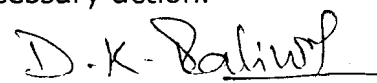F. No. 16-71/2009-DL
Government of India
Ministry of Human Resource Development
Department of Higher Education

....

New Delhi, the 22nd July, 2009

Subject: Minutes of the Seventh Meeting of the Empowered Committee of Experts (Project Approval Board) of the National Mission on Education through Information and Communication Technology (ICT) – regarding.

A copy of the Minutes of the Seventh Meeting of the Empowered Committee of Experts (Project Approval Board) of the National Mission on Education through Information and Communication Technology (ICT), a Centrally Sponsored Scheme, held on 2nd July, 2009 at 3.30 p.m. under the Chairpersonship of Secretary, Department of Higher Education, Ministry of Human Resource Development, in Conference Room No.112-C Wing, Shastri Bhawan, New Delhi is sent herewith for information and necessary action.

D.K. Paliwal

(Dr. D.K. Paliwal)
Deputy Educational Adviser (DL)
· Tele: 23385489

Encl: As above.

All members of the Project Approval Board of National Mission on Education through Information and Communication Technology (ICT) [As per list enclosed].

Copy, along with a copy of Minutes, to: Sr. PPS to Secretary (HE) & Chairperson, PAB and JS(DL)/Member Secretary, PAB - for information.

Copy, along with a copy of Minutes, also to:

1. Shri Amitabh Bhattacharya,
    Principal Adviser (Education),
    Planning Commission,
    New Delhi.   **(Fax No.23096623)**

2. Shri Furqan Qamar,
   Adviser (Education),
   Planning Commission,
   New Delhi.   **(Fax No.23096548)**

3. Shri R. Chandrashekhar,
   Special Secretary,
   Department of Information Technology,
   Electronics Niketan,
   CGO Complex, Lodhi Road,
   New Delhi   **(Fax No.24363079)**

4. Shri N. Ravi Shanker,
   Joint Secretary,
   Department of Information Technology,
   Electronics Niketan,
   CGO Complex, Lodhi Road,
   New Delhi.   **(Fax No.24363099)**

5. Shri Subodh Kumar,
   Additional Secretary,
   Department of Telecommunications,
   Sanchar Bhawan,
   New Delhi.   **(Fax No.23350495)**

6. Prof. Ajay Chakraborty,
   Dean (CE),
   Indian Institute of Technology,
   Kharagpur.   **(Fax No.91-3222-82000)**

7. Shri R.K. Shevgaonkar,
   Dy. Director,
   Indian Institute of Technology,
   Bombay.   **(FaxNo.91-22-5723546)**

8. Prof. K. Mangala Sunder,
   Professor, Chemistry and
   NPTEL Coordinator,
   Indian Institute of Technology, Madras,
   Chennai   **(Fax No.91-44-225780)**

9. Shri A. Bhaskaranarayana,
   Scientific Secretary,
   Indian Space Research Organization (ISRO),
   Antariksh Bhawan,
   New BEL Road,
   Bangalore – 560094. **(FAX No.080-23415229)**

10. Ms. Shakila Shamsu,
    Joint Adviser (Edn.),
    Planning Commission,
    Yojana Bhawan, New Delhi.

11. Shri J.S. Deepak,
    Joint Secretary,
    Department of Telecommunications,
    Sanchar Bhawan, New Delhi.

12. Dr. Prem K. Kalra,
    Director, IIT, Rajasthan,
    C/o Indian Institute of Technology, Kanpur,
    Kanpur.

13. Prof. Karmeshu,
    SCSS,
    Jawaharlal Nehru University (JNU),
    New Delhi.

14. Prof. Kushal Sen,
    Professor,
    Indian Institute of Technology,
    Delhi.

15. Shri Sanjay Mittal,
    Professor of Aerospace Engineering &
    Dean, Academic Affairs,
    Indian Institute of Technology,
    Kanpur.

16. Shri Vishwa Mohan,
    DGM (BSP),
    BSNL Corporate Office,
    BSNL, New Delhi.

17. Shri Mithun Dutta,
    System Administrator,
    E-Gyankosh,
    Indira Gandhi National Open University (IGNOU)
    Maidan Garhi, New Delhi.   **He is requested to upload the Minutes sent herewith on the SAKSHAT Portal immediately.**

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Project Approval Board of National Mission on Education through Information and Communication Technology (ICT)

List of Members

1. Secretary,
   Department of Higher Education,
   Chairperson
   Ministry of Human Resource Development
   Shastsri Bhawan, New Delhi.   Chairperson

2. Additional Secretary, & Financial Adviser,
   Department of Higher Education.
   Ministry of Human Resource Development,
   Shastri Bhawan, New Delhi

3. Secretary,
   Planning Commission
   Yojana Bhawan,
   New Delhi.   Fax No : 23096575)

4. Secretary,
   Department of Telecommunications
   Sanchar Bhawan,
   New Delhi.   (Fax No.23711514)

5. Secretary,
   Department of Information Technology
   Ministry of Communication and Information Technology,
   CGO Complex, Lodhi Road,
   New Delhi.   (Fax No.24363134)

6. Secretary,
   Department of Space,
   Lok Nayak Bhawan,
   New Delhi.   (Fax No. 080-2345328)

7. Dr. A. Mukhopadhyay
   Adviser/Scientist 'G', SERC Division,
   M/o Science & Technology, D/o Science & Technology,
   Technology Bhawan,
   New Delhi – 110 016.   **(Fax No.26602193)**

8. Director,
   Indian Institute of Technology,
   Powai
   Mumbai-400076   (Fax No. 91-22-25723546)

9. Director,
   Indian Institute of Technology,
   Roorkee-247667
   Uttrakhand)   (Fax No.91-1332-273560)

10. Director,
    Indian Institute of Technology,
    North Guwahati   (Fax No.91-361-2690762)
    Guwahati-781039(Assam)   (Fax No.91-361-2692321)

11. Director,
    Indian Institute of Technology,
    P O Kharagpur-721302   (Fax No.91-3222-282000)

12. Director,
    Indian Institute of Technology,
    PO IIT,
    Chennai -600036   (Fax No.91-44-22578003)

13. Director,
    Indian Institute of Technology (Fax No.91-512-2597790)
    Kanpur-208016 (U.P)   (Fax No.91-512-2590260)

14. Director,
    Indian Institute of Science,
    Bangalore-560 012
    Karnataka   (Fax No.91-80-23600936)

15. Director,
    Indian Institute of Technology,
    Hauz Khas,
    New Delhi-110 016   (Fax No.91-11-26582659)

16. Prof. V.N. Rajashekhar Pillai,
    Vice-Chancellor,
    Indira Gandhi National Open University (IGNOU),
    Maidan Garhi, New Delhi

17. Prof. Pramod Tandon,
    Vice-Chancellor,
    North Eastern Hill University (NEHU),
    Shillong

18. Prof. H.P. Kincha,
    Vice-Chancellor,
    Visvesvaraya Technological University, Belgaum
                    .....

<u>MINUTES OF THE **SEVENTH** MEETING OF THE EMPOWERED COMMITTEE OF EXPERTS (PROJECT APPROVAL BOARD) OF THE NATIONAL MISSION ON EDUCATION THROUGH INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) HELD ON 2ND JULY, 2009 AT 3.30 P.M. IN CONFERENCE ROOM NO. 112-C WING, SHASTRI BHAWAN, NEW DELHI UNDER THE CHAIRPERSONSHIP OF SECRETARY, DEPARTMENT OF HIGHER EDUCATION</u>

The seventh meeting of the Empowered Committee of Experts (Project Approval Board) (PAB) of National Mission on Education through Information and Communication Technology (ICT) was held at 3.30 p.m. on 2nd July, 2009 in the Conference Room No. 112-C Wing, Shastri Bhawan, New Delhi, under the Chairpersonship of Secretary, Department of Higher Education.

2.   The list of participants is at Annex-I.

3.   At out outset, Shri R.P. Agrawal, Secretary, Department of Higher Education, welcomed all the members and, thereafter, agenda items were discussed and the following decisions were taken:

<u>Item No. 1</u>

Shri J.S. Deepak, Joint Secretary [DoT] referred to the minutes of the 6th PAB meeting and requested for clarifications as follows:

i)   The meaning of flexibility to rope in Railtel and Power Grid as per local needs while drawing parallel from NKN. He mentioned that factually speaking there was no BSNL led consortium in NKN. The work was being done by NIC, which had entrusted the job of providing connectivity individually to BSNL and other PSUs like Railtel etc. He wanted this point to be clarified.

ii)   He mentioned that for the NME-ICT the Implementation and Monitoring Committee would not be formed by DoT. Rather it should be formed by MHRD and DoT would be transferring money to BSNL on the recommendations of the Implementation and Monitoring Committee.

iii)   In the proposed MoU between BSNL-MTNL combine and the Colleges, the clause regarding free provision of space for erecting mobile towers by BSNL should be mentioned.

Joint Secretary [DL] informed the PAB that :

a)   Decision of PAB was to award work to BSNL-MTNL combine and not to a consortium as in the case of NKN. He further clarified that flexibility was given to BSNL-MTNL combined to rope in Railtel and/or Power Grid as per

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local needs. The final decision of taking help from Railtel and/or Power Grid was with BSNL-MTNL combine.

b)   The order regarding constitution of Implementation and Monitoring Committee had already been issued by MHRD. Hence, the question of its constitution under the aegis of DOT did not arise. The Implementation and Monitoring Committee would be giving its recommendations to DoT for release of funds. It was also pointed out that DoT and BSNL representatives were already part of the above mentioned Committee. A copy of the order constituting the Implementation and Monitoring Committee was circulated during the meeting.

c)   The desired clause as mentioned by Joint Secretary [DoT] could be retained in the proposed MoU if the PAB so desired.

Joint Secretary [DL] said that these clarifications could be sent to DoT / BSNL-MTNL combine through a letter.

Secretary [HE]-cum-Chairman of PAB directed that the clarifications would be recorded in the PAB minutes itself and that would serve the purpose.

Joint Secretary [DoT], Shri J.S. Deepak then raised the issue of clearly defining and indicating the scope of work that should be accomplished by BSNL-MTNL combine.   He referred to various iterations in the technical approach since the formative days of the Mission. His apprehensions were based on the scope of work likely to get altered in view of NKN taking over the university network on day one itself. He said that one cannot invite tender for 10,000 units of work, finalise rates and then ask the tenderers to do some lesser quantum of work at the same rate. He indicated that BSNL would need to have a fresh look at the rates that it had offered and the Board of BSNL might reject the altered scope of work altogether at the agreed price.

Secretary [HE] mentioned that NME-ICT and NKN had to seamlessly integrate so as to avoid any duplication. When NME-ICT and NKN both the works were being entrusted to BSNL, connectivity being provided to universities from MPLS port of BSNL or MPLS port of NKN should not make such a difference. It might mean a small amount going down from NME-ICT network to NKN network or *vice versa*. He mentioned that NKN network would take some time to get operational, but it was worth trying to connect to NKN network as far as practicable from day one itself. If that was technically not possible, it would be another matter.

Joint Secretary [DL] mentioned that right from the formative stages of NME-ICT, it has been told at all fora that NME-ICT is going to be based on a rental model and whenever NKN is in a position to provide connectivity to a given institution, the rental for that institution would get stopped. He further

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mentioned that alteration, if any, in the scope of work because of efforts to avoid duplication with NKN would not affect the college network and hence the rate variation for college network did not appear to be justified. He mentioned that the rates arrived at after long process of consultations should not escalate upward otherwise the whole due diligence process would be back to square one, and would have to be repeated.

Secretary [HE] mentioned that the university component of NME-ICT had to be viewed in a dynamic scenario as the exact progress of NKN could not be predicted. In any case, 60% of the work of NKN was with BSNL itself.

Joint Secretary [DoT] mentioned that the issue of scope of work between the two networks should be frozen and DoT / BSNL-MTNL combine should be told as to what was to be done, based on which they would take a fresh look at the rates.

He was informed that one of the considerations for selecting BSNL for NME-ICT was that it had been awarded a lion share of work of setting up NKN and, therefore, was in a better position to achieve the seamless connectivity between the two networks.

Secretary [HE] mentioned that a cut and dry scope of work might not be possible, but the contours of overall work are possible and could be provided. He even offered that if BSNL was really losing money due to the proposed connections to NKN pops we could be very realistic in considering how to compensate them.

Minutes of the fifth meeting of Project Approval Board held on 29.5.2009 were then confirmed. It was, however, decided that MHRD must address the issues raised by the Joint Secretary, DoT and resolve the matter/issues so that the work could be started early. On the suggestion of representative of IIT, Kharagpur that there should be some mechanism to address the problems of institutions located in far flung areas, PAB also decided to broadbase the Implementation-cum-Monitoring Committee by forming Sub-Committee(s) for various regions as well. PAB also noted the Action Taken as indicated in Annexure I.

Item No. 2

The Draft of the Guidelines prepared by the Committee constituted to prepare the guidelines for assessment of projects, devising parameters for monitoring the progress of the implementation of approved projects, evolving yardsticks and guidelines for evaluating the outcome and output of the sanctioned projects, being implemented, was circulated in the PAB meeting. A copy of the same is enclosed as Annex-II. Prof. Karmeshu from JNU made a brief presentation in this regard. He said that the basic philosophy of the Mission is diffusion of innovations and exclusivity and critical mass needs to be created. Therefore, there is a need to generate awareness about the

Mission among the masses. Prof. Prem K. Kalra, Convener, Standing Committee mentioned that there is less awareness among the masses about the National Mission on Education through ICT and there has been a decline in the number of proposals submitted under the Mission. In order to spread the awareness of the Mission, Prof. Kalra suggested deployment of mobile vans in some areas from college to college and showcase the Governments efforts in the field of ICT. He said CEC centers (about 17-18) which are in the heart of the universities could also be roped in or IGNOU's study centers could also be used for the purpose.

Dr. D.K. Paliwal, DEA(DL) said that spread of awareness is necessary, but at the same, it needs to be looked into as to how many colleges/stakeholders are capable to appreciate the ICT. Therefore, capacity building to make use of ICT is a must and this aspect too needs attention. Dr. D.K. Paliwal then said that the Draft Guidelines prepared by the Committee for assessment of projects, etc. appears to be in the form of a concept paper and guidelines should be more comprehensive. He further apprised PAB of the fact that one of the powers and functions of the National Apex Committee of National Mission on Education through Information and Communication Technology, as indicated in the CCEA-approved Mission Document is "Framing of Guidelines" under paragraph 6.1.1.1 of the Mission Document.

Representative of Planning Commission suggested making use of social networking sites for the generating awareness of the Mission. She also suggested to identify domain areas where nothing has so far been done and efforts may be made to cover those areas. Chairperson, endorsing the views of representative of Planning Commission, directed Member Secretary, PAB [JS(DL)] to identify the gap areas and help of the institutions which have expertise in those areas could be sought. Chairperson, PAB also directed to put a synopsis (5-6 lines) of all the projects/proposals sanctioned so far on the website of SAKSHAT. For generating awareness about the Mission, Chairperson, PAB suggested that UGC or AICTE could be approached to write to the colleges suggesting that their website could provide a link to the Mission. He further said that forthcoming meeting of Secretaries of Higher Education/Technical Education is also expected to be helpful in this regard. PAB, then, considered the Draft Guidelines (placed at Annex-II) and approved the same with the modification that Rs.2000/- and Rs.1000/- be paid respectively as honorarium and sitting fee to the domain experts for their contribution in evaluating each Project and to the Members of the Standing Committee for their participation in each of the meetings.

Item No.3

While no fresh recommendations of the Standing Committee were circulated in the meeting, Prof. Prem K. Kalra, Convener, Standing Committee of NMEICT requested PAB to consider granting approval to the four proposals which were recommended by the Standing Committee which met in the morning of 20th April, 2009. Prof. Prem K. Kalra further mentioned

that there is likelihood of dampening of the spirit of the institutes, who had submitted these proposals, as a considerable time has elapsed since Standing Committee's recommendations. He further explained in some details the objectives of the Mission these proposals/projects are likely to achieve. These proposals were mentioned in the 4th PAB meeting held on 20.4.2009 and Chairman, PAB had agreed to consider sanctioning the recommendations of the Standing Committee, upon receipt of the detailed minutes of the Standing Committee by all the PAB members by e-mail. Thereafter, pending preparation of the Guidelines for assessment of projects, etc. no proposals have been sanctioned by the PAB. PAB considered the request made by Prof. Prem K. Kalra about these four proposals and approved the same. These four proposals, indicating the amount approved by PAB, are the following:

S.No.	Project	Institute	Duration	Amount
1	Content generation for undergraduate courses in Agricultural Entomology	CSR Krishi Vishwa Vidyalaya, Palampur, Himachal Pradesh	One year Pilot Project	Rs.25.00 lakh
2	Use of open source software for teaching Mathematics	Bhaskaracharya Prathishtana, Pune	One Year	Rs.33.85 lakh
3	E-book on Material Science and Engineering	IIT, Kanpur	One Year	Rs.32.21 lakh
4	E-book on Sinusoidal Oscillators	NIT, Calicut	1.5 years	Rs.5.00 lakh

PAB directed Convener, Standing Committee to make available on the net, minutes of the meeting of the Standing Committee held on 20.4.2009, along with appraisal notes of each proposal.

Item No.4

PAB considered the agenda pertaining to maintenance of Sakshat Portal and approved the proposal for providing funds, as per needs, for the SAKSHAT Portal from the Mission Secretariat budget of NMEICT in so far as it is being used for uploading of projects/proposals for assistance under

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—/b—

NMEICT, and from the funds available under NMEICT component of Provision of e-books and e-journals free to the learners, indicated in the Financial Requirement and Phasing under Paragraph 24 of the Mission Document of NMEICT.

Establishment of Mission Secretariat

Dr. D.K. Paliwal, DEA (DL) apprised the PAB of the status of signing of an Memorandum of Understanding by the Department of Higher Education with Ed.CIL for hiring of its services for all kinds of technical and logistic support. He also apprised PAB that IGNOU has informed the Department that it will provide 4 rooms for the Mission Secretariat. PAB noted this information.

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

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List of Participants

1.   Secretary,
Department of Higher Education
Ministry of *Human Resource Development*
New Delhi   (in Chair)

2.   Shri J.S. Deepak,
Joint Secretary,
Department of Telecommunications,
Sanchar Bhawan, New Delhi

3.   Ms. Shakila Shamsu,
Joint Adviser (Edn),
Planning Commission, New Delhi

4.   Dr. Prem K. Kalra,
Director, IIT, Rajasthan,
C/O, Indian Institute of Technology,
Kanpur

5.   Prof. Karmeshu,
SCSS,
Jawaharlal Nehru University (JNU)
New Delhi

6.   Prof. Ajay Chakraborty,
Dean (CE),
Indian Institute of Technology,
Kharagpur.

7.   Prof. Kushal Sen,
Professor,
Indian Institute of Technology,
Delhi

8.   Shri Sanjay Mittal,
Professor of Aerospace Engineering &
Dean, Academic Affaairs,
Indian Institute of Technology,
Kanpur

9.   Shri Vishwa Mohan,
DGM (BSP),
BSNL Corporate Office,
BSNL, New Delhi

10.   Shri N.K. Sinha,
             Joint Secretary (DL) and
             Member Secretary, PAB,
             Department of Higher Education,
             Ministry of Human Resource Development,
             New Delhi

11.   Dr. D.K. Paliwal,
             Deputy Educational Adviser (DL),
             Department of Higher Education, MHRD,
             New Dellhi

12.   Shri Raj Kumar,
             Under Secretary (DL),
             Department of Higher Education, MHRD,New Delhi

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GUIDELINES
FOR DEVELOPMENT, ASSESSMENT,
MONITORING THE PROGRESS,
EVALUATION OF OUTCOME OF PROJECTS,
SUBMITTED FOR ASSISTANCE
TO MHRD
UNDER NME-ICT

Ministry of Human Resource Development
DEPARTMENT OF HIGHER EDUCATION,
NEW DELHI – 110 001
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National Mission on Education through ICT (NME-ICT)

1. PREAMBLE

The National Mission on Education through Information and Communication Technology (NME-ICT) is envisaged as a Centrally Sponsored Scheme to leverage the potential of ICT, in teaching and learning process for the benefit of all the learners in Higher Education Institutions at any time any where mode. Its motto being "to provide connectivity up to the last mile", the NME-ICT aims to extend computer infrastructure and connectivity to over 20000 colleges existing at present and each of the departments of over existing 400 universities/deemed universities and institutions of national importance in the country. The numbers of institutions/Departments are is grow in future.

NME-ICT seeks to bridge the digital divide, i.e., the gap in the skills to use computing devices for the purpose of teaching and learning among urban and rural teachers/learners in higher education domain and empower those, who have hitherto remained untouched by the digital revolution and have not been able to join the mainstream of the knowledge economy. This will enable them to make best use of ICT framework for teaching and learning.

NME-ICT is focused primarily on development of high quality e-content in all disciplines and subjects at various levels. The projects under NME-ICT can broadly be classified as:
(a)   e-Content Development (b) Infrastructure Development (c) Social Impact
The topics covered under each domain are not exhaustive but indicative.

a)   e-Content Development (including all four quadrants)
* ICT Methodology for Teaching and Evaluation
* Modules Preparation
* Workshops for Training

The basic framework for content development is to scout domain experts who will take the responsibility for development of course design, study material, preparation etc. It will cover all kinds of development assisting in access to Education and Mission objectives.

b)   Infrastructure Development
* Education Technology
* Connectivity
* Software Development
* Tools and Devices
* Technology Ideas

R&D activities relevant to Mission objectives will also be undertaken.

c)   Social Impact
* Inclusivity (for content developers and learners)
* Expansion
* Bridging Digital Divide

The objective of the mission is to attain participation level of learners and developers to the maximum cutting across regions, income groups, gender. This will facilitate equal participation at all levels giving opportunities to all sections to utilize their potential which usually lies dormant. Special projects under NME-ICT would set up center of excellence, office(s) for the mission,

technology demonstration centers, and organize workshops. To realize the objectives of the Mission, understating dynamics of innovation diffusion becomes imperative.

2. INNOVATION DIFFUSION AND CRITICAL MASS

This mission is essentially in the nature of diffusion of interactive communication technology where the concept of critical mass becomes central to its success. Rogers defines "critical mass as the point in time at which enough individuals have adopted an interactive innovation that the perceived cost benefit of adopting the innovation changes from negative to positive for individuals in the system, so that a certain minimum number of individuals in the system adopt and the rate of adoption becomes self-sustaining". It must be understood that the underlying dynamics is nonlinear and mimics the pattern of self-organizing system.

The knowledge is to be viewed as comprising various courses and their course material which are inter-connected and interwoven. This inter-dependence results in increase in probability of adoption of the innovation as more individuals in the network adopt it. Accordingly, achieving the critical mass of content developers and users is essential for mission's success. It is possible that much before reaching the critical mass, the loss of interest phenomenon may set in which may lead to discontinuance of the diffusion of innovation. In light of this it is necessary to adopt strategies to reach the critical mass (as depicted in a Fig. 1).

Therefore, it is imperative to involve every possible potential contributor to the mission which will widen the base of the resource pool leaving no talent in the country untouched. This needs a change in perspective which has so far dominated the world view restricting such an initiative to a selected group of experts. This will require the project (mission) to be open ended and subject to general scrutiny to enable continual improvement based on feedback. This is in the nature of open source. Further, the importance of time is also critical to the success of the project. There is a time frame available for the diffusion of innovation to succeed. Thus there are narrow windows within which the project (mission) will take off or pale into insignificance settling down at a very low level of adoption (as given in b of Fig. 1).

In any case the project has been visualized as a National project to involve the largest number of contributors and users. This 'inclusivity' and expansion, besides being the basic objectives of the NME-ICT, are also at the core of expected social returns from the project. It needs to be appreciated that lop-sided growth in terms of content developers and users would thus be a self-defeating exercise. Therefore, there is a need to broaden the base from elitist model based participation to mass based participation. Needless to say excellence of output is to be ensured for the project (mission) to be worthwhile. However, excellence can mean many things. Typically it has been customary to define excellence in terms of patents, publications (impact factor etc). But this project (mission) has a much wider sweep and has to be seen and judged as a social and academic revolution. In this case, excellence would also mean teaching and developing course material regarding cultural issues, inculcating basic sensibilities etc. In light of this the criteria for evaluation of the proposals have to be modified to make it broad based.

It is pertinent to mention that the course material should have a wider range to benefit learners of varying abilities. In view of this, it would be desirable if more than one coordinator can also be permitted to develop contents on similar or related topic as there are several books for the same course with different emphasis suiting the needs of different types of learners.

One of the strategies to reach the Critical Mass is as follows:

All Universities be sanctioned (Rs.7 Lakhs each) to produce one semester paper on e-content (using 4 Quadrant Template) in an area of their expertise, if they at least one teacher from every constituent / affiliated College of their University. This would be under Teacher-empowerment programme. This would require training of Teachers in e-content generation (to be done in CEC

Media Centres, IGNOU Regional Centres and good Computer Centres of various Universities/Institutes) and a need to get connectivity for the purpose of exchange of thoughts. This would provide in-tangible benefits of inclusion, sense of ownership and competitiveness among teachers to do something worthwhile under this Mission. This could be a cost-effective, hands-on way of popularizing the Mission; as compared to news paper advertisement. This will address issues of earliest image and regional imbalances.

3. WHO CAN SUBMIT PROPOSALS FOR e-CONTENT DEVELOPMENT?

"e-content development" is an entirely new project initiated by MHRD, it is quite possible that the PIs/Co-PIs may not have prior experience in the field similar to that of the audio-visual programmes of CECs (Consortium for Educational Communication, UGC) under the country-wide classrooms project of UGC. But keeping in view the vast experience of teachers in Universities and Colleges in teaching and learning and those scientists and professionals and retired faculty would be well competent in making significant contributions to e-content development. In view of this, even those who have no prior experience in e-content development may prove to be an asset.

Proposals for e-Content development may be submitted to NME-ICT Secretariat by any of the following:
(a)   Any educational institutions in the country imparting higher education, scientific organizations, private organizations, the retired teachers/ scientists and other professionals, who agree with the aims and objectives of the NME-ICT, shall be eligible to submit proposals.
(b)   Teachers with ten years teaching in service/ or retired are eligible to submit projects as content writers.
(c)   A consortium of universities/colleges/Academicians.
(d)   NGO's engaged in activities similar to the objectives of NME-ICT.
(e)   An Agency/Institution/Individual through invitation the of NME-ICT

4.   PROCEDURE FOR EVALUATION OF PROPOSALS

The procedure for evaluation of the proposals would be more or less the same as adopted by funding agencies (like UGC, DST) except the benchmarks for judging the project would be suitably modified in view of above mentioned issues. Thus there are similarities with regard to procedures/practices as adopted by funding agencies like DST, CSIR, UGC, CEC and NME-ICT.

Proposals are submitted online on Sakshat website. Each standing committee member gets an opportunity to go through the Project and review the proposal on following criteria:
i.   Feasibility and the appropriateness of time frame.
ii.   Uniqueness/ novelty/innovation.
iii.   Scope for inter-institutional collaboration and development.
iv.   Organization of program.
v.   Work details as outlined by PI.
vi.   Sufficiency of funds as requested by PI.
vii.   Social impact/ reach/ spread of the outcomes of the proposal.
viii.   Contribution of project in minimizing the digital divide in the country.
ix.   Any other matter which is likely to affect the execution of the project.

In the first meeting (held on 15. 4. 2009) of project coordinators of all projects sanctioned under NME-ICT, it was decided to have an expert group for monitoring projects. These expert groups have already been indentified for sanctioned projects (Similar to DST- Progress evaluation and Monitoring and UGC – Progress for Monitoring the progress of the Scheme: See Annexure I)

5.   UNDERTAKING BY PROJECT INVESTIGATOR (P I)

While submitting fresh proposals, the PIs on behalf of Implementing Institution has to submit an undertaking to the NME-ICT, that the proposal being submitted by them has not been submitted elsewhere, nor is it a repetition of any other project for which they have received funding from any other agency. However, if they want to submit the same or similar proposal to any other funding agency, they should inform MHRD.

6. PRINCIPAL INVESTIGATOR & CO-INVESTIGATOR(S) AND THE IMPLEMENTING INSTITUTION(S)

i.   The Principal Investigator (PI) has the primarily responsibility for the implementation of the project. The project team consists of the PI, Co-Investigator(s) (upto two) and the project personnel appointed as per the sanction order, if any. It is necessary to ensure that the project is carried out by the project team in a cohesive manner. Periodic meetings of the team are essential for this purpose.

ii.   In case of PIs who would be superannuating during the duration of the project, association of a "in service" Co-Investigator may be ensured by the Institute authorities. In such cases, the institute authorities should inform to the NME-ICT, well in advance, about their "no objection" for providing the infrastructural facilities to the PI for implementation of the project after his superannuation.

Having accepted the responsibility for the implementation of the project, the PI should be committed to implement the project over its duration and should have no plans to go on long leave.

iii   In case, the PI is shifting to another institution on new appointment/ transfer/ long term deputation, the project could be transferred to that institution with the mutual consent of both the institutions and of the NME-ICT. Such requests for transfer of the project should be sent well in advance and should be accompanied with 'No Objection' certificates from both the institutions and the Endorsement Certificate from the new Institution.

iv   In case the PI leaves the project due to unforeseen circumstances, the Co-Investigator could be considered as the PI subject to the approval of the PI, Head of the Institute and the NME-ICT. Such a request should be sent at least 4-6 months in advance along with a detailed bio-data of the Co-Investigator.

v The PI as well as the implementing institution has the responsibility of informing the NME-ICT about any change in the status of the PI/ Co-Investigator including relieving them on short term deputation for a continuous period of 3 months or more.

vi   The project stands terminated in the absence of the PI/ Co-Investigator for a continuous period of 3 months without intimation to the NME-ICT.

vii   The implementing institution has an important role to play and in consultation with the NME-ICT take steps to ensure successful completion of the project, before relieving the PI.

viii The implementing Institute should provide full infrastructural facilities such as accommodation, water, electricity, and communication facilities etc. for smooth implementation of the project.

7.   PROJECT STAFF(S)

i.   All the personnel including Research personnel appointed under the project, for full/ part time duration of the project, are to be treated as temporary employees and will be governed by the Administrative rules/ service conditions of the implementing Institute. No reference on these issues be made to this NME-ICT. The NME-ICT/MHRD will have no liability, whatsoever, for the project staff after completion of the project duration.

ii.   Scale and emoluments for the posts not covered under this order are governed by norms prevalent in the implementing Institution or as may be decided by this Department.

iii. The total emoluments spent (i) on engaging personal (ii) towards the work outsourced (iii) payment of honorarium to regular staff and (iv) on procurement of Hardware and / or Software required for development of e-content should not exceed the budget allocated for the project.

8.   SANCTION OF PILOT PROJECT/ DETAILED PROJECT

A.   Every PI/ co-PI is required to give a presentation before the standing committee (SC) which comprises about 30 members. In view of fairly wide range of available domain expertise among SC members as well as in the areas of teaching methodology, content development, lab development and other aspects of education, no useful purpose would be served by inviting three more external experts in the committee. However, if the standing committee feels that expertise in certain areas is not available, the committee may associate three external experts.

Based on presentation and critical examination of the proposal the standing committee eitner recommends sanction of the project or makes suggestions for further improvement (in tune with the basic objective of the Mission that 'No proposal would be rejected'). The maximum duration of completing a Pilot project would be one year or as approved by SC and PAE.

B.   In its sixth meeting of the empowered committee of experts (held on 29. 5. 2009), the committee decided the adoption of two-step approach of considering a pilot process as soon as possible for any project under the mission and then request a comprehensive evaluation of the full proposal within a few months to sanction the full project by the time the pilot project can be reviewed and assessed as successful by many domain experts.

In order to address the above concerns, it would be required to reduce the time period which is usually taken between the final review, presentation and sanction of the detailed

project. Thus it would be necessary that the three external experts are also invited for the presentation by the PI.

C. Accordingly, on completion of pilot project, the SC would invite three external experts to review the project. Based on the feedback of the experts, an extended SC (SC members along with three external experts) would invite PI for presentation for the detailed project.

9. FUNDING AND DURATION OF PILOT PROJECTS

Rule for funding of the Pilot project (under the category of content development) is restricted to 10% of the total cost of detailed project.

The funding guidelines to be followed by SC are advisory in nature. However, in special cases the SC may use its discretion to deviate from these guidelines with justification.
These guidelines may be reviewed from time to time so that mission objectives can be achieved.
Note: These guidelines are within the framework of NME-ICT. In case of any conflict with NME-ICT guidelines, Mission guidelines will prevail.

10. HONORARIUM AND OTHER GUIDELINES (FOR CONSIDERATION)

i. It is proposed that Rs. 5000/- each as honorarium to domain experts for their contribution in evaluating the Project.

ii. The member of the standing committee to be paid Rs. 2000/- as sitting fee for each meeting.

11. CONTENT DEVELOPEMENT

E-Content Development consists of (i) Academic content writing and (ii) e-Content production. The Academic content may be written by the Subject Experts. However, the services of Establishments or Production Houses, having experience in production of e-Content and Video programmes, especially for education may be sought by the Implementing Institution. Proposals for e-Content development may be submitted keeping in mind that the product is developed and delivered to NME-ICT Secretariat in an integrated form, following Guidelines with regard to Template and Technical parameters:

However, if it is found that the quality of e-Content is not as per Technical and Production Guidelines, the Implementing Institution / individual assigned to produce the e-Content shall have to get it corrected.

12. e-CONTENT MODULE & CONTENT DURATION

Content duration has been estimated on the basis of the number of hours that are required to transact the content in the classroom. For example, a course in the classroom requires one credit and a credit is equivalent to 15 hours classroom teaching. The content of a course will be taken as 15 hours. On an average, UG students have to take 6 to 8 papers in an academic year. Therefore, during the study period of 3 years a student may take 18 - 24 papers.

Each paper requires 20 - 25 lessons. Presuming that a lesson will take three hours of teaching, 60 to 75 hours will be required to complete one paper. Two and a half hours of classroom lecture is normally covered by an e-Content Module of 30 minutes duration. So, on an average 250- 300 Modules are required for completion of the full course.

Similarly, duration of Video programmes produced by the Programme Developer concerning each module shall be about 30 minutes.

13. PROJECT MANAGEMENT AND MONITORING COMMITTEE:

An Academic Content Advisory Committee shall be constituted by the Implementing Agency in consultation with the NME-ICT, comprising of a panel of Subject Experts. Technical Experts, and Media professionals, Managers to monitor and review the progress of implementation of the e-Content Scheme assigned to the Instituted / Agency.

The committee shall be responsible for selecting and engaging (i) a Course Coordinator for each of the e-Course assigned and (ii) Production House/Agency for production of e-content Development. The Academic Content Advisory Committee shall meet once in three months, or more often if needed, to review the quality of Academic Content delivered by the Subject Experts and quality of Production delivered by the Production Agency/ Implementing Agency of each e-Content course and recommend the corrections, changes etc that are required in accordance with the Guidelines on this issued.

The Mission document will prevail all issues over this document in case of any conflicts and contradictions.

14. DELIVERY OF PRODUCT

The Programme Production Agency, shall take the Academic content from the Subject Coordinator/ Subject Expert, engaged by the Implementing Agency and shall produce e-Content Module as per Academic and Technical criteria and provide Graphics, Animation and Multimedia inputs, wherever needed. The Programme Production Agency shall also incorporate necessary modifications as communicated by the Subject Coordinator or the Academic Content Advisory Committee. The Programme production agency, shall submit the integrated e-Content developed and other products as per technical criteria on a Portable Hard Disk to NME-ICT (Hard Disk returnable to the agency).

15. TECHNICAL GUIDELINES

For the development of e-content, envisaged by the NME-ICT as Centrally Sponsored Scheme, is to leverage the potential of ICT, in teaching and learning process. The Technical and Production parameters to be observed by all Implementing Agencies shall therefore be uniform. Accordingly Technical Parameters and Guidelines may be sought from the NME-ICT Secretariat. All Implementing Agencies shall therefore ensure that the Technical Guidelines are strictly followed.

16. META-DATA AND CREATION OF INFORMATION BANK

The e-content Development Project of the NME-ICT envisages development of large number of e-modules, video programmes, LoRs, etc. related to a number of subjects of UG and PG. It is important that key words appearing in each module are recorded on a Production Detail Report (PDR format to be provided) by the Subject Expert/Production Agency. This information is then tagged with the video/audio production and stays with it forever. A Computerized Library Management Software (CLMS) created to handle such information proves to be boon in churning out data out of an infinite number of programmes stored. Such Meta-data (data about the programmes) can be surfed by anybody on the net by pressing a keyword and the person can seek any of the information related to the programme, its synopsis, etc.

17. QUALITY CONTROL:

The content authenticity shall be the responsibility of the Course Coordinator. However, the technical quality checking shall be the responsibility of the Production agency and should follow instructions on this laid down above. Further, issues concerning copyright aspects / intellectual property rights are to be taken care of by the e-Content production agency.

The final products in the form of e-Content modules shall finally be previewed and approved by the Academic Content Advisory Committee before making it available to the public.

18. IPR & COPYRIGHTS

The intellectual Property Rights (IPR) and Production Copy Rights of the e-Content and other products developed shall rest with the NME-ICT, however the Subject Expert delivering the lecture(s), text, diagram's, Chart(s) etc shall submit an undertaking in writing to the NME-ICT that he/she has not violate the Copyright issues on this

19. ADDITIONAL GUIDELINES FOR RELEASE OF GRANTS IN YEARLY INSTALMENT AND FINANCIAL MANAGEMENT

i.   The grants for the project shall be released on the basis of yearly requirements taking note of the progress and expenditure incurred. The first sanction order indicates the budgetary allocation for the duration of the project under various heads like Equipment, Manpower, Travel, Consumable, Contingency etc. In specific cases, the item, apart from these heads, for which an allocation is made, will be indicated separately.

ii.   The first installment of grant shall be released along with the first sanction order.

iii. Diversion of funds from non-recurring head i.e., Equipment to Recurring head like Manpower, Consumable etc. is normally not allowed. However, reallocation/ re-appropriation of grants under different heads require prior approval of PAB of NME-ICT.

vi.   All the assets acquired from the grant will be the property of Government of India and should not be disposed off or encumbered or utilised for purpose other than those for which the grant had been sanctioned, without the prior sanction of The NME ICT Secretariat.

vii. After completion/ termination of the project, the NME-ICT will be free to sell or otherwise dispose off the assets, which are the property of the Government. The institute shall render to the Government necessary facilities for arranging the sale of these assets. The NME-ICT also has the discretion to gift the assets to the Institute or transfer them to any other Institute if it is considered appropriate and justified.

viii. The NME-ICT Secretariat reserves the right to terminate the project at any stage if it is convinced that the grant has not been properly utilised or appropriate progress is not being made.

20. ADDITIONAL SET OF CRITERIA FOR MONITORING THE PROGRESS OF THE SCHEME:

The proposals will be evaluated by the Academic Content Advisory Committee, keeping in mind the following criteria:

a.   Technologically Friendly: so as to be downloaded and used on any computer either independently or in a LAN situation;

b.   Learner Friendly: for easy navigation;

c.   Learner Centric: to be useful in self-instructional mode;

d.   Teacher Friendly: so as to be used in various teaching-learning methods such as classroom lectures, tutoring to a group, lab session, etc.;

e.   Employing Learner Centric Pedagogy: specifically, the designer of the e-Content should pay attention to the teaching model used - such as simple information communication, exploratory approach, discovery approach, mastery learning etc. Many types of interactive methods should be included to make the learning process effective and efficient.

f.   Self-evaluative: so as to have plenty of evaluation material to give feedback to the learner as to his/her achievements in a given topic of the course and including formative as well as summative evaluation.

g. Object Based Learning/Teaching: so as to state specifically the objects of learning/teaching and employ different strategies for skill, competency and functionality developments.

21. PROFORMA FOR SUBMITTING UTILIZATION CERTIFICATE AND PROGRESS REPORT:

Statement of Expenditure and Utilisation Certificate (Annexure-I) shall be submitted to NME-ICT as per usual norms and procedures. It should also be uploaded on the Project Website linked to Sakshat.

22. INCENTIVES FOR CREATION OF e-CONTENT PROGRAMME

The teachers/subject experts who put their rich experience in the development of e-Content will be given due recognition by considering their work on development of five e-content modules as equivalent to a publication of a paper in an International peer reviewed journal/public book, subject to the condition that a notification in this regard is issued by the MHRD/UGC.
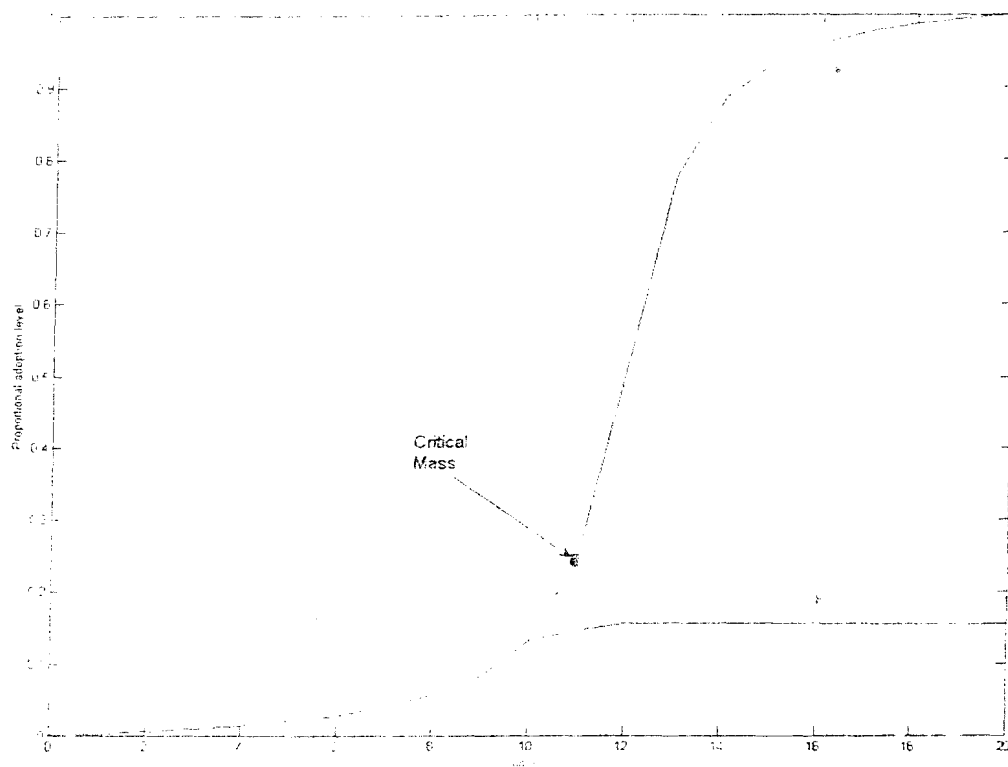
Figure-1

Figure 1: Alternative scenarios depicting evolution of innovation-diffusion. (a) Critical mass is attained (b) Critical mass is not attained and the adoption level settles down at a very low level.

UTILIZATION CERTIFICATE

(To be sent to the NME-ICT)

.... College/ .... University

Certified that the Project Grant of Rs. _____ (Rupees _____) approved by the NME-ICT for e-Content Development Project at the College/University/Institution/Agency has been utilized as per details given below:

Amount of grant received from the NME-ICT :

Details of expenditure incurred :

(a) Honorarium to the Content Developer/

     Subject Expert etc. :

(b) Secretarial Assistance :

(c) Travel Grant :

(d) Contingency/compilation and

     Communication Expenses

(e) Equipment/Hardware/Devices :

(f) Mis.

(g) Total expenditure :

(h) Unspent balances refunded/refundable to the NME-ICT:

(i) Balance grant payable by the NME-ICT

(j) Activity as assigned by PAB :

Certified further that all the terms and conditions laid down in the NME-ICT letter no. _____ dated _____ have been fulfilled by the College/ University/Agency and the grant has been utilized for the purpose for which it was sanctioned.

Certified further that the inventories of permanent and semi permanent assets created/acquired wholly or mainly out of the grants given by the NME-ICT as indicated above are being maintained in the prescribed form and are being kept up to date and these assets have not been disposed off, encumbered or utilized for any other purpose.

1. Signature of the PI   2. Signature of the

                          Auditor/Chartered Accountant

3. Signature of the nominated officer
   of the University/College/Institution/Agency
   authorized to operate the bank account jointly