Government of India
Ministry of HRD
Department of Higher Education

****

14th January,2011

To

All Members of Empowered Committee of Experts
(Project Approval Board) of National Mission on
Education through Information and Communication
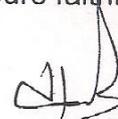Technology (As per list enclosed)

Sub: **Agenda Papers** – 18th Meeting of the Empowered Committee of Experts
(Project Approval Board) of National Mission on Education through
Information and Communication Technology (NMEICT) to be held on 24th
January, 2011 at 3.00 p.m.

Sir/Madam,

Enclosed please find Agenda and papers to be considered at the 18th
Meeting of the Empowered Committee of Experts (Project Approval Board) of
National Mission on Education through Information and Communication
Technology (NMEICT) scheduled to be held on **24th January, 2011 at 3.00 p.m.**
under the Chairpersonship of Secretary, Department of Higher Education,
Ministry of Human Resource Development in Conference Room No.112-C Wing,
Shastri Bhavan, New Delhi.

2.   Kindly make it convenient to attend the meeting.

Yours faithfully,

(Dr. Harvinder Singh)
Director (TEL) &
Nodal Officer (NMEICT)
Tel: 011-23382604

Copy to: PSO to Secretary (HE), PS to AS&FA and Additional Secretary (TEL) –
          for information.

AGENDA FOR 18TH MEETING OF PROJECT APPROVAL BOARD OF NATIONAL MISSION ON EDUCATION THROUGH INFORMATION AND COMMUNICATION TECHNOLOGY TO BE HELD ON 24th JANUARY, 2011 AT 3.00 P.M. IN CONFERENCE ROOM NO.112-C, SHASTRI BHAWAN, NEW DELHI

Item No.	Subject	Page No.
Item No.1	Confirmation of the Minutes of the 17th Meeting of the Project Approval Board held on 26th November, 2010.	
Item No.2	Action Taken Report on the Minutes of 17th Meeting of the Project Approval Board held on 26th November, 2010	
Item No.3	Review of Decision-National Programme on Radio Enabled Learning by Commonwealth Educational Media Centre for Asia (CEMCA), New Delhi	
Item No.4	Development of Analysis and Indexing tools for harnessing educational videos, - IIT, Rajasthan	
Item No.5	Development of Low Cost Mobile Robots, IIT Rajasthan	
Item No.6	CEC Main project - Production of Courseware e-content Development, Video Programmes & LORs, Consortium for Educational Communication, New Delhi	
Item No.7	E-Kalpa Creating Digital Environment for Design in India, Prof.Ravi Poovaiah, IIT, Bombay	
Item No.8	Robot Enhanced Teaching of Subjects in Engineering Colleges, Prof. Kavi Arya, IIT, Bombay	
Item No.9	Approval of pilot projects recommended by Standing Committee	
Item No.10	Assimilation of Open Source Software in Science and Engineering Education, Prof. Prabhu Ramachandran, IIT, Bombay	
Item No.11	Extension of pilot of Vocational Modules and Haptic Devices by Amrita Vishwa Vidyapeetham	
Item No.12	Strengthening of Mission Secretariat	
Item No.13	Salary of Consultants	
Item No.14	Hiring of Accommodation for Mission Secretariat	
Item No.15	Presentation by BSNL	
Item No.16	Any other item with the permission of Chair	

Agenda Item No.1

The Minutes of the 17th Meeting of the Project Approval Board held on 26th November, 2010 are placed below (**Appendix-1- Page No._____**) for kind perusal and confirmation please.

Agenda Item No.2

The Action Taken Report on the Minutes of the 17th Meeting of the Project Approval Board held on 26th November, 2010 is given at **Appendix-2 (Page No._____)**

Agenda Item No.3

Review of Decision-National Programme on Radio Enabled Learning by Commonwealth Educational Media Centre for Asia (CEMCA), New Delhi.

1.	Project Approval Board (PAB) of NMEICT in its 9th meeting held on 3rd & 11th September, 2009 approved a pilot project, namely, **"National Programme on Radio Enabled Learning by Commonwealth Educational Media Centre for Asia (CEMCA), New Delhi"** and decided that Rs. 75.00 lakhs may be released to IGNOU which will coordinate the programme. The proposal was accordingly processed in the Department during 2009-10, but no funds could be released to IGNOU, as the then Divisional Head had opined that the project is to be implemented by/or Commonwealth Educational Media Centre for Asia (CEMCA), which is a body of Commonwealth of Learning (COL), an international organization. Government of India also contribute Rs. 4.00 crores per year from Non-Plan funds of COL under an international agreement. In view of this, it may be considered whether the funds may be provided to an international agency out of National Mission of Education through Information and Communication Technology (NMEICT), which apparently, does not have such a provision. The file was then referred to IFD/AS&FA. IFD requested Distance Learning Division of the Department of Higher Education, MHRD to re-examine the proposal with reference to Mission Document as well as the international agreement signed with COL etc. IFD also requested to re-examine the other aspects of the pilot project and ensure that there is neither duplication nor overlapping in the accumulation of funds for the pilot project to be undertaken.

2.	A letter was sent to CEMCA, requesting Director, CEMCA to let the Department of Higher Education, MHRD know as to how this project activity is different from the activities for which CEMCA is mandated. In response, Director, CEMCA, vide his letter dated 17.08.2010 has informed that "i*n consonance with the mission of Commonwealth of Learning, Commonwealth Educational Media Centre for Asia promotes the meaningful, relevant, and appropriate use of information and communication technologies to serve the educational and training needs of Commonwealth member states in Asia".*

Director, CEMCA has further informed that:

-	The three year plan of COL has been approved by the Education Ministers of Commonwealth Countries. While CEMCA's mandate is to develop systems and models using technology both conventional and new media and to build capacity among the Higher Education Institutions in the region, it cannot undertake specific content building measures and create open education resources for a specific country.

- CEMCA neither has staff, infrastructure nor financial resources to embark on a large scale project like Radio Enabled Learning. CEMCA would like to create two full courses in Humanities and Social Sciences as the basic model for Radio Enabled Learning. CEMCA has already organized two National Base Camps and invited more than Fifty Higher Education Institutions to participate in the awareness programs on Radio Enabled Learning and National Mission on Education through Information and Communication Technology.

- CEMCA has already motivated 27 institutions to produce sample programs on Radio Enabled Learning. After seeing these models, CEMCA's intention of producing two full courses as basic models has gained more relevance and importance.

- In conclusion, it has been stated that while CEMCA has a mandate to develop new systems and models using technology using its own resources, it does not have the wherewithal of creating contents and Open Education Resources.

3.   A copy of letter dated 17.08.2010 received from Director, CEMCA is enclosed (**Appendix-3 – Page No. _____)** for perusal.

4.   In view of the above position, PAB of NMEICT is requested to review its decision mentioned in paragraph 1 above and give appropriate directions in this regard.

Agenda Item No.4.

Development of Analysis and Indexing tools for harnessing educational videos, PI, Gaurav Harit IIT, Rajasthan

This item was placed before the Project Approval Board in its 17th Meeting held on 26th November, 2010. The PAB decided to refer the matter to Standing Committee with the direction to have re-look at the proposal, especially the financial aspects involved.

The projects was re-evaluated by the Standing Committee in its meeting held on 4th December, 2010 and extracts of the meeting are given below:

Gaurav Harit, IIT Rajasthan, Control Number GRE01091011292

The Standing Committee discussed the project of Dr. Gaurav Harit and observed that a large part of the projected activities are research and development of tools for speech recognition in Indian English and Indian languages. Therefore, it was of the opinion that the activities could start now allowing Dr. Harit to carry out those activities that are possible within the project period. The budget recommended by the committee is as follows along with the proposed amount by the PI.

Head-wise Breakup of the Budget: (Rupees in Lakhs)

Category	Proposed for three years	Recommended by the SC for the project period	Justification
Manpower	41.88	17.00	Pro-rated for one year and three months
Equipment	30.50	14.00	Server costs are high in the budget..Also 10 KVA UPS, current price is between Rs. 2.5 and 3.0 lakhs. Hence it has been reworked to consider reduced cost.
Travel/contingency /consumables	6.00	1.45	Pro-rated for the project period of NMEICT.
Total	90.38	32.45	---------------------
Remarks	Equipment cost is more than 30 percent of project cost. However, IIT Rajasthan is a new Institution and facilities for computing and computer labs to be set up under the project may be given as above due to non-availability of an established lab set up.		

Project Approval Board may consider the proposal and take a decision.

Agenda Item No.5

Development of Low Cost Mobile Robots

This item was placed before the Project Approval Board in its 17th Meeting held on 26th November, 2010. The PAB decided to refer the matter to Standing Committee with the direction to have re-look at the proposal, especially the financial aspects involved.

The projects was re-evaluated by the Standing Committee in its meeting held on 4th December, 2010 and extracts of the meeting are given below:

Robotics for Education: Swagat Kumar, IIT Rajasthan Control Number SIN19061010920

The Standing Committee observed that this project has four components:

1. Joint activities with IIT Bombay in areas common to robot education and spreading the awareness and disseminating software codes.
2. Conduct of a large number of workshops. Despite independent proposal, workshops can also be carried out jointly.
3. Development of a robot platform (R & D)

4. Creating a virtual portal for interlinking robotic research and education centres through a virtual lab project. Initially, IIT Guwahati and IIT Rajasthan to work together,

Considering the overlap between the multiple institutes, activities 1, 2 and 4 are recommended by the SC. Activity 3 will be considered after successful demonstration of the others by the PI and Co-PIs

Category	Proposed for eighteen months	Recommended by the SC for the project period	Justification
Manpower	60.0 (IITJ) 60.0 (IITG)	25.8 for both (12. 9 each)	20 staff asked. Manpower costs by the PI are very high and activities needed to be coordinated with IIT Bombay, using some of their manpower for this project. The other PI has also been informed of this. Recommended: 2 PAs per Institute at a salary of Rs. 25000 per month for 15 months, (Total Rs. 15.0 lakhs) 4 JPAs per institute at a salary of Rs. 18000 per month for 15 months (Total: Rs. 21. 6 lakhs)

Equipment	Swarm robots Fixed manipulator + vision system + workspace 50.00 (IITJ) Heavy robots 250 (IITJ) 250 (IITG)	50 (IITJ)	Recommended as is. Not recommended at present. The PI is requested to demonstrate the activities already outlined within the project period and submit this requirement after satisfactory completion of the above activities.
Travel/contingency /consumables	40.00 (IITJ) 40.00 (IITG)	15.0 (IITJ) 15.0 (IITG)	----------------
Partnership activities with IIT Bombay	50.0 (IITJ) 50.0 (IITG)	15.0 (IITJ) 15.0 (IITG)	Recommended for a period of five months. Remaining amount can be sanctioned after utilization and after a review.
E-Portal activities and system components	150.00 (IITJ) 150.00 (IITG)	10.00 (IITJ) 10.00 (IITG)	Cost of basic server set up running on Enterprise Linux for server (8-16 GB RAM each) maintenance which includes 16 cores in each Institute and about 10 TB storage per machine. For further recommendation detailed break-up of the projected budget should be given with justification why these open source, commodity servers cannot substitute special servers, if any.
Total	1150.00	155.80	--------------------
Remarks	Equipment cost recommended is about 30 percent of project cost.		

Project Approval Board may consider the proposal and take a decision.

Agenda Item No.6

CEC Main project - Production of Courseware e-content Development, Video Programmes & LORs, Consortium for Educational Communication, New Delhi

This item was placed before the Project Approval Board in its 17th Meeting held on 26th November, 2010. The PAB decided to refer the matter to Standing Committee with the direction to have re-look at the proposal, especially the financial aspects involved.

The projects was re-evaluated by the Standing Committee in its meeting held on 4th December, 2010 and extracts of the meeting are given below:

CEC Project - Shri Pradeep Kaul

The Standing Committee discussed the proposal. The budget required for creating all the modules fall within the prescribed norms of Rs. 7 lakhs per course of forty lecture equivalents and for covering all four quadrants. Hence the budget for phase I, for a period of two years, is sanctioned without change for the unit amount (Rs. 7 lakhs per course), for a period of fifteen months (Total budget for Phase I). The SC requests that the PI should certify that the head of the UGC has permitted the activities as per the NMEICT norms.

Standing Committee recommends to the PAB for approval for the entire project with sanction of about 30 percent for all the activities i.e. Rs. 5.4 crores approximately (30 percent of Rs. 12 crores and 30 percent of Rs. 6.50 crore).

Project Approval Board may consider the proposal and take a decision.

Agenda Item No.7

E-Kalpa Creating Digital Environment for Design in India, Ravi Poovaiah, IIT, Bombay

This item was placed before the Project Approval Board in its 17th Meeting held on 26th November, 2010. The PAB decided to refer the matter to Standing Committee with the direction to have re-look at the proposal, especially the financial aspects involved.

The projects was re-evaluated by the Standing Committee in its meeting held on 4th December, 2010 and extracts of the meeting are given below:

E-Kalpa Creating Digital Environment for Design in India, Ravi Poovaiah, IIT, Bombay

The Standing Committee discussed the projected expenses of Prof. Ravi Poovaiah in detail. It makes the following observations:

1. The projected expenses of Rs. 7 lakh per course are just about right. The PIs should deliver broadcast quality courses, however.

2. The courses should have the four quadrant format.

3. Videoconferencing equipment may not be provided. The PIs are asked to use A- VIEW, which is also funded by NMEICT.

4. The cost of digital storage is on the higher side. The SC feels that it is possible to get 3 units of 5TB storage units at a cost of Rs. 30 lakh.

5. The PIs are advised to use the NKN bandwidth already provided to IIT Bombay. The modified

non-recurring budget is given below:

No	Item	First Year (Rs. in lakh)		Second Year (Rs. in lakh)	
		Requested	Recommended	Requested	Recommended
i	Media production	150	150	150	150
ii	Audio	55	55	50	50
iii	Video conferencing	30	0	15	0
iv	AC, etc.	30	30	30	30
v	Computers	100	100	50	50
vi	Digital storage	30	15	30	15
vii	Connectivity	15	0	15	0
	Total non-recurring	410	350	340	295
	Total recurring budget	300	300	300	300
	Grand total	710	650	640	595

The SC recommends Rs. 650 lakhs for the first year and Rs. 198 lakh (approximately one third of Rs. 595 lakhs) for the second year.

Project Approval Board may consider the proposal and take a decision.

Agenda Item No.8

Robot Enhanced Teaching of Subjects in Engineering Colleges, Prof. Kavi Arya, IIT, Bombay

This item was placed before the Project Approval Board in its 17th Meeting held on 26th November, 2010. The PAB decided to refer the matter to Standing Committee with the direction to have re-look at the proposal, especially the financial aspects involved.

The projects was re-evaluated by the Standing Committee in its meeting held on 4th December, 2010 and extracts of the meeting are given below:

Robot Enhanced Teaching of Subjects in Engineering Colleges, Prof. Kavi Arya, IIT, Bombay

The Standing Committee discussed the projected expenses of Prof. Kavi Arya in detail. It makes the following observations:

1. Manpower could be reduced: There is no need for an accounts manager. The PI should manage with 4 Project Engineers and 2 technical writers. Thus the monthly manpower cost will come down from Rs. 3,65,000 to 2,70,000 per month.
2. The PI should use Robots that cost Rs. 2,200 for deployment, in the place of Rs.15,000 robots. This is the only way to reach out to a large number of colleges in the available funds.

3. The amount of Rs. 7 lakh per college could be reduced to Rs. 4 lakh, as follows:

    (a) If robots are to be given to the colleges, they should be centrally purchased to ensure quality.

    (b) The course content development should happen in a centralised fashion so as to avoid duplication and to ensure quality. The course content development funds are recommended to be given separately.

    (c) The rest of the heads, which add up to Rs. 4 lakh (as opposed to the requested amount of Rs. 7 lakhs), are recommended.

4. The robots given under two Heads are to be procured centrally. This comes to 360 robots in the first year and 600 in the second year.

5. The honorarium to be given to the PI could be reduced to Rs. 2.5 lakh and Rs. 3 lakh, for the two years.

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The following budget is recommended:

Item	First Year		Second Year	
	Requested	Recommended	Requested	Recommended
Manpower	43,80,000	32,40,000	48,18,000	35,64,000
Workshop	18,00,000	18,00,000	19,80,000	19,80,000
Travel	8,00,000	8,00,000	8,00,000	8,00,000
CCT (Cons. & Cont.)	6,00,000	6,00,000	6,00,000	6,00,000
Robots	36,00,000	7,92,000	39,60,000	13,20,000
Outreach programme	84,00,000	48,00,000	2,52,00,000	1,44,00,000
Contests	5,00,000	5,00,000	5,00,000	5,00,000
PI honorarium	6,00,000	2,50,000	11,38,140	3,00,000
Total	2,00,80,000	1,27,82,000	3,78,58,000	2,34,64,000

The SC recommends Rs. 127.82 lakhs for the first year and Rs. 78.21 lakh (approximately one third of Rs. 234.64 lakhs) for the second year.

Project Approval Board may consider the proposal and take a decision.

Agenda Item No.9

Approval of Pilot projects recommended by the Standing Committee

This item was placed before the Project Approval Board in its 17th Meeting held on 26th November, 2010. The PAB decided to refer the matter to Standing Committee with the direction to have re-look at the proposal, especially the financial aspects involved.

The projects was re-evaluated by the Standing Committee in its meeting held on 4th December, 2010 and extracts of the meeting are given below:

9.1. **Developing ICT based pedagogical practices for management accounting, Dr.Manoj Shah**
   Control No.ME24091011361

   The SC recommended the projected budget of Rs. 7 lakh which is reasonable and is in line with many other such proposals that have been funded by NMEICT.

9.2. **Development of e-contents on foundation course on analytical biochemistry and separation techniques, Dr.Charmy Kothari, Christ college, Rajkot.**
   Control No. DE-21091011349

   The SC recommended the projected budget of Rs. 7 lakh which is reasonable and is in line with many other such proposals that have been funded by NMEICT.

The following Pilot projects were recommended by the Standing Committee in its meeting held on 9th October, 2010:

9.3. **e-content of zoology experiments. Z-101 (**Earlier proposed name of the project Virtual laboratory for Zoology**), Dr. Nikunj Bhatt, V.P& R.P.T.P Science College. Vallabh Vidyanagar. Anand, Gujarat.**

   Control No.:DE-18091011346

Extracts of the Minutes of the Standing Committee Meeting held on 9th October,2010 are given below:

   DE-18091011346

   Virtual laboratory for Zoology.

   Dr.Nikunj Bhatt, VP & RPTP Science College

   – eartheworm video 3d showing parts (animation was shown)
   – virtual lab concept clarified.
   – The proposal belong to econtent generation for zoology lab.
   – Resubmitting with change of topic.
   – 100% release at the beginning
   – 7 lakhs.

A copy of the Appraisal done by the Standing Committee is enclosed (**Appendix-4 –Page No._____**)

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9.4. Development of e-Contents for Foundation Course on Pharmaceutical Microbiology, Dr. Navin R. Sheth, Department of pharmaceutical sciences, Saurashtra University, Rajkot

Control No. DE-24091011360

Extracts of the Minutes of the Standing Committee Meeting held on 9th October,2010 are given below:

DE-20091011360
Development of e-contents for foundation course on pharmaceutical microbiology
Dr.Navin R. Sheth, Dept of Pharmaceutical Science, Saurashtra University, Rajkot.

– one course
– as per AICTE syllabus
– 25 lectures, 15 hours lab demo with commentry.
– comments – practicals should not be added as replacement for lecture.
– Six month for the project completion.
– Maximum 7 lakhs
– 100% at the beginning

A copy of the Appraisal done by the Standing Committee is enclosed (**Appendix- 5 Page No._____)**

Project Approval Board may consider the above proposals proposal and take a decision.

Agenda Item No.10

Assimilation of Open Source Software in Science and Engineering Education, Prof. Prabhu Ramachandran, IIT, Bombay

This item was placed before the Project Approval Board in its 17th Meeting held on 26th November, 2010. The PAB decided to refer the matter to Standing Committee with the direction to have re-look at the proposal, especially the financial aspects involved.

The projects was re-evaluated by the Standing Committee in its meeting held on 4th December, 2010 and extracts of the meeting are given below:

Assimilation of Open Source Software in Science and Engineering Education, Prof. Prabhu Ramachandran, IIT, Bombay

The Standing Committee discussed the projected expenses of Prof. Prabhu Ramachandran in detail. It makes the following observations:
1. Funding for conferences may be applied for separately.
2. Rs. 75,000 for one book conversion is on the higher side. The PIs are suggested to do this in Rs. 25,000.
3. The PIs are suggested to maintain the salary at the current level.

The modified budget is given below:

Item	First Year (Rs. Inlakh)		Second Year (Rs. Inlakh)	
	Requested	Recommended	Requested	Recommended
Workshops - Large	32.0	32.0	48	48
Workshops – Small	20.0	20.0	20	20
Conferences	36.0	0.0	36	0
Video courses	14.0	14.0	70	70
E-learning courses	35.0	35.0	140	140
Course/Book conversion	37.5	12.5	75	25
Hardware	10.0	10.0	5	5
Software	4.0	4.0	0	0
Salaries	76.0	45.0	76	50
Travel	10.0	10.0	10	10
Cons., cont.	10.0	10.0	10	10
Total	284.5	192.5	490	378

The SC recommends Rs. 192.5 lakhs for the first year and Rs. 126 lakh (one third of Rs. 378 lakhs) for the second year.

The PIs were asked by the Standing Committee to come up with a list of commercial software packages that can be effectively replaced by open source equivalent and a procedure to do this conversion. The PIs are urged to look into this important activity in the future.

Project Approval Board may consider the proposal and take a decision.

Agenda Item No.11

Extension of pilot of Vocational modules and Haptic Devices by Amrita Vishwa Vidyapeetham

This item was placed before the Project Approval Board in its 17th Meeting held on 26th November, 2010. The PAB decided to refer the matter to Standing Committee with the direction to have re-look at the proposal, especially the financial aspects involved.

The projects was re-evaluated by the Standing Committee in its meeting held on 4th December, 2010 and extracts of the meeting are given below:

Extension of pilot of Vocational modules and Haptic Devices by Amrita Vishwa Vidyapeetham

The standing committee discussed the project\Development of Computerized Vocational Educational Modules & Use of Haptic Devices for training" by B. Bhavani, in detail. The SC recommends that an extended pilot be successfully completed before the main project can even be considered. The SC makes the following recommendations, with respect to the extended pilot.

1. The budgeted amount of desktop computers and also the laptops are much higher than required.

2. The PI has also asked for 10 each of desktops and laptops. The SC feels that it is not required to buy so many of them. The SC recommends that the number of desktops be reduced to 7 and the laptops to 3.

3. Although the SC wished that in the linear haptic instrument. all the possible devices should be simulated, the PI expressed the inability to do so in the budget asked for and in a period of 9 months, the duration of the project. The SC wishes that the PI covers as many devices as possible in the linear haptics and rotary haptics.

The proposed and the recommended budget (in lakh) are given below:

Item	Requested	Recommended
Non Recurring Expenses		
Hardware, equipment and accessories	61.13	49.23
Software, research and application	2.00	2.00
Video production costs	7.20	7.20
Contingency	4.84	4.84
Recurring Expenses		
Personnel	60.53	60.53
Travel, deployment expenses, conf.	10.00	10.00
Consumables	5.00	5.00
Video module development	14.93	14.93
Contingency	5.50	5.50
Total	171.13	159.23

The SC recommends that Rs. 90 lakh be given immediately and that the balance be given after assessing the performance, possibly after 3 months.

Project Approval Board may consider the proposal and take a decision.

Agenda Item No.12

Strengthening of Mission Secretariat

A proposal for manpower strength of the Mission Secretariat was put up in 13th PAB meeting held on 25th February 2010.

The PAB in its above meeting approved the proposal. However, while approving the proposal, the PAB advised that there should be flexibility and at this stage, there is no need to identify the areas for consultants. The advertisement should only cover requirements of consultants in different fields without indicating the number of positions for the fields. It would be advisable to have consultants who have knowledge of ICT also. Retired professionals in the age group of 60-70 may also be considered. Candidates in service can be considered on deputation terms.

It has been observed that the response to our two advertisements was not encouraging due to the high criteria of Ph.D. qualifications of equivalent research experience and 20 years experience with at least 15 years in teaching in university/deemed university/PG college or research at senior position in national/international level research organization. Due to this criteria, Professors/Asso. Professors working in colleges/research organization on regular basis are not joining the Mission.

The Selection Committee also interviewed the applicants who did not have Ph.D. but have equivalent research experience and also those who did not have research experience but had experience in education/administration field. One of the persons selected namely Shri Pradeep Kaul fall in this category.

Therefore, it is proposed that in future also, we may relax the condition of teaching experience in case of Sr. Consultants and professionals even with administrative experience of similar nature in education field may also be allowed so that the Mission can get good response to its future recruitment.

Future Expansion

Keeping in view the expansion plans of the Mission and its activities across the country, the following is submitted:-

1. We may constitute Committees for finding the prospective PIs and the institutes in the areas/courses which have not yet been covered for e-content development. We also need to cover a large number of disciplines and organize workshops across the country so as to make the presence felt in all regions . For this purpose, 2 more Senior Consultants will be required in the Mission's HQs at Delhi.

2. Presently the review meetings in respect of projects sanctioned under the Mission are being conducted in Delhi only. Due to large number of projects to be reviewed and continuously monitored, it is proposed to constitute Review Committees of experts zone-wise i.e. for North, West, South, East and Central so as to regularly and continuously monitor the progress and review & upgrade the e-contents being generated under various projects. For this purpose, 5 Senior Consultants from the Mission who will be placed in these regions/zones to work as Conveners for all these zonal committee meetings will be required.

3. To assist these Senior Consultants, 14 Junior Consultants/ Support Staff will also be required.

In view of the above, it is requested that the present sanctioned position of Sr. Consultants may be enhanced from 6 to 13 and the Jr.Consultants/Support staff from 20 to 34.

Project Approval Board may consider the proposal and take a decision.

Agenda Item No.13

Salary of Senior Consultants

EdCIL (India) Ltd. with whom the Department of Higher Education, MHRD has signed a Service Agreement for establishing a Mission Secretariat/TSG for NMEICT is in the process of recruiting Consultants for the Mission. In this regard, a letter No.10(560)/2010-Admn. Dated 21.12.2010 regarding engagement of Senior Consultants for NMEICT project is enclosed as **Appendix-6** (**Page No._____).**

Two candidates have been recommended by the Selection Committee which met on 18th November 2010 in Engineering discipline – one on deputation basis and the second on consolidated remuneration of Rs.75,000 per month. EdCIL has clarified that the highest position in consultants with EdCIL is the position of Chief Consultant and the approved range of remuneration fee is Rs.30,000-55,000. The recommendation of monthly fee @ Rs.75,000/- per month is beyond the approved remuneration range of EdCIL.

As per the requirement, the candidate should have BE/B.Tech or ME/M.Tech. in Engineering and a **Ph.D. or equivalent research experience** and 20 years experience with at least 15 years in teaching in university/deemed university/PG college or research at senior position in national/international level research organization was kept as the minimum criteria for engaging Senior Consultants.

In the advertisement also, it was mentioned that consolidated salary inclusive of all allowances commensurate with salary of Associate Professor would be given. The option of deputation was also kept. The approval is sought to allow salary of Consultant at Rs. 75,000/- p.m. (consolidated) inclusive of all allowances.

Project Approval Board may consider the proposal and take a decision.

Agenda Item No.14

Hiring of Accommodation for Mission Secretariat

NMEICT is in the process of hiring accommodation for the Mission Secretariat. A Status Report on the same will be placed before PAB.

MINUTES OF 17th MEETING OF PROJECT APPROVAL BOARD OF NATIONAL MISSION ON EDUCATION THROUGH INFORMATION AND COMMUNICATION TECHNOLOGY HELD ON 26th NOVEMBER, 2010 AT 4.00 P.M. AT CONFERENCE ROOM (FIRST FLOOR), CENTRAL SECRETARIAT LIBRARY (CSL) BUILDING, SHASTRI BHAWAN, NEW DELHI.

The **17th** Meeting of the Empowered Committee of Experts (Project Approval Board) (PAB) of National Mission on Education through Information & Communication Technology was held on 26th November, 2010 at 4.00 p.m. in Conference Room (First Floor), Central Secretariat Library (CSL) Building, Shastri Bhawan, New Delhi under the Chairpersonship of Secretary, Department of Higher Education.

The list of Members who participated in the meeting is at **Annexure.**

Mrs.Vibha Puri Das, Secretary, Department of Higher Education welcomed all the Members. Thereafter, agenda items were discussed and the following decisions were taken:

Item No.1

Chairperson requested all the members to give their comments, if any, on the Minutes of the 16th PAB Meeting. No comments were made by anyone present. PAB also took note of the contents of letter dated 19th October, 2010 received from Dr.B.K.Gairola, DG, NIC, requesting for modifications in the minutes of the joint meeting of 2nd National Apex Committee and 16th PAB held on 1st September, 2010. Since the proceedings of the said meeting were video-recorded and the minutes were prepared accordingly and the Department of Higher Education has also now proposed seeking directions of the Cabinet, it was felt that the request Dr.Gairola is not to be taken into account. Thereafter, the Minutes of the 16th PAB meeting held on 1st September, 2010 were confirmed.

Item No.2

Action Taken Report on the Minutes of 16th Meeting of the Project Approval Board held on 1st September, 2010 was noted by PAB. AS(TEL) informed PAB that IIM Ahmedabad has not so far returned the money released to it under one of the projects of NMEICT. PAB then suggested that this could be considered for adjustment while releasing plan grant to IIM Ahmedabad by the bureau concerned in the Department of Higher Education.

Item No.3

Review of Decision-National Programme on Radio Enabled Learning by Commonwealth Educational Media Centre for Asia (CEMCA), New Delhi

Deferred for next meeting of PAB.

Item No.4

The PAB discussed the following proposals.

1. **ME24091011361**

   Developing ICT based pedagogical practices for management accounting, Dr.Manoj Shah

2. JNE-23091011355

Network of interoperable distributed institutional repositories in universities and institutions of higher education research and India, Dr.Jagdish Arora, Inflibnet, Gujarat

3. DE-21091011349

Development of e-contents on foundation course on analytical biochemistry and separation techniques, Dr.Charmy Kothari, Christ college, Rajkot.

4. E-Kalpa Creating Digital Environment for Design in India, Ravi Poovaiah, IIT, Bombay

5. Robot Enhanced Teaching of Subjects in Engineering Colleges, Prof. Kavi Arya, IIT, Bombay

6. Assimilation of Open Source Software in Science and Engineering Education, Prof. Prabhu Ramachandran, IIT, Bombay

7. Development of Analysis and Indexing tools for harnessing educational videos, Dr. Gaurav Harit, IIT, Rajasthan

8. Development of Low Cost Mobile Robots, Dr. Swagat Kumar, IIT, Rajasthan

After discussion, the PAB decided to refer the matter to Standing Committee with the direction to have re-look at the proposals, especially the financial aspects involved. PAB desired that Standing Committee in its recommendations to PAB should invariably include its specific observations and recommendations with regard to reasonableness of cost estimates for both manpower and the proposed purchases of equipment etc.

Item No.5 & 14

Remote Triggered Virtual Labs

Dr.Ranjan Bose, Co-PI from IIT Delhi made a presentation on the progress made in the project and the funds required for main DPR. He informed that 23 labs have already been developed and 350 plus students have been trained for using virtual labs in the pilot project.

The full project on Simulation based Virtual Labs had already been sanctioned for Rs.80 crores against which IIT Delhi has received first installment of 30% i.e. Rs.24 crores till date. The Co-PI informed that the first installment has been spent and second installment of 40% i.e. Rs.32 crores is required to be released immediately. The PAB also approved that the next installment of 40% may be released to IIT Delhi for the full project, namely, Virtual Labs (Simulation based) sanctioned to it.

Item No.6

National Centre for e-learning,PI: Prof.A.K.Bakhshi

Prof.A.K.Bakhshi made a presentation before PAB, highlighting the various aspects of the proposal.

The PAB discussed the proposal. After discussion, PAB decided to refer the matter to Standing Committee with the direction to have re-look at the proposals, especially the financial aspects involved. PAB desired that Standing Committee in its recommendations to PAB should invariably include its specific observations and recommendations with regard to reasonableness of cost estimates for both manpower and the proposed purchases of equipment etc.

Item No.7

Production of Courseware e-content Development, Video Programmes & LORs Consortium for Educational Communication, New Delhi

Dr. Tilak R. Kem, Director, CEC-UGC made a presentation on this proposal, highlighting various aspects of the project.

The PAB discussed the proposal. After discussion, PAB decided to refer the matter to Standing Committee with the direction to have re-look at the proposals, especially the financial aspects involved. PAB desired that Standing Committee in its recommendations to PAB should invariably include its specific observations and recommendations with regard to reasonableness of cost estimates for both manpower and the proposed purchases of equipment etc.

Item No.8

Indian Library and Information Infrastructure for Scholarly Content (N-LIST), Principal Investigator: Dr. Jagdish Arora, Director, INFLIBNET Centre,Ahmedabad

Dr.Jagdish Arora, Director and PI INFLIBNET made a presentation about the project. He informed that 900 colleges have already subscribed for e-journals. Around 4000 colleges will be covered within the next one year.

The PAB noted that Rs.20 crores in two installments have been released to the Director, IIT Delhi who is the Principal Investigator of this project. PAB after deliberations decided that the project should be rigorously reviewed by experts in the area and referred this proposal to Standing Committee for a single recommendation along with reasonableness and justification for the proposed budget of Rs.4000.02 lakhs. It was also decided that the e-books to be procured should be linked to sakshat portal.

Item No.9

Extension of pilot of Vocational modules and Haptic Devices by Amrita Vishwa Vidyapeetham

The representative of Amrita Vishwa Vidyapeetham made a presentation before the PAB highlighting the progress made in the extended pilot phase and the further requirement of funds.

The PAB discussed the proposal. After discussion, PAB decided to refer the matter to Standing Committee with the direction to have re-look at the proposals, especially the financial aspects involved. PAB desired that Standing Committee in its recommendations to PAB should invariably include its specific observations and recommendations with regard to reasonableness of cost estimates for both manpower and the proposed purchases of equipment etc.

Item No.10

Approval for release of next installment to NPTEL

The PAB considered the request by the Director, IIT Madras and PI for NPTEL project for release of next installment of Rs.25 crores to the institute.

However, the PAB opined that NPTEL is not functioning as an aid to teachers and self-learning for teachers/students. The Phase-I material developed under NPTEL is a single quadrant product. Dr.Kannan from IIT Bombay informed that all material being generated under Phase-II and Phase-III will be 4-quadrant and efforts are being made even to make Phase-I also 4-quadrant.

The PAB decided that proper justification and more details for demand of Rs.25 crores may be obtained from the PI and the proposal for release of the 3rd Installment be processed on file.

Item No.11

Setting up of a Committee on Communication & Bulk Storage Servers at 100 premier Institutions

The PAB approved setting up a Committee on Communication & Bulk Storage Servers at 100 premier Institutions with the following composition:

1. Prof. Gautam Barua, Director, IIT, Guwahati
2. Prof. S.V. Raghavan, Scientific Secretary to PSA to GOI
3. Dr. Y.N. Singh, IIT, Kanpur
4. Prof. B.N. Jain, IIT, Delhi
5. Prof. Huzoor Sharan, IIT, Delhi
6. Prof. H.M. Gupta, IIT, Delhi
7. Ms. Shakeela T. Shamshu, Joint Adviser, Planning Commission
8. Dr. B.K. Murthy, Director (Scientist "F") and Head, National Knowledge Network, Department of Information Technology, New Delhi
9. Shri R.S. Mani, Sr. Technical Director, National Informatics Centre, CGO Complex, New Delhi
10. Mr. Luv Gupta, Principal Adviser, TRAI
11. Director (Finance), Department of Higher Education, MHRD
12. Representative of Department of Telecommunications, Govt. of India
13. Dr. P.K. Kalra, Director, IIT, Rajasthan - Convener

The PAB also approved the following Terms of Reference:

a) To identify 100 institutions where communication and bulk storage servers could be installed;
b) To suggest specifications of such servers;
c) To suggest manpower needed for maintenance of such servers, along with space where such servers would need to be installed;
d) To suggest methodology for procurement by the Institutions; and
e) To suggest group of institutions with Principal Investigator which will anchor the project.

It was also decided that the Committee may co-opt more experts, if needed, for the benefit of Mission and TA/DA, as applicable, may be paid by the Mission.

The Committee will submit its report to Project Approval Board of NMEICT within a period of six weeks from the date of its constitution.

Item No.12

Low cost access-cum-computing device - Status Report

A presentation on the progress made in this regard by the representative of IIT Rajasthan. PAB took note of the status. The PAB was of the opinion that excise duty exemption, if any, for procurement of low cost devices may be pursued simultaneously.

Item No.13

Providing connectivity to universities & Colleges - Status Report

Representative of BSNL made a presentation on connectivity provided to universities and colleges. BSNL informed that 136 universities have been connected and it is awaiting consent for payment of universities/beneficiaries share from some universities. With regard to colleges, this number is 9731. AS (TEL) informed PAB that Planning Commission has made provision in this regard in the State Plans. PAB suggested that BSNL may get in touch with Planning Commission and collect relevant document(s) and pursue with State Governments for their consent for meeting 25% or 10%, as the case may be. BSNL also informed that tender process for providing LAN to universities is underway. BSNL reiterated its request for up-gradation of international bandwidth beyond 2 GB. PAB decided that upto 10 GB of international bandwidth can be provided. BSNL however, will utilize according to realistic requirement.

General Observation/Comments of PAB - With regard to making open sources user friendly the example of SCILAB and PYTHON was mentioned by Prof.Kannan of IIT Bombay. It was decided that MHRD may write to Central Educational Institutions and to AICTE for pursuing with the institutions affiliated to it for making use of SCILAB and other Open Source Softwares. It was also decided to request the institutions to explore Open Source Software Solutions before blindly adopting proprietary softwares for their academic, administrative and financial needs.

The meeting ended with a Vote of Thanks to the Chair.

Attendance of the 17th Meeting of the Project Approval Board (PAB) of the National Mission on Education through Information & Communication (NMEICT) Technology held on 26th November, 2010 at 4.00 p.m. at Conference Room (First Floor), Central Secretariat Library (CSL) Building, Shastri Bhawan, New Delhi.

S.No.	Name, Designation and Address	Phone No., Fax and Email
1	Ms. Vibha Puri Das Secretary (HE) MHRD, Shastri Bhawan, New Delhi	Chairperson
2	Mr. N.K.Sinha Additional Secretary(TEL) Department of Higher Education, MHRD, Shastri Bhawan, New Delhi	23387781 nksinha.edu@nic.in
3	Shri Vinayshil Gautam A.AL_Sagar Chair Professor of Management IIT (D) Hauz Khas New Delhi-110016	26591171 (o) 26862620 (f) gautamvinay@hotmail.com
4	Shri Amit Patra Dean (Alumni Affairs And International Relations IIT, Kharagpur	03222-282034 (Ph/Fax) deanaa@hijle.iitkgp.ernet.in
5	Shri R.P Agrawal Chairman BOG IIT, Delhi	9910823311 rpa1949@gmail.com
6	Shri S.K. Roy AS & FA Ministry of Human Resources Development Shastri Bhawan New Delhi	9868886588 skray@nic.in
7	Dr. Harvinder Singh Director (PAE) & Nodal officer (NME-ICT) Department of Higher Education, MHRD, Shastri Bhawan, New Delhi	23382604 harvinder.edu@nic.in
8	Shri R. Sagi Kumar DGM (NWP-BB) BSNL Corporate Office New Delhi	9868280066
9	Prof. Kamal Bijlani Amrita Vishwa Vidyapeetham Kollam Kerala	9447571000 kamal@amrita.edu
10	Prof. Rajan Bose IIT Delhi	9818253072 rbose.iitd@gmail.com

11	Shri Pradeep Kaul Jt Director CEC Aruna Asaf Ali Marg New Delhi-110067	9868274690 kaulp@rediffmail.com
12	Dr. Jayashree Shinde Dept of Edu Techno SNDT University Mumbai	9820779375 jvshinde@gmail.com det@sndt.ac.in
13	Prof. Kannan Moudgalya Professor IIT Bombay	9869326979 kannan@iitb.ac.in
14	Shri V.M. Gupta Scientist 'D' NKN Division Department of Information Technology	24362115 vm.gupta@nic.in
15	Dr.H. Maheshappa Vice Chancellor Visvesvaraya Technological University Belgaum Karnataka	9880288083 vc@vtu.ac.in
16	Dr. M. R. Rajeshwari Addl. Professor Biochemistry Dept AIIMS New Delhi	9810145036 rajeshwari3011@hotmail.com
17	Prof. A.K. Bakhshi Director Institute of Life Long Learning University of Delhi	9818352820 akbakhshi2000@yahoo.com
18	Dr. N. K. Verma Department of Electrical Engineering IIT, Kanpur U.P	09455843959 nishchal@iitk.ac.in
19	Dr. Jagdish Arora Director, INFLIBNET Ahmedabad	9725051200 jarora@inflibnet.ac.in

ACTION TAKEN NOTE ON THE

MINUTES OF 17th MEETING OF PROJECT APPROVAL BOARD OF NATIONAL MISSION ON EDUCATION THROUGH INFORMATION AND COMMUNICATION TECHNOLOGY HELD ON 26th NOVEMBER, 2010

Item No.	Action Taken
Item No.1 Chairperson requested all the members to give their comments, if any, on the Minutes of the 16th PAB Meeting. No comments were made by anyone present. PAB also took note of the contents of letter dated 19th October, 2010 received from Dr.B.K.Gairola, DG, NIC, requesting for modifications in the minutes of the joint meeting of 2nd National Apex Committee and 16th PAB held on 1st September, 2010. Since the proceedings of the said meeting were video-recorded and the minutes were prepared accordingly and the Department of Higher Education has also now proposed seeking directions of the Cabinet, it was felt that the request Dr.Gairola is not to be taken into account. Thereafter, the Minutes of the 16th PAB meeting held on 1st September, 2010 were confirmed.	Minutes confirmed
Item No.2 Action Taken Report on the Minutes of 16th Meeting of the Project Approval Board held on 1st September, 2010 was noted by PAB. AS(TEL) informed PAB that IIM Ahmedabad has not so far returned the money released to it under one of the projects of NMEICT. PAB then suggested that this could be considered for adjustment while releasing plan grant to IIM Ahmedabad by the bureau concerned in the Department of Higher Education.	IIM Ahmedabad does not get any grant.
Item No.3 **Review of Decision-National Programme on Radio Enabled Learning by Commonwealth Educational Media Centre for Asia (CEMCA), New Delhi** Deferred for next meeting of PAB.	Included in the Agenda
Item No.4 The PAB discussed the following proposals. 1. **ME24091011361** **Developing ICT based pedagogical practices for management accounting, Dr.Manoj Shah** 2. **JNE-23091011355** **Network of interoperable distributed institutional repositories in universities and institutions of higher education research and India, Dr.Jagdish Arora, Inflibnet, Gujarat**	These projects were referred back to Standing Committee. The projects re-evaluated by the Standing Committee are included in the Agenda

3. DE-21091011349 Development of e-contents on foundation course on analytical biochemistry and separation techniques, Dr.Charmy Kothari, Christ college, Rajkot.	
4. E-Kalpa Creating Digital Environment for Design in India, Ravi Poovaiah, IIT, Bombay	
5. Robot Enhanced Teaching of Subjects in Engineering Colleges, Prof. Kavi Arya, IIT, Bombay	
6. Assimilation of Open Source Software in Science and Engineering Education, Prof. Prabhu Ramachandran, IIT, Bombay	
7. Development of Analysis and Indexing tools for harnessing educational videos, Dr. Gaurav Harit, IIT, Rajasthan	
8. Development of Low Cost Mobile Robots, Dr. Swagat Kumar, IIT, Rajasthan	
After discussion, the PAB decided to refer the matter to Standing Committee with the direction to have re-look at the proposals, especially the financial aspects involved. PAB desired that Standing Committee in its recommendations to PAB should invariably include its specific observations and recommendations with regard to reasonableness of cost estimates for both manpower and the proposed purchases of equipment etc.	
Item No.5 & 14 **Remote Triggered Virtual Labs** Dr.Ranjan Bose, Co-PI from IIT Delhi made a presentation on the progress made in the project and the funds required for main DPR. He informed that 23 labs have already been developed and 350 plus students have been trained for using virtual labs in the pilot project. The full project on Simulation based Virtual Labs had already been sanctioned for Rs.80 crores against which IIT Delhi has received first installment of 30% i.e. Rs.24 crores till date. The Co-PI informed that the first installment has been spent and second installment of 40% i.e. Rs.32 crores is required to be released immediately. The PAB also approved that the next installment of 40% may be released to IIT Delhi for the full project, namely, Virtual Labs (Simulation based) sanctioned to it.	Rs.32.00 crore released to IIT Delhi.

Item No.6 **National Centre for e-learning,PI: Prof.A.K.Bakhshi** Prof.A.K.Bakhshi made a presentation before PAB, highlighting the various aspects of the proposal. The PAB discussed the proposal. After discussion, PAB decided to refer the matter to Standing Committee with the direction to have re-look at the proposals, especially the financial aspects involved. PAB desired that Standing Committee in its recommendations to PAB should invariably include its specific observations and recommendations with regard to reasonableness of cost estimates for both manpower and the proposed purchases of equipment etc.	Prof.A.K.Bakhshi has sent a letter, withdrawing from the Project. He has proposed to be associated with the Mission in an honorary capacity. Agenda added.
Item No.7 **Production of Courseware e-content Development, Video Programmes & LORs Consortium for Educational Communication, New Delhi** Dr. Tilak R. Kem, Director, CEC-UGC made a presentation on this proposal, highlighting various aspects of the project. The PAB discussed the proposal. After discussion, PAB decided to refer the matter to Standing Committee with the direction to have re-look at the proposals, especially the financial aspects involved. PAB desired that Standing Committee in its recommendations to PAB should invariably include its specific observations and recommendations with regard to reasonableness of cost estimates for both manpower and the proposed purchases of equipment etc.	Re-evaluated by the Standing Committee; included in the Agenda.
Item No.8 **Indian Library and Information Infrastructure for Scholarly Content (N-LIST), Principal Investigator: Dr. Jagdish Arora, Director, INFLIBNET Centre,Ahmedabad** Dr.Jagdish Arora, Director and PI INFLIBNET made a presentation about the project. He informed that 900 colleges have already subscribed for e-journals. Around 4000 colleges will be covered within the next one year. The PAB noted that Rs.20 crores in two installments have been released to the Director, IIT Delhi who is the Principal Investigator of this project. PAB after deliberations decided that the project should be rigorously reviewed by experts in the area and referred this proposal to Standing Committee for a single recommendation along with reasonableness and justification for the proposed budget of Rs.4000.02 lakhs. It was also decided that the e-books to be procured should be linked to sakshat portal.	Presentation was made before the Standing Committee. Thereafter letters have been received from the PI for which the report will be submitted to PAB. He has again made presentation on 15th January, 2011 before Standing Committee. Additional Agenda will be put up before the PAB.

Item No.9	
Extension of pilot of Vocational modules and Haptic Devices by Amrita Vishwa Vidyapeetham	Re-evaluated by the Standing Committee; included in the Agenda.
The representative of Amrita Vishwa Vidyapeetham made a presentation before the PAB highlighting the progress made in the extended pilot phase and the further requirement of funds.	
The PAB discussed the proposal. After discussion, PAB decided to refer the matter to Standing Committee with the direction to have re-look at the proposals, especially the financial aspects involved. PAB desired that Standing Committee in its recommendations to PAB should invariably include its specific observations and recommendations with regard to reasonableness of cost estimates for both manpower and the proposed purchases of equipment etc.	
Item No.10	
Approval for release of next installment to NPTEL	
The PAB considered the request by the Director, IIT Madras and PI for NPTEL project for release of next installment of Rs.25 crores to the institute.	Rs.6.00 crores have been released to IIT Madras.
However, the PAB opined that NPTEL is not functioning as an aid to teachers and self-learning for teachers/students. The Phase-I material developed under NPTEL is a single quadrant product. Dr.Kannan from IIT Bombay informed that all material being generated under Phase-II and Phase-III will be 4-quadrant and efforts are being made even to make Phase-I also 4-quadrant.	
The PAB decided that proper justification and more details for demand of Rs.25 crores may be obtained from the PI and the proposal for release of the 3rd Installment be processed on file.	
Item No.11	
Setting up of a Committee on Communication & Bulk Storage Servers at 100 premier Institutions	The Committee has been set up.
The PAB approved setting up a Committee on Communication & Bulk Storage Servers at 100 premier Institutions with the following composition:	

1. Prof. Gautam Barua, Director, IIT, Guwahati
2. Prof. S.V. Raghavan, Scientific Secretary to PSA to GOI
3. Dr. Y.N. Singh, IIT, Kanpur
4. Prof. B.N. Jain, IIT, Delhi
5. Prof. Huzoor Sharan, IIT, Delhi
6. Prof. H.M. Gupta, IIT, Delhi
7. Ms. Shakeela T. Shamshu, Joint Adviser, Planning Commission

8. Dr. B.K. Murthy, Director (Scientist "F") and Head, National Knowledge Network, Department of Information Technology, New Delhi
9. Shri R.S. Mani, Sr. Technical Director, National Informatics Centre, CGO Complex, New Delhi
10. Mr. Luv Gupta, Principal Adviser, TRAI
11. Director (Finance), Department of Higher Education, MHRD
12. Representative of Department of Telecommunications, Govt. of India
13. Dr. P.K. Kalra, Director, IIT, Rajasthan - Convener

The PAB also approved the following Terms of Reference:

a) To identify 100 institutions where communication and bulk storage servers could be installed;
b) To suggest specifications of such servers;
c) To suggest manpower needed for maintenance of such servers, along with space where such servers would need to be installed;
d) To suggest methodology for procurement by the Institutions; and
e) To suggest group of institutions with Principal Investigator which will anchor the project.

It was also decided that the Committee may co-opt more experts, if needed, for the benefit of Mission and TA/DA, as applicable, may be paid by the Mission.

The Committee will submit its report to Project Approval Board of NMEICT within a period of six weeks from the date of its constitution.

Item No.12 **Low cost access-cum-computing device - Status Report** A presentation on the progress made in this regard by the representative of IIT Rajasthan. PAB took note of the status. The PAB was of the opinion that excise duty exemption, if any, for procurement of low cost devices may be pursued simultaneously.	Conveyed to IIT Rajasthan. A total of Rs.25.00 crores have been released to IIT Rajasthan.
Item No.13 **Providing connectivity to universities & Colleges - Status Report** Representative of BSNL made a presentation on connectivity provided to universities and colleges. BSNL informed that 136 universities have been connected and it is awaiting consent for payment of universities/beneficiaries share from some universities. With regard to colleges, this number is 9731. AS (TEL) informed PAB that Planning Commission has made provision in this regard in the State Plans. PAB suggested that BSNL may get in touch with	Rs.130.36 crores have been released to BSNL. Rs.11.88 crores have also been released to MTNL so far.

Planning Commission and collect relevant document(s) and pursue with State Governments for their consent for meeting 25% or 10%, as the case may be. BSNL also informed that tender process for providing LAN to universities is underway. BSNL reiterated its request for up-gradation of international bandwidth beyond 2 GB. PAB decided that upto 10 GB of international bandwidth can be provided. BSNL however, will utilize according to realistic requirement.	
General Observation/Comments of PAB - With regard to making open sources user friendly the example of SCILAB and PYTHON was mentioned by Prof.Kannan of IIT Bombay. It was decided that MHRD may write to Central Educational Institutions and to AICTE for pursuing with the institutions affiliated to it for making use of SCILAB and other Open Source Softwares. It was also decided to request the institutions to explore Open Source Software Solutions before blindly adopting proprietary softwares for their academic, administrative and financial needs.	Issued.

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File No.NMEICT (MS)/PAB/18
Government of India
Ministry of HRD
Department of Higher Education

****

21st January, 2011

To

All Members of Empowered Committee of Experts
(Project Approval Board) of National Mission on
Education through Information and Communication
Technology (As per list enclosed)

Sub: Additional Agenda-18th Meeting of the Empowered Committee of Experts (Project Approval Board) of National Mission on Education through Information and Communication Technology (NMEICT) to be held on 24th January, 2011 at 3.00 p.m.

Sir/Madam,

Please refer to our letter of even number dated 14th January, 2011 enclosing therewith Agenda and Papers for 18th Meeting of the Empowered Committee of Experts [Project Approval Board (PAB)] of National Mission on Education through Information and Communication Technology (NMEICT) scheduled to be held on 24th January, 2011 at 3.00 p.m.

2.   We are enclosing now Additional Agenda for kind perusal.

3.   Kindly make it convenient to attend the meeting.

Yours faithfully,
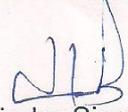
(Dr. Harvinder Singh)
Director (TEL) &
Nodal Officer (NMEICT)
Tel: 011-23382604

Copy to: PSO to ES (HE)/PS to AS&FA/AS (TEL)

ADDITIONAL AGENDA FOR 18TH MEETING OF PROJECT APPROVAL BOARD OF NATIONAL MISSION ON EDUCATION THROUGH INFORMATION AND COMMUNICATION TECHNOLOGY TO BE HELD ON 24th JANUARY, 2011 AT 3.00 P.M. IN CONFERENCE ROOM NO.112-C, SHASTRI BHAWAN, NEW DELHI

Item No.	Subject
Item No.1	Developing suitable pedagogical methods for various classes, intellectual calibers and research in e-learning, IIT Kharagpur
Item No.2	Standing Committee Members to take over the job of Consultant/Coordinator
Item No.3	e-content Development of Marketing Management
Item No.4	e-Content generation for students of science in graduate programmes.

Additional Agenda Item No.1

Developing suitable pedagogical methods for various classes, intellectual calibers and research in e-learning, IIT Kharagpur

Under the National Mission on Education through Information and Communication Technology scheme, a pilot project, namely, Developing suitable pedagogical methods for various classes, intellectual calibers and research in e-learning" was sanctioned to Indian Institue of Technology, Kharagpur during 2008-09 and 1st instalment of Rs.2.50 crore was also released. The second instalment of Rs.2.50 crore has not been released.

PI of the said project, Prof. Anup K Ray from Indian Institute of Technology, Kharagpur has sent a letter dated 31.12.2010 (copy enclosed), in which he has mentioned the following:

- As explained to ES and AS&FA on 27.12.2010, this is a unique NMEICT project.
- The details are available in the project website http://pedagogy.iitkgp.ernet.in.
- Brief summary is shown at Annexure I of his said letter (copy enclosed).
- It is important to appreciate that by far the largest component of this project is the investment of very large intellectual effort (45000+ man-hours) by nearly 570 faculty members from 50+ academic institutions. Procurement of h/w and s/w; expenditure on salary, TA/DA costs etc. constituter less than 30% of the project cost. Honorarium/Development/Review fees may constitute upto 65% of the budget.
- Persuading competent faculty members to undertake a project of this nature is an hphill task. It will be quite impossible to continue with the project if one has to comply with the condition "honorarium in no case shall exceed 10% of the project", introduced well after the sanction of the project.
- 20% of annual salary as the upper limit of honorarium including honorarium from all sources should be changed to honorarium received from MHRD sponsored projects. It should be noted that large no. of faculty members who are already engaged in several other projects including the NPTEL, Virtual Lab projects have been pressurized into undertaking the Pedagogy project also. Most will get honorarium for only a single project.

- It is important to allow – at least for this project – partial payment of honoraria, on satisfactory completion of a very significant part of the assignment, on condition that the concerned faculty gives an undertaking to complete the entire assignment satisfactorily, otherwise agree to refund the fees received.
- DPR for the main phase will be submitted as soon as these issues are resoved.
- What is to be done to get the 2nd instalment.
- In the absence of any funds and no official confirmation of extension, several Nodal/Partner Institutions have put the project on hold.

Prof. Anup K Ray has also requested to put up this matter before PAB and persuade them to exempt this project from the stipulations detailed in Annexure 2 of his letter (copy enclosed-**Appendix-A-Page No.8**). He has also requested for extension of the project till 31.3.2011.

The matter is placed before PAB of NMEICT for discussion and appropriate decision in the matter.

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18th Meeting of Project Approval Board of NMEICT

Additional Agenda Item No.2

Standing Committee Members to take over the job of Consultant/Coordinator

Under Centrally Sponsored Plan scheme, namely, National Mission on Education through Information and Communication Technology, a pilot project, namely, Content Creation (Non-technical) E-content creation in the areas of economics, mathematics, commerce, history, zoology and botany was sanctioned to University of Delhi and an amount of Rs.1.00 crore (first instalment) was released to the University vide this Department's sanction letter dated 31.3.2009. University of Delhi has not sought second instalment.

The PI of this pilot Project, Prof. A.K. Bakshi, vide his letter No.CD/2010/1306 dated 29.12.2010 (**Appendix-B Page No.11)** addressed to Secretary, Department of Higher Education, MHRD (copy enclosed), has informed that due to a sudden change in scenario at Institute of Lifelong Learning, University of Delhi of which he was Director till 14.12.2010, he would like to withdraw his project proposal (separate proposal) of Rs.522 crore as PI for setting up a National Centre for e-content Development at ILLL under NMEICT.

Prof. A.K. Bakshi has further stated that with the changed scenario at this crucial stage of the project with no ILLL team and facilities with him, it would not be possible for him to complete the pilot project given by the MHRD. He has also stated that in view of his expertise and experience in e-learning domain, he would be happy if his services could be used, even in an honorary capacity, for serving the cause of NMEICT.

Under NMEICT e-content is being generated. It is proposed that Prof. A.K. Bakshi's experience and expertise could be utilized for achieving the objectives of the Mission.

NMEICT requires services of Consultants. PAB has approved six Consultants to be taken for the purpose. Another agenda is being moved for two more Consultants as well as for future, five more Consultants for managing the regional requirements. A separate agenda is being placed before the PAB in this regard. Two efforts have been made for recruitment of Consultants approved by the PAB. In the first attempt, no suitable candidate was found available. In the second attempt, two Consultants have been selected. In respect of these, agenda is being placed before the PAB for fixing their salary etc.

From the above, it is clear that we will need volunteers to take up the job of Consultant so that objectives of the Mission are achieved. In this context, it may be stated that the Standing Committee members can be used for the purpose. Prof. A.K. Bakshi, who is the member of the Standing Committee, has expressed his desire to work as a Consultant/Coordinator. Prof. Kannan Moudgalaya of IIT, Bombay has also shown inclination for the purpose. In view of the above, it is proposed that Prof. Kannan Moudgalaya may be requested to take up the job of Consultant/Coordinator for Engineering courses and Prof. A.K. Bakshi may be requested to take up the job of Consultant/Coordinator for Science and Social Science. There will not be need to make any payment except for reimbursing to them the expenses like TA/DA if the tours etc. are taken up for further the objectives of NMEICT. Meanwhile, efforts have been made to identify the Standing Committee members to take over the job of Consultant/Coordinator for Management and other disciplines and also for Languages on the similar basis till regular Consultants join. These Consultants/Coordinators will be reporting to Mission Director.

PAB of NMEICT may kindly consider the proposal and take a decision.

....

18th Meeting of Project Approval Board of NMEICT

Additional Agenda Item No.3

e-content Development of Marketing Management

The Standing Committee in its meeting held on 21st August, 2010 recommended the following project:

e-content Development of Marketing Management

      SUBMITTED BY :- Jaydeep Badiyani

      Institute: Bhavnagar University

      CONTROL NUMBER :- JE-20071011105

The Standing Committee recommended Rs.14 lakhs for preparation of two pilots.

The extracts of the Minutes of the Standing Committee are enclosed at **Appendix 3A- Page No.13.**

A copy of the Appraisal done by the Standing Committee is enclosed at **Appendix-3B= Page No.14.**

Additional Agenda Item No.4

e-Content generation for students of science in graduate programmes.

The following project was recommended by the Standing Committee in its meeting held on 9th October, 2010:

e-Content generation for students of science in graduate programmes.

ME-24091011358

Dr.Mandira Sikdar, Navrachna University, Vadodara, Gujarat.

The Standing Committee recommended Rs.7 lakhs for preparation of one pilot.

The extracts of the Minutes of the Standing Committee are enclosed at **Appendix-4A- Page No.20.**

A copy of the Appraisal done by the Standing Committee is enclosed at **Appendix-4B- Page No.21.**

Anup K Ray
Centre for Educational Technology

FTS- 3330/2011/AS(TEL)

INDIAN INSTITUTE OF TECHNOLOGY
Kharagpur : 721 302, West Bengal, India

31-12 10

Dear Mr Sinha

Ref: Meeting on 27-12-2010 with the Secretary, Education, MHRD
and Mr S K Ray, AS & FA.

Sub: Release of 2nd Installment of Grant for Pedagogy project

The pilot phase of the project "Developing suitable pedagogical methods for various classes, intellectual calibers and research in e-learning" was sanctioned in March 2009. As explained to Ms Vibha Puri Das, Secretary (HE), MHRD, you and Mr. S K Ray AS & FA (HE) on the 27-12-2010 this is a unique NMEICT project. The details are available in the project website http://pedagogy.iitkgp.ernet.in . I am also attaching a PowerPoint presentation for your convenience. A brief summary is shown at Annexure1.

It is important to appreciate that by far the largest component of this project is the investment of very large intellectual effort (45000+ man-hours) by nearly 570 faculty members from 50+ academic institutions. Procurement of h/w and s/w; expenditure on salary, TA/DA costs etc constitute less than 30% of the project cost. Honorarium/Development/Review fees may constitute up to 65% of the budget.

- Persuading competent faculty members to undertake a project of this nature is an uphill task. It will be quite impossible to continue with the project if one has to comply with the condition *"honorarium in no case shall exceed 10% of the project"*, introduced well after the sanction of the project.
- 20% of annual salary as the upper limit of honorarium including honorarium from all sources should be changed to honorarium received from MHRD sponsored projects. It should be noted that large no. of faculty members who are already engaged in several other projects including the NPTEL, Virtual Lab projects have been pressurized into undertaking the Pedagogy project also. Most will get honorarium for only a single project.
- It is important to allow- at least for this project- partial payment of honoraria, on satisfactory completion of a very significant part of the assignment, on condition that the concerned faculty gives an undertaking to complete the entire assignment satisfactorily, otherwise agree to refund the fees received .

As suggested by Mr S K Ray, I request you to put up these issues to the PAB and persuade them to exempt this project from the stipulations detailed in Annexure 2. Please let me know what else we need to do to get the 2nd installment of Rs 2.5 crore released? The DPR for the main phase will be submitted as soon as these issues are resolved. In the absence of any funds and no official confirmation of extension, several Nodal/ Partner Institutions have put the project on hold.
Kindly allow the project to be extended till 31-03-2011.

With warm regards

Anup K Ray
PI, Pedagogy Project

Mr. N. K. Sinha, IAS
AS (TEL), Department of Higher Education,
Ministry of Human Resource Development,
Shastri Bhavan, New Delhi 110 001

Annexure 1

1. Briefly stated, *the vision of the project* is to:

❖ *Make engineering education system more learner-centric*
❖ *Take care of individual differences amongst learners*
❖ *Ensure mastery over not only domain knowledge but also over the knowledge ,skills and attitudes needed for the 21st century*
❖ *Introduce Outcomes-based learning*

2. The project is aimed at introducing far reaching changes in the Indian Higher Education system, initially starting with Engineering Education. Due to lack of adequate pedagogic expertise and lack of awareness of outcomes based learning concepts significant effort was necessary to build up the required knowledge base before starting the main work.

3. The Pilot Phase Project Summary is shown below.

- *Sanctioned amount:*   Rs 5 Crore
- *Released amount:*   Rs 2.5 Crore
- *Anchor Institution :*   IIT Kharagpur
- *Participating Nodal Institutions:*   IITB; IITK; IITG; IIT Roorkee; NITD; NITW; IIITB; NIT Rourkela; BESUS; BIT Mesra; BITS Pilani
- *Major Deliverable:*   Sample Outcomes-based Curriculum Document for B Tech Courses

- *Faculty participation :*   500+ from 50+ Institutions
- *Current Status:*   - Almost all pilot phase objectives achieved.
                                                       - Some review and editing work pending
- Major Problems :   - Review Process to be revised
                                                       - Second installment not yet released
                                                       - New post-facto Payment Norms introduced for release of 2nd installment of sanctioned grant. (Annexure 2)

Annexure 2

Conditions imposed after sanction of the grant

The following three conditions have been incorporated in this Department's sanction letters while releasing grant-in-aid towards second installment of pilot phase of the projects sanctioned in 2008-09, first and final installment for the pilot projects sanctioned in 2009-10, some full projects (where 30% of the project cost has been released so far).

a) No honorarium shall be payable until completion of the project and acceptance of deliverables by the Government of India, Department of Higher Education, MHRD. The honorarium shall be regulated strictly as per rules in force from time to time and within prescribed ceilings.

b) Honorarium, if any, shall be payable only after the completion of the project and acceptance of the deliverables by the Govt of India, Department of Higher Education, MHRD. The honorarium shall be regulated strictly as per rules in force from time to time which inter alia, includes provision of SR12 and within the prescribed ceilings.

c) Further the honorarium in no case shall exceed 10% of the cost the project and no individual would get more than 20% of his /her annual salary as honorarium for the whole year including honorarium from any other source whatsoever.

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PROFESSOR (Dr.) A. K. BAKHSHI
F.N.A.Sc.
SIR SHANKAR LAL PROFESSOR OF CHEMISTRY & HEAD
M.Sc. (Gold Medalist), Ph.D. (Delhi), Dip. Int. Relations,
Dip. Int. Law (Gold Medalist), DAAD Fellow (Germany),
INSA Research Fellow, IUPAC Fellow
Member Scientist : Indian Antarctica Expedition

DEPARTMENT OF CHEMISTRY
UNIVERSITY OF DELHI, DELHI-110007 (INDIA)
Tel.   : 27667725 Ext. 1395 (O)
          25104525 (R)
Mobile : 9818352820
E-mail : akbakhshi2000@yahoo.com

Ref. No. CD/2010/1306 FTS.67503 /2010-Secy(HE) Dated: 28th December, 2010

The Education Secretary
Ministry of Human Resource Development
Shastri Bhawan
New Delhi.

Dear Madam,

This has reference to my meeting with you on Friday, the 24th December 2010 in your office. Let me first of all express my profound gratitude to you for giving me an opportunity to meet you despite your very busy schedule.

As I talked to you in our meeting, due to a sudden change in scenario at Institute of Lifelong Learning (ILLL), University of Delhi, of which I was the Director till 14th December 2010, I would like to withdraw my project proposal of Rs. 522 crores as Principal Investigator (PI) duly recommended to MHRD by the former VC Prof. Deepak Pental for setting up a *National Centre for e-Content Development* at ILLL under NMEICT. As you know Madam, the idea for setting up a National Centre was given by Sh. Kapil Sibal , Hon'ble Minister of Human Resource Development during my invited presentation at the last Conference of the Central Universities Vice-Chancellors.

I would also like to inform you that I am also the Principal Investigator (PI) of a pilot project for e- Content Development under *National Mission on Education through Information and Communication Technology (NMEICT)* of the MHRD, Govt. of India, in progress at ILLL. However with the changed scenario at this crucial stage of the project with no ILLL team

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PROFESSOR (Dr.) A. K. BAKHSHI
F.N.A.Sc.
SIR SHANKAR LAL PROFESSOR OF CHEMISTRY & HEAD
M.Sc. (Gold Medalist), Ph.D. (Delhi), Dip. Int. Relations,
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and facilities with me, I don't think it would be possible for me to complete this project.

Madam I have been very actively associated with the various activities of the NMEICT and Sakshat portal for the last more than four years and am also presently a member of the Standing Committee of the NMEICT. I derive immense satisfaction from the fact that starting from scratch, ILLL during the last three years could attain an unassailable lead in the realms of ICT- enabled higher education in the country. I was felicitated by the former President of India Dr. A.P.J. Abdul Kalam for my contributions in the e-transformation of the University of Delhi. I was also Chairman of the Working Group for Chemistry and also for Polymer Science for the establishment of the National Science Digital Library, a project of the CSIR.

In view of my expertise and experience in e-learning domain, I would be happy if my services could be used , even in an honorary capacity, for serving the cause of NMEICT.

Thanking you once again for your support and with best regards,

Yours faithfully,

A.K.Bakhshi

Extracts of the Minutes of the Standing Committee Meeting held on 21st August, 2010

e content Development of Marketing Management

SUBMITTED BY :- Jaydeep Badiyani

Institute: Bhavnagar University

CONTROL NUMBER :- JE-20071011105

The PI proposed the development of two separate marketing management courses for students of management and commerce streams. The commerce stream is extremely important for Gujarat. The proposed courses are aimed also at distance learners, as 30% of the students of Bhavnagar university study through this mode.

The projected expenses are within the norms allowed by the mission.

The SC recommends this proposal with the following conditions:

1. Detailed outlines of the two courses have to be provided
2. Should conform to the syllabus of UGCIAICTE
3. Should follow the four quadrant approach
4. Each course should have material for 40 hours of instruction

The PI need not present this proposal again.

However, the PI may submit the budget along with detailed appraisal in the prescribed format. The detailed appraisal will be conducted in the next meeting of the Standing Committee to be notified.

Appraisal by Standing Committee

Name of the Project: e content Development of Marketing Management for Students of Commerce and Management

Control No. JE-20071011105

Name of PI(s):Dr. Jaydeep M. Badiyani

Name of the Institute(s): Bhavnagar University, Bhavnagar, Gujarat.

Recommendation of the Standing Committee: Rs. 14 lakh may be given at the beginning itself.

1. Objectives

To create e-content on marketing management for students of commerce and management.

2. Deliverables

There will be two courses: one course for students of commerce and the other for the students of management. The proposed e-content will be delivered in 4-quadrant approach. Each will be suitable for 40 hours of instruction.

Marketing management for students of management. (as per UGC NET syllabus and model curriculum of management).

1. Introduction of marketing.
2. Marketing environment.
3. Marketing information system and marketing research.
4. Understanding consumer.
5. Targeting and positioning.
6. Product decisions.
7. Price decisions.
8. Promotion decisions.
9. Marketing channel decisions.
10. 7 p's of services marketing.
11. Evaluation and marketing control.
12. Uses of internet as marketing medium and new issues in marketing management.

Marketing management for students of commerce (as per UGC NET syllabus and model curriculum of commerce).

1. Introduction to commerce, management, trade and marketing.
2. Marketing as process and system.
3. Factors affecting marketing management.
4. Consumer behavior, targeting and positioning.
5. 4 p's of marketing including 3 more p's of service marketing.
6. Marketing control.

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7. International marketing.

3.   Suggestions with respect to:

   i)   Arrangement for quality control : Quality control will be arranged in three steps. First, evaluation will be done by students. In the second stage, the e – content will be discussed with peer group for quality of the e content. The third stage will be of expert panel members' evaluation.
   ii) Accuracy : Only standard international, national and regional publishers and certified websites will be referred for preparing all quadrilateral dimensions.
   iii) Coverage : The coverage of the project would be to all who wish to learn marketing management. However, main focus is PG programme syllabus prepared by UGC and AICTE.
   iv) Updation mechanism : At the end of development and further, the content will be discussed with peer group and then will be sent to experts for their valuable comments. Then, the site will be updated. If needed by the content requirements, infrequent interim updates will also be done.
   v)   Testing by users: At the end of the development phase, the e content will be tested by regular MBA students. Accordingly, modifications can be made.
   vi) Testing by peer group : After testing by users, there will be a testing by peer group members who are teachers of management programmes at PG and UG levels.

4.   Scaling up

   a)   Plan : As shown in deliverables, the project will be completed in 12 months.
   b)   Strategy
        (i)   In-house : Out of quadrilateral dimensions, three i. e. e content (text), Bibliography / Reference reading list / Webliography and Self assessment questions will be prepared in house.
        (ii) Out sourcing : Out of quadrilater dimensions, one i. e. e tutor (animation, audio visual learning materials etc.) which requires some technical computer skills may be outsourced.

In case of outsourcing, please comment with regard to its acceptability with reference to Government Rules & Procedures.

Outsourcing will be done by following government / university rules and procedures.

5.   Popularizing and extension activities and plans.

   a.   Strategy for popularization : Popularization will be done in various ways. While user testing in development phase, regular MBA students will be asked to test. The testing itself on a mass basis will popularize the project. Workshop participants, teachers of management discipline, peer group members and experts will be requested to popularize the project wheresoever they go to take sessions.
   b.   Extension activities and plans :
        i)   Maintenance mechanism : A website may be created for maintenance of e content or the project will be submitted to NME ICT website for publishing it.

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ii) User feedback mechanism, its execution procedure and corrective measures : A survey form created from freewares like google docs, will be attached with the website. Thus, continuous feedback will be taken up which will be discussed with peer group at every end of semester. The feedback then will be sent to experts for modifications. Then, the website can be updated.

6. Review Mechanism

a. Frequency of review : With constant feedback system by users, at every end of semester, the website will be reviewed by peer group members as well as expert / eminent in the field.
b. List at least 10 Reviewers, who are eminent in fields of the projects.
1. Prof. H. C. Trivedi, Dean, School of Management, Petrolium University, Dehradun.
2. Dr. Bushan D. Sudhakar, Reader, Department of International Business, School of Management, Pondicherry Uni., Pondicherry.
3. Prof. Tushar Hathi, Head, Department of Economics, Kachchh University, Bhuj.
4. Prof. S. S. Khaluja, Durga Manavidyalaya, Pandit Ravishankar Uni., Raipur, Chattisgarh.
5. Prof. A. Kumar, Department of Business Administration, Bhavnagar University, Bhavnagar.
6. Prof. Arvind Srivastava, Department of Commerce, Lucknow Uni., Lucknow.
7. Dr. Ramesh D. Vaghani, Head, Department of Social Work, Saurashtra University, Rajkot.
8. Prof. R. D. Sharma, Head, Department of Commerce, Jammu University, Jammu.
9. Prof. Vinod Patel, Department of Business Administration, Veer Narmad South Gujarat University, Surat,
10. Prof. S. P. Srivastava, Head, Department of Commerce, Banaras Hindu Uni., Varanasi.
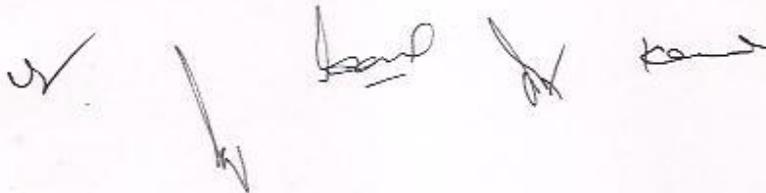
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7. Budget

a. Capital Expenditure
   i) Details to be captured itemwise

Sr. No.	Item.	Description.	Quantity.	Price per quantity.	Amount.	Justification.
1.	Equipment	Laptops with latest configurations.	3	75,000/-	2,25,000/-	For core – team – team of expert – Flexibility in working from anywhere, any time.
2.	Equipment.	Nvidia Internet Data card BSNL	3	5000/-	15,000/-	For Internet connectivity during workshops and flexibility in working from anywhere anytime.
3.	Equipment.	Mobile (Cell phone) with Internet connection inbuilt.	1	25,000	25,000	For PI – For flexibility in working anytime anywhere.
4.	Equipment.	Photocopier with printing, scanning, fax inbuilt.	1	1,00,000/-	1,00,000/-	For printing / scanning e – material – sharing and distribution through fax.
Total.					3,65,000/-	

   ii) Focused comments on high cost equipment
   (More than Rs. 10 lakhs worth of items)
   (Specifications, reasonability of estimated cost) : Nil.

b. Revenue Expenditure
   i) Details to be captured itemwise

Sr.	Item.	Description.	Quantity.	Price per	Amount.	Justification.

Appendix-3B

No.				quantity.		
1.	Workshop	Face to face and online.	2	1,20,000/-	2,40,000/-	For preparing e-Content.
2.	Hiring services	Honorarium to Principal Investigator			2,00,000/-	
		Two project fellow with knowledge of English and computers	2	9,000/- per month (for 11 months)	2,00,000/-	For data entry, animation, video editing and other computer related work.
	Travel and field work				1,45,000/-	
	Contingency				1,00,000/-	For stationary, pen-drives, external hard disk, cell phone internet connectivity and other peripherals etc.
	Internet connectivity	With nvidia data card	3	1,000/- per data card per month (21 months)	60,000/-	Approx. Cost for entire project.
	Over head charges.				90,000/-	
	Total	Excluding Honorarium to PI and overhead charges.			10,35,000/-	
	Grand Total				14,00,000/-	

ii)   Focused comments on :
- total honorarium to be paid in the project and
- total consultancy fee during the project.

Two project fellow will be hired for 11 months each which will total the honorarium to Rs. 2.00 lacks in addition to 10% honorarium to principal investigator.

c. Please indicate the Anchor Institution for disbursement of funds.
   Bhavnagar University, Bhavnagar, Gujarat.

8.   Cost benefit analysis including cost effectiveness approach viz-a-viz other alternatives.

The cost of the total project will be approximately Rs. 14.00 lacks which is much less compared to traditional methods of learning employed throughout the country for teaching that no. of students of the subject in the discipline. The benefits are not only

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compared in terms of no. of students but, their transportation, boarding and lodging facilities and other facilities required for learning through traditional methods and e learning. Thus, the obvious benefits are with e learning. Even distance learning mode (manual) requires a huge no. of printed materials, postage charges and infrastructure to carry out regular activities which are very less in e learning mode.

9.   Social impact

Our society is getting tuned to the Internet. The no. of users and usage patterns show an increasing growth rate. The inclusion of Internet in mobiles enhanced this. The e learning will open doors of learning for those who wishes to learn particular subject. The discussion groups or feedback reviews will enhance communication, relationships and networks among them. Thus, social unity and awareness in total will be increased.

10.   Outcome – Extent to which the project will realize the objectives of the Mission may be given explicitly.

The Mission indicates to several objectives.
1.... content generation.
2.... connectivity along with provision for access devices for institutions and learners.
3.... to bridge the digital divide, i.e. the gap in skills to use computer technology for the purpose of learning among teachers and students of urban and rural.
4.... to focus on appropriate pedagogy for e-learning, providing facility of performing experiments through fully computerized laboratories, online testing etc.

Digital literacy, Learner centric environment, Data centre, Coherence in collective efforts, Partitioning on expertise etc. are clearly supported by the project. The project will be a small step towards digital literacy and learner centric environment. Eminent experts will review with peer groups and coherent efforts of every teacher – learner will create a pool of knowledge which will be a small step to a large Mission of catering to Indian society. The objective of hierarchial level of knowledge empowerment can be linked with the involvement of PG and UG level of teachers in the process of the project. The objective of using generic methods and multi mode of learning with multimedia support is catered here in the project too. The pedagogical tools and self assessment questions (saqs) are also created for marketing management which are inline with the objectives. This way, the project and the Mission serve as evolution of new era of the society and education if not revolution.
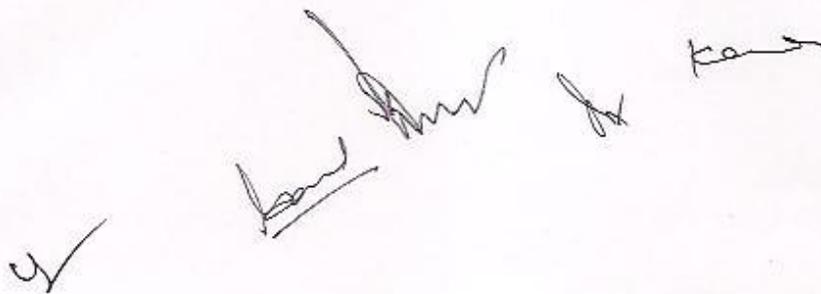
Extracts of the Standing Committee Meeting held on 9th October, 2010

ME-24091011358

e-Content generation for students of science in graduate programmes.

Dr.Mandira Sikdar, Navrachna University, Vadodara, Gujarat.

- Science courses - biology and chemistry -first year undergraduate
- title modification to be added in proposal.
- Lecture topics and learning objectives to be added
- 7 lakhs
- 100% release at the beginning.

Appraisal by Standing Committee

Name of the Project: _E-content for undergraduate students in Biochemistry._

Control No.:   ME-24091011358

Name of PI(s):   *Dr. Mandira Sikdar,*

Dr. Elizabeth Robin,

Mr. K.S. Kumar,

Ms. Darshee Baxi.

Name of the Institute: *Navrachana University, Vasna Bhayali Rd., Vadodara 391 410, Gujarat.*

The learning objectives, content topics and learning outcomes are detailed below:

Recommendations of the Standing Committee: To release the entire Rs. 7 lakh at the beginning.

Objectives

To create e-content for an undergraduate biochemistry course.

Having studied the aforementioned concepts in biochemistry, Students will be able to...

- Understand the concepts in cell biology, biochemistry and chemistry as an essential basis of life.
- Describe the structure, organization and function of living organisms in molecular terms. To understand life on molecular level, he/she must know the chemical structure and function of the biological molecules and to understand bioenergetics (study of energy flow in cells).
- Understand the basics of chemistry and apply this knowledge to the understanding of related concepts.
- Classify carbohydrates, proteins, lipids, nucleic acids, enzymes and vitamins into its different forms and identify the structures and functions.

- Understand and appreciate water as basis of life and its role in basic life processes.
- Understand cellular structures (animal and plant), functions of different cellular organelles and significant cellular processes.
- Understand the concept of photosynthesis and respiration and comprehend the related Metabolic pathways.
- Understand the basic components and reactions associated with Electron transport chain.

- Explain the different models of cell membrane structure along with its functional importance.
- Discuss the basic and applicative knowledge of osmosis and diffusion.
- Summarize the mechanisms involved in cell to cell interactions.

Topics for Biochemistry (As per UGC recommended syllabus)

- Basics of chemistry I
- Basics of chemistry II
- Basics of chemistry III
- Carbohydrates I
- Carbohydrates II
- Carbohydrates III
- Proteins I
- Proteins II
- Proteins III
- Lipids I
- Lipids II
- Lipids III
- Nucleic acids I
- Nucleic acids II
- Nucleic acids III
- Enzymes I
- Enzymes II
- Enzymes III

- Cell
- Animal cell I
- Animal cell II
- Plant cell I
- Plant cell II
- Cell membrane structure I
- Cell membrane structure II
- Photosynthesis I
- Photosynthesis II
- Respiration I
- Respiration II
- Electron transport chain I
- Electron transport chain II
- Osmosis
- Passive diffusion and imbibitions.
- Types of transport across the cell membrane and cell to cell interactions I
- Types of transport across the cell membrane and cell to cell interactions II
- Types of transport across the cell membrane and cell to cell interactions III
- Types of transport across the cell membrane and cell to cell interactions IV

2. Deliverables (Please give milestones with timelines linking with payments)

The proposed e-content will be developed using the four quadrant approach. It will be suitable for 40 hours of instruction.

3. Suggestions with respect to:

- *Arrangement for quality control :-*

In order to maintain the quality of the e-content, constant feedback would be taken from Subject Experts , Technical experts, Practitioners, Designers of Learning Management

Systems and also the learners for whom the e-content is being designed.

- *Accuracy :-*

The Project will also be periodically monitored by the Investigators and Experts' (Subject, Technical, and Pedagogic) feedback shall be elicited too. The section on Post your Queries / Suggestions / Feedback shall also act as a medium for eliciting learner feedback for accuracy of the content.

- *Coverage :-*

The topic under consideration would be dealt with from all possible aspects while covering inter-disciplinary aspects too. The most fundamental and the latest information on the topics would be included in the e-content. The content would cover a very wide range of topics while treating each topic in-depth.

- *Updation mechanism :-*

With the suggestions received from subject and technical experts and Feedback from learners / users, the e-content would be constantly updated so that the content is relevant , updated and useful to learners who visit the site. The post-your-query section has also been especially designed for this purpose.

- *Testing by users : -*

Users who have logged in for the first time may not be familiar with the components in the content and thus may spend more time locating data. In order to make the process more effective, the main menu would have explicit instructions on how to navigate through the content. The objective of this exercise would be to minimize their queries and make the entire process effective – both in terms of time and content location.

- *Testing by peer group : -*

Colleagues teaching the same would act as peer support for the website and their feedback would be invited for the purpose of updation and maintenance of quality of content and general instructions provided.

4. *Scaling up*

a. *Plan: -*

The topics would be covered in such a way that even for a single topic, there would be extensive coverage both horizontally as well as in – depth. Content would be gradually included

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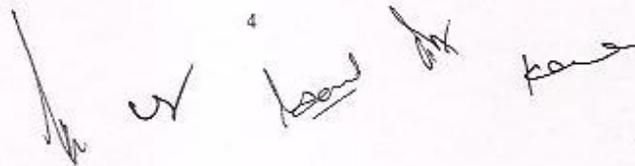
so that all topics are covered extensively. These topics would be linked to related websites, related research, e-books and thus, scaling up of ideas would be achieved. Special attention would be given to the interdisciplinary aspects, research and the application of the constructs under consideration. The content would be added such that the fundamentals are first taken care of before we add more complex and complicated ideas. Thus, pre-requisite knowledge would have to be established before the designing of the following data.

b. *Strategy*

i. *In-house:-*

The Faculty/Principal Investigators of the Project are academicians in different subjects – Biology, Chemistry and Pedagogy and thus they are equipped to deal with a wide range of topics for the content under consideration. The technical aspects would also be dealt with In-house by the Project fellow appointed for this purpose. The Navrachana University houses different Graduate programs and the Navrachana Education Society has under it many Educational Institutions - the Faculty of these Programs and Institutions can be valuable peer support for the Investigators – namely, for Language, Technology, Pedagogy, etc.

ii. *Outsourcing :-*

None.

5. *Popularizing and extension activities and plans*
a. *Strategy for popularization:-*

The following strategies would be employed for the purpose of popularization namely Search engine Optimization - SEO techniques and reaching out through social sites and through Interactive Forums.

b. *Extension activities and plans.*

i. *Maintenance mechanism:-*
The Website would be popularized by conveying its utility and benefits to concerned

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academia. The Project Fellow would be entrusted the responsibility of developing and maintaining the website under the supervision of the Investigators.

ii. *User feedback mechanism, its execution procedure and corrective measures.*

The section on post-your-query /feedback has been especially designed for this purpose of getting feedback and suggestions from the users. This section would be a permanent facility and the Investigators would be constantly visiting this section for an understanding of the queries, followed by attending to the specific doubt/query/feedback with urgency. Thus frequency of review would be very high as a result of this facility i.e. the post-your-query /feedback section.

Review Mechanism

a. Frequency of review:-

Thus frequency of review would be very high as a result of this facility i.e. the post-your- query /feedback section.

b. List at least 10 Reviewers, who are eminent in fields of the projects:-

| Science	Prof.Ramachandran
	(Former Dean, Science faculty, The M.S. University of Baroda, Vadodara.
	Prof. M.Daniel
	(Former Dean, Science faculty, The M.S. University of Baroda, Vadodara.
	Prof. Maheep Bhatnagar,
	Head & Coordinator UGC-SAP, Department of Zoology, University College of Science, MohanLal Sukhadia University, Udaipur - 313001.
	Prof. G.M.Nair,
	Head of Dept. Biotechnology, KeralaUniversity, India.
	Dr. Sunita Dhingra,
	Miranda House College, Delhi University, New Delhi.
	Dr. Nalini Purohit,

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	Reader, Department of Chemistry, Faculty of Science, The M.S. University of Baroda, Vadodara.
Education	Dr. Sujata Srivastav, Reader, C.A.S.E., The M.S. University of Baroda, Vadodara. Prof. S.C. Panigrahi, Head, Dept. of Education, Faculty of Education and Psychology, The M.S. University of Baroda, Vadodara.
Language	Ms. Lily Rana, Sr. Language Teacher, Navrachana International School, Bhayli, Vadodara.
Technology	Mr. Gaurav Gawahar, Lecturer, M.C.A, Navrachana University, Vadodara. Prof. Rana Mukopadhyay, Professor, M.C.A, The M.S. University of Baroda, Vadodara.
Designing of content	Ms. Valli Pillai, Lecturer, Navrachana College of Education, Sama, Vadodara. Mr. Tushar Chaudhary, Software Consultant, Vadodara.

7. Budget.

a. Capital Expenditure

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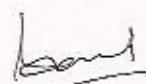
Sr. No.	Item	Description	Qty	Price / Q	Amount	Justification
1.	Equipment (Permanent Asset)	Laptops with latest configuration	4	50,000	2,00,000	For core team (4) Flexibility in working from anywhere and, anytime.
2.		Desktop with latest configuration	1	33,000	33,000	For Project fellow
3.		Internet Card, Connectivity	4	20,000	20,000	For internet connectivity during workshops and flexibility in working from anywhere, anytime
4.		Printer / Scanner/ Fax	1	20,000	20,000	For printing scanning e – materials and sharing Documents with experts.

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6.		Infrastructure Development	-	-	57, 000	Working area for Project Fellow (AC, related Furniture etc.)
7.				-	50, 000	For Project related audio video equipment
8.		Software (Flash, audio and Video editing tools/ etc.)	-	-	110,000	For designing web page and formatting e-articles.
Total	Rs. 4,90,000					

Focused comments on high cost equipment (More than Rs. 10 lakhs worth of items) (Specifications, reasonability of estimated cost):- Not Applicable

b. Revenue Expenditure

i. Details to be captured item-wise:-

Sr. No.	Item	Description	Quantity	Price / Q	Amount	Justification
Recurring						
1.	Hiring	Experts	-	-	16, 750	To provide Necessary and timely

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|						Inputs.
2.		Project Fellow	1	10,000/m For 11 Months	110,000	For web designing / data entry, video editing and related tasks
3.	Workshop	-	As and when Required for the Project	-	25,000	For need assessment, feedback and related inputs during module preparation.
4.	Travel / Field Work	-	-	-	16,750	For data collection
5.	Overhead Charges	-	-	-	41,500	
Total	2,10,000					

ii. Focused comments on:-

Total honorarium to be paid in the project-

The Total honorarium to be paid in the Project will be as per the norms and regulations.

Total consultancy fee during the project :-

None.

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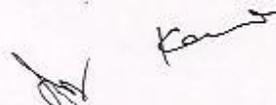
c. Please indicate the Anchor Institution for disbursement of funds :-
NAVRACHANA UNIVERSITY, VASNA BHAYALI RD, VADODARA 391410

8. Cost benefit analysis including cost effectiveness approach viz-a-viz other alternatives

The formal systems of education entail Institutional expenditures namely infrastructure, library resources, manpower and such other which would not be present in this Project. Thus, the project would be cost effective due to the aforementioned reasons. Also, via distance learning, we would be able to take 'quality education' to the learners, who are geographically distanced at 'anyone-anytime-anywhere' mode.

9. Social Impact :-

Although we live in a world of Information explosion and this information is available at one's fingertips, it is indeed ironic that there is a very significant gap that divides peoples across the globe and is known as the Digital divide. This divide is indeed getting deeper and threatening the very social fabric of nations across the world. We, academicians, through this Project, now have an opportunity of taking 'quality education' to the unreached populations and thus ensuring democratization of education. This Project would cater to the educational needs of remotely placed populations as also those learners who wish to update their skills and enrich themselves in a world that is witness to quick redundancy in almost all spheres of knowledge. We hope to contribute in a humble and meaningful way towards the achievement of National objectives for increased literacy for the nation.

10. Outcome - Extent to which the project will realize the objectives of the Mission may be given explicitly :-

The Project and the Principal Investigators will try their best to achieve the objectives as stated in the National Mission For Literacy.

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