Objects, PMEG recommended 50 LOs (25 nos. of Non-interactive with at least 2 animations Graphics @ Rs.40,000/- per programme; and 25 interactive programme with 2 animations Graphics with interactivity in at least 15 frames @ Rs.50,000/- per programme).
- iii. PMEG recommended 100 educational audio programmes @ Rs.10,000/- per programme.
- iv. A sum of Rs.4 lakh was approved for training.
- v. The proposal for conducting workshop was not approved as the workshop is meant for developing Learning Objects and hence the cost of the workshop will have to be borne from the allocation for production cost of LOs.
- vi. A sum of Rs.1 lakh for Library books and another sum of Rs.5 lakh for Office expenses were approved.
- vii. As regards financial assistance for 'replacement of centralized AC Plant', these will be considered on file after receipt of PWD estimates.
- viii. Financial assistance for 'purchase of new technology equipment', 'Digitization of old programmes'; 'equipment repairs'; and 'vehicle maintenance and fuel' was not approved as these would form part of a renovation programme being considered separately.

## **8. SIET Kerala**

8.1. Director, SIET Kerala made a presentation and highlighted the following:

- In Kerala there is a CD library in each of 14,000 schools.
- SIET Kerala sells CD to schools with cost of each CD being Rs.20 each and has sold 10 lakh CDs so far.
- SIET Kerala has entered into franchise arrangement at 14 places.

- Video programmes being produced by SIET Kerala are being shown on dedicated Educational Channel ‘VICTORS’.
- 5 day workshop has been conducted by SIET Kerala for preparation of LOs.
- 533 LOs has been identified for production for class XI and 520 LOs for class XII students based on the school syllabus.
- SIET Kerala sought financial assistance for Rs.241.20 lakh, the breakup of which is as follows:

(i) 533 interactive multimedia learning objects : Rs. 213.20 lakh

(ii) 60 video programmes Rs. 18 lakh

(iii) Seminar and workshop on film making Rs. 10 lakh

2. After the presentation, the following observations were made:

- In the PMEG Meeting of 1<sup>st</sup> October, 2010, 180 Video Programme had already been sanctioned for SIET Kerala. It was also decided then that SIET Kerala would submit a set up programmes being produced to CIET for evaluation. There would be a third party evaluation of the programmes being produced by all SIETs. The CIET was supposed to have facilitated this. It was informed by Director, SIET, Kerala that SIET Kerala had sent samples of the programmes and LOs as well as detailed proposals for production of Interactive Multimedia Learning Objects to CIET. However, CIET has not given its comments on the programmes. Joint Director, CIET will be reminded to send their comments and the evaluation report for these programmes and LOs.
- Production of 533 Interactive multimedia LOs during the available time of 2 months during the year may be difficult.

- CIET has recommended to take up 20 video programmes instead of 60 sought for by SIET Kerala.
- The arrangement of selling CDs through a franchise was found to be viable and can be implemented in other SIETs not only to make them self sufficient but also to ensure that CDs produced by them are utilized.

8.3. After detailed discussions, PMEG recommended the following:

- i. Production of 250 Interactive Multi Media Learning Objects @ Rs.40,000/- each for Science and Maths for Class XII.
- ii. Production of 20 Video Programmes in English @ Rs.40,000/- each.
- iii. SIET Kerala would submit a detailed note on engagement of franchise for selling of CDs so that the same can be sent to other SIETs for information and replication if possible.
- iv. As regards financial assistance for seminar and workshop on film making, SIET Kerala was directed to submit the actual expenditure incurred on conducting workshop on the sidelines of Children's Film Festival so that the same can be considered for reimbursement.

## **9. SIET Hyderabad**

9.1 Director, SIET Hyderabad made a presentation, the highlights of which are as under:

- Video programmes are being shown both on DD as well as Manu TV.
- Video programmes are being produced for classes 9 & 10.
- Total financial assistance worth Rs 317.80 lakh was sought for the following items:

(i) 100 video programmes for TV:	Rs. 80 lakh
(ii) 100 multi-media learning objects:	Rs. 50 lakh
(iii) 100 audio programmes:	Rs. 25 lakh
(iv) Workshop:	Rs. 20.25 lakh
(v) Office expenses:	Rs. 5 lakh
(vi) Library:	Rs. 1 lakh
(vii) Digitization of video programme:	Rs. 1 lakh
(viii) Purchase of technical equipment:	Rs. 84 lakh
(ix) Maintenance of Central AC Plant:	Rs. 1.89 lakh
(x) Electricity charges:	Rs. 7.20 lakh
(xi) Rewiring and replacement of electrical items:	Rs. 15 lakh
(x) Water charges:	Rs. 0.30 lakh
(xi) AMC for existing ACs and purchase of Air coolers:	Rs. 1.44 lakh
(xii) Maintenance of office building:	Rs. 25 lakh

9.2 After discussion PMEG recommended of the following:

- i. Production of 50 Interactive Multi Media Learning Objects for classes IX and X @ Rs.50,000/- each.
- ii. Production of 100 Video Programmes (50 outdoor @ Rs.60,000/- each and 50 indoor @ Rs.1,00,000/- each)
- iii. Production of 50 audio programme @ Rs. 1000/- per programme
- iv. Financial assistance of Rs.1 lakh for Library books; and Rs.5 lakh for office expenses.
- v. Proposals for ‘digitization of video programmes’; ‘electricity charges’; ‘water charges’; ‘AMC for existing ACs and purchase of air coolers’ was not approved.
- vi. As regards ‘maintenance of office building’, SIET was asked to submit PWD estimates for consideration separately on file.
- vii. Reimbursement for replacement of existing Natural Draft Cooling Tower with FRP Cooling Tower was not agreed as it is not as per the scheme.
- viii. Condemnation of equipments:- As there was no technical appraisal and no comments from CIET, this proposal was deferred.
- ix. Renovation of Acoustical Treatment for Audio Studio, Renovation of Toilets and other minor works in SIET Hyderabad:

As there were no comments from CIET, this proposal was deferred.

## **10. Proposal from Secondary Education Group, NCERT**

10.1. Dr. P.K. Chaurare, DSE, NCERT made a presentation of a project titled ‘Teaching Secondary Mathematics with ICT’, highlights of which are as under:

- The duration of the project is 2 years i.e. 2010-11 to 2011 - 12.



- Open Educational Resources (OER) in Mathematics at secondary stage is proposed, which would be designed in such a manner that it could fit in to teachers' daily routine.
- OER in Mathematics would be a source for teachers' professional development as well as for continuous and comprehensive evaluation tool.
- The project will be run mainly on open source.
- The entire content would be available in a pen drive both for use of students and teachers.
- For the use of teachers the programme would also include facility to design test papers and the teachers would also be able to manipulate the lesson by using the tools according to their lesson plans.
- There would be 7 themes covering the entire syllabus of Classes IX and X.
- The above project would increase the confidence of teachers. Initially it would be in expressive mode and later in exploratory mode.
- There would be about 500 animations and it would be in the form of modules.
- There will be atleast 10 to 12 LOs in each module.
- The project will help in self training of teachers and there would not be any need of separate training for teachers for implementing this project.
- The project team is prepared to work hard to complete the project in six months.

10.2 After detailed discussion, PMEG felt that the concept was sound and recommended for initial production of 3 themes, with financial implication of Rs.15 lakhs, In the meanwhile, a technical group headed by Joint Director, CIET and with experts from NCERT and outside NCERT will appraise the project. On receipt of the report from the expert group, further sanction of the balance themes for production would be considered by the PMEG during 2011 – 12. While taking up

the first 3 out of 7 themes, the development should be based on the holistic approach to cover all the 7 themes eventually within a period of 6 months.

## **General**

11.1 In the last PMEG Meeting of 1<sup>st</sup> October, 2010, Secretary (SE&L) had desired that CIET should formulate guidelines on the types of programmes to be produced so that there is no overlapping among SIETs and between CIET & SIETs. This would also help in avoiding repetition of programmes on the same theme. This is important especially due to the fact that a number of States have sent proposals for multimedia content development. In the earlier PMEG meetings it was decided that the CIET will appraise the proposals for development the multimedia content by the State Government and furnish a report to the PMEG. Thus, standardization of E content across the States can be made easier.

11.2 It was also informed that in the last meeting of the Joint Committee of all SIETs and CIET, it was decided that the CIET would act as a central repository of all the programmes produced by all the SIETs and CIET itself. It was also agreed that digitization of old video tapes and umatic tapes and other contents lying with the SIETs would be done by the CIET. The CIET was asked to report on the progress/action taken by the CIET on this.

11.3 The need for an MIS System for monitoring progress of the implementation of the scheme was also discussed. It was felt that the progress report of the States (along with the details of the schools, number of students covered, number of teachers trained, etc.) should be automatically updated by the States themselves, by creating a dynamic MIS System/Website. In 2009, NIC was requested to design an MIS System for monitoring of the scheme at the Ministry level. The Department of

Computer Education and Technological Aids of NCERT was asked to design a reporting and monitoring system which will capture the information both from the State Governments implementing the scheme at the school level as well as information on the activities/products, etc. of the SIETs.

11.4 A proposal to dissolve the SIET Patna was also received, but this could not be considered because there was no representative from SIET, Patna. It was observed that SIET Pune is also facing hardship. Ministry of Education and Culture in 1982, in the order for establishing the SIETs, MHRD had clearly mentioned that after five years the State Governments would take over the administration and activities of the SIET alongwith the financial implications involved. However, no State Government has, till now, done this. It was agreed that a separate meeting to discuss problems and issues faced by the SIETs would be held under the Chairmanship of Secretary (SE&L).

The meeting ended with a vote of thanks to the Chair.