Evaluation Report

Pandit Madan Mohan Malviya National Mission on Teachers and Teaching (PMMMNMTT) Scheme: An Evaluation

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Executive Summary

The Pandit Madan Mohan Malviya National Mission on Teachers and Teaching (PMMMNMTT) is a scheme addressing issues related to teaching and teacher development to improve quality of higher education in India. The scheme was introduced during the Twelfth Five Year Plan (2012-17) and was formally launched by the Hon'ble Prime Minister on 25th December, 2014. The Scheme is now under implementation in 42 institutions. The sunset date for the scheme is March 2020. The continuation of the scheme beyond March 2017, however, is subject to a third party evaluation. At the request of MHRD, the CPRHE/NUEPA undertook the evaluation study. The PMMMNMTT is a major reform initiative and it plays a crucial role in enhancing learning outcomes and improving the quality of higher education. The scheme in its implementation has succeeded in mobilizing a large number of high quality academics and top ranking institutions of India to lead academic changes in higher education. It is important that such a scheme is supported, continued and made regular programme in the higher education sector.

The implementation of this scheme is guided by the guidelines prepared by the MHRD. The guidelines are comprehensive and respect the autonomy of institutions to innovate and design programmes under various components. The institutions implementing the scheme are very happy with the MHRD team for their support and prompt responses.

The transfer of financial resources from MHRD to the implementing institutions seems to be fast process. However, delays take place in the transfer of resources within the institution from the university to the project. The institutional procedures and processes, in fact, delayed implementation in many instances. The MHRD may transfer funds to the project account directly with some degree of freedom for the project coordinator to withdraw the amount, utilize it as per the budgeted heads, re-appropriate the funds in limited cases.

The uncertainty regarding continuity of the scheme beyond March 2017 acts constraint to plan for various programmes which need long term commitment. One of the reasons for slow progress of implementation of components such as SOEs is this uncertainty. A related issue is engaging the staff on contract basis to implement the scheme. The rules and regulations in the institutions delay staff engagement even on a temporary basis and implementation of the scheme. Another factor delaying staff engagement is the uncertainty regarding the duration of appointment and security of jobs. The programme can attract good candidates only when there is a guarantee regarding job security. The programme envisages mobilization resource persons from outside the implementing institutions. It may be useful to prepare a list of experts which will help widen the involvement of larger pool of experts in the design, review and overall implementation of programmes under this scheme. Similarly, there is scope for revising the remuneration indicated for the resource persons since some of the institutions feel that the remuneration is inadequate to attract highly qualified resource persons.

It is reported that getting participants for many of the programmes is a difficult task. Many universities are not keen to nominate faculty members to participate in the programme since they are not prescribed by the UGC or government. The participants are not keen to attend

programmes since they do not get the API scores by attending the programmes under this scheme. There is a need for getting the programmes under the scheme prescribed the by regulators to get nominations and also to ensure that API scores are awarded to the participants. Another related issue is the cost of participation. There is a need to ensure that the cost of travel and stay of participants are borne by the organizing institution.

The MHRD has been organizing workshops to exchange experiences of the implementation of the scheme under different components. These workshops are found to be very useful. Such workshops and provision for regular interactions and networking among institutions implementing the programme may be organized on a regular basis. This will also help avoiding duplication of programmes under the same component.

MHRD may take necessary steps to disseminate the information regarding various programmes organized under different components. Developing a common portal where all components are represented will be a good idea to experiment with.

List of Abbreviation

AICTE	All India Council for Technical Education
AMU	Aligarh Muslim University
API	Academic Performance Indicator
ASCI	Administrative Staff College
BHU	Banaras Hindu University
BOAT	Board of Apprenticeship Training
C&AG	Comptroller and Auditor General
CABE	Central Advisory Board Of Education
CALEM	Centre for Academic Leadership and Education Management
CESME	Centre for Excellence in Science and Mathematics Education
CIM	Chartered Institute of Marketing
CIT	Central Institute Of Technology
CNC	Computerized Numeric Control
CPRHE	Centre for Policy Research in Higher Education
CREATES	Centre for Research in Advanced Technology for Education in Sciences
CU	Central University
DEC	Distance Education Council
EC	Executive Committee
EdCIL	Educational Consultants of India Ltd
EFC	Expenditure Finance Committee
FDC	Faculty Development Centres
GER	Gross Enrolment Ratio
HRDC	Human Resource Development Centre
ICT	Information and Communication Technology
IGNOU	Indira Gandhi National Open University
IGNTU	Indira Gandhi National Tribal University
IIITDM	Indian Institute of Information Technology, Design and Manufacturing
IIM	Indian Institute of Management
IISc	Indian Institute of Science
IISER	Indian Institute of Science Education and Research
IIT	Indian Institute of Technology
IoT	Internet of Things
ISMU	Indian School of Mines University
MA	Master of Arts
MHRD	Ministry of Human Resource and Development
MMDC	minority managed degree colleges
MOOC	Massive Open Online Course
NCERT	National Council of Educational Research and Training
NCTE	National Council for Teacher education

NERIST	North Eastern Regional Institute of Science and Technology
NET	National Eligibility Test
NGO	Non-Government Organization
NIFFT	National Institute of Foundry and Forge Technology
NIT	National Institute of Technology
NITTR	National Institute of Technical Teacher Training and Research
NUEPA	National University of Educational Planning and Administration
OLS	Open Learning Systems
OSD	Officer on Special Duty
PAB	Project Approval Board
PFMS	Public Fund Management System
PMMMNMTT	Pandit Madan Mohan Malviya National Mission on Teachers and Teaching
RA	Research Associate
RF	Radio Frequency
SC	Screening Committee
SLIET	Sant Longowal Institute of Engineering & Technology
SOE	School of Education
SPA	School of Planning and Architecture
TA/DA	Travelling Allowance/Dearness Allowance
TEMPT	Technology Enabled Modular Proactive Teaching
TLC	Teaching Learning Centre
ToR	Terms of Reference
TSG	Technical Support Group
UC	Utilization Certificate
UG	Under Graduate
UGC	University grants Commission
VC	Vice Chancellor

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1. Introduction

The Pandit Madan Mohan Malviya National Mission on Teachers and Teaching (PMMMNMTT) is a scheme designed to reinforce teacher competencies and teaching learning practices to improve quality of higher education in India. It comprehensively address all issues related to teachers, teaching, teacher preparation, professional development, curriculum design, developing student assessment and evaluation methodology, research in pedagogy and developing effective pedagogy.

The scheme was approved and implemented during the Twelfth Five Year Plan (2012-17). The scheme was approved by the Expenditure Finance Committee (EFC) in its meeting on 18 December 2014 and was formally launched by the Hon'ble Prime Minister on 25th December, 2014. The Scheme is now under implementation in 42 institutions.

The PMMMNMTT scheme is implemented and monitored through an institutional structure, which comprises of Executive Committee, Project Approval Board, Screening Committee, National Project Directorate and Technical Support Group at the central level. The Mission Secretariat, headed by the Joint Secretary and supported by the OSD, is located within the MHRD and it supports and coordinates all the activities of the scheme. The Mission Secretariat is assisted by the Technical Support Group (TSG) in managing the implementation of the scheme.

The Twelfth Plan is coming to an end by the end of March 2017. The sunset date for the scheme is March 2020. However, continuation of the scheme beyond March 2017 is subject to an evaluation of the scheme. The ministry of Finance stipulated that the evaluation should be done by a third party. The MHRD requested NUEPA to undertake the evaluation exercise. The CPRHE/NUEPA undertook the study. The scheme is at its initial stages of evaluation and therefore, it is too early to evaluate the implementation of the scheme. The time provided for the evaluation is just over a month. These two limitations may be kept in mind while reading the evaluation report.

The plan of presentation of the report is as follows. The next section discusses the higher education context and the role of teachers and teaching learning process in enhancing quality of higher education. Section 2 presents the scheme and its various components, management structure to implement the scheme and geographical spread of institutions implementing the scheme. Section 3 discusses the methodology and sources of information relied on to prepare this evaluation report. Section 4 examines the implementation of the scheme in each of the institutions. Section 5 provides an overall assessment of the implementation of the scheme. Section 6 concludes the Evaluation report by specifying the possible intervention points to take actions for further improvement of the scheme.

2. Higher education and the teaching-learning context in India

2.1 Massification of Higher Education

After decades of slow growth and low enrolment ratios, the higher education sector in India experienced accelerated growth and fastest expansion in this century. Higher education enrolment increased from 8.8 million in 2001-02 to around 34.0 millions in 2014-15 and the gross enrolment ratio (GER) increased from 8.1 to 23.6 per cent. India entered a stage of massification of higher education in this century (Varghese, 2015a; Varghese and Jinusha, 2015). Further, with around 800 universities, 40 thousand colleges, 1.4 million teachers and 34.0 million students, India has the second largest higher education system in the world.

The massive expansion is also accompanied by a high degree of diversification of the system. The institutional diversification is reflected in terms of central and state universities in the public sector and government colleges, aided colleges and unaided colleges in the collegiate segment. The growth of private universities which also adds to the diversification process is a very recent phenomenon. As of now, a major share of institutions and student enrolment is in private higher education institutions.

The open learning systems (OLS) also helped expanding the higher education sector in India. The establishment of Indira Gandhi National Open University (IGNOU) in Delhi followed by similar efforts by many state governments, increased OLS share in student enrolment in higher education in India. The latest to enter the scene is MOOCs, which provide access to many courses, mostly free of cost. India at present enrolls the second largest number of students in the MOOC courses after the USA. The MHRD has launched a web portal SWAYAM where MOOC courses are available. The initiatives by MHRD, no doubt, will increase the demand for and enrolment in MOOC courses by Indian students.

The massification process also resulted in the diversification of student body. The students belonging to different religious orientations and caste groups, from poor families in rural areas, and speaking minority languages co-exist with students from the traditional elite backgrounds. The new group of entrants bring along with them varying socio-economic and cultural experiences, pre-college credentials and aspiration levels. Even when public policy promotes diversity, the institutional structures and processes are rooted in traditional forms of response centred around prejudices and exclusionary behaviour leading to contestations in the campuses (Sabharwal and Malish, 2016a; 2016b).

2.2 Massification and teaching-learning process in higher education

The massification of the system and diversification of the student body pose challenges for enhancing quality of higher education in India. The role of teachers and teaching learning process are crucial factors influencing quality of higher education. The quality of an education system is limited by the quality of its teachers. The good teachers know what to teach, how to teach and how to improve student learning. Teachers need to hold core values in their commitment to the profession and in their response to diversity and integrity, need to enhance

core competencies (communication skills), functional competencies, and technical knowledge and skills.

For an effective teaching learning process the system needs teachers who are grounded in content knowledge, pedagogic knowledge and technical knowledge. In the class room situation the teacher is no longer just a pedagogue but also a good manager of the classroom and a facilitator of learning. The students expect teaching to become more flexible. The teacher needs to address the concerns of each student and their varying levels of socialization and differences in abilities to learn.

The context and nature of teaching and learning is changing. 'Teaching is not talking and learning is not listening' (Darling-Hammond, 1995). Teaching in the present context requires deeper knowledge in the domain and a wide repertoire of teaching strategies to suit the learning requirements of varying social milieu of students, coming from diverse background. The diversity in the classrooms makes the traditional 'whole class instruction' less practical as a dominant mode of teaching.

Diversity demands flexibility in instructional methods in the class rooms. In massified situations, the responsibilities of teachers demand them to recognize diversity of students to provide equity in learning opportunities to achieve enhanced learning outcomes. The teacher becomes more of a manager and facilitator of the learning process than the teaching process. The role of the teacher needed to change from information providers to learning facilitators. There are no effective formal national systems and institutional mechanisms to support teaching faculty development in India (British Council, 2014).

The technology has revolutionized teaching learning processes. Teaching used to be seen in terms of a dyadic relationship in a synchronic fashion at a time and in a place. The technology has changed this notion of teaching and learning. The teaching and learning process has become asynchronous, anonymous and invisible (Varghese and Mandal 2016; Mandal, 2016). Teachers and students need not have to see each other face-to-face, may not need a class room either. The teachers and students now have access to on-line resources to supplement, if not substitute, the traditional class room teaching-learning processes.

2.3 Teachers for improving quality in higher education

Improvement in quality of teachers is critical to improving quality and learning outcomes in higher education. Unfortunately, Indian higher education faces shortage of teachers. This shortage of teachers has two dimensions, namely, quantitative and qualitative. The recruitment of teachers has not kept pace with the massive expansion of the sector. Further, a good share of the sanctioned teaching positions are lying vacant in many colleges and universities. Given the expansion trends, the problem of quantitative shortages of teachers may aggravate in the coming years unless large scale recruitments take place.

The problem of shortage of quality teachers has been a challenge in India (Sen, 2011). The Committees and Commissions appointed in independent India articulated the central role of teachers in higher education (Mathew, 2016), shaping minds of students and fulfillment of higher education objectives. The National Commission on Teachers (1985) recommended a rigorous merit-based selection of higher education teachers. The National Policy on Education (1986) reiterated the emphasis on recruitment of competent teachers and in-service training of teachers. The academic staff colleges were established following the recommendation of the NPE 1986.

The concerns for teacher development in school education have also been addressed. The National Curriculum Framework for Teacher Education 2009 was developed by the National Council for Teacher Education (NCTE) in view of the National Curriculum Framework (NCF) 2005 and the Right to Education Act 2009. Following this, NCTE has revised regulations for grant of recognition and norms and standards for various teacher education courses.

The University Grants Commission constituted a Committee under the Chairmanship of Professor R.C. Mehrotra which submitted its report in 1986. The Committee recommended for qualifying at the national test to become eligible to be recruited as teachers in higher education institutions. The Committee also prescribed minimum qualifications to ensure the quality of those recruited as teachers. Subsequently a test - National Eligibility Test (NET) was introduced in 1989. It has become compulsory to have NET and/or a doctoral degree to become a higher education teacher in India (Mitra, 1993).

The CABE Committee on Autonomy of Higher Education Institutions (2005) recommended that NET examination be made compulsory for those without a Ph.D. degree and that periodic in-service training of teachers must be made compulsory. The Yashpal Committee (2009) also highlighted the importance of teacher education. In its report, the Committee emphasised on the necessity to enhance the quality of teacher education within higher education and recommended for full-fledged orientation programmes for teachers in colleges and universities.

Although there have been criticisms against NET examinations, it is generally agreed that NET has served a useful purpose by ensuring standards for recruiting teachers in higher education (Ahmad, 2008; Sharma, 2008; Verma, 2007). The CPRHE at the request of the UGC carried out a study on the NET (Varghese, Malik and Gautam, 2015) which shows that the NET examination is highly competitive and the pass per cent is invariably below 5 per cent. The introduction of API scores indicates the importance of higher education teachers attending in-service programmes to keep abreast with developments in their respective domains of specialisation.

The selection of highly qualified teachers need not necessarily translate into effective classroom transactions and improved quality unless they are oriented to pedagogical practices and to better managing of students and class rooms. The role of the teacher changed from that of a provider of information to that of a facilitator and manager for enhancing the knowledge levels and analytical capacities of students. Therefore, there is a need for programmes for teacher

development, improving learning conditions in the class rooms and increase opportunities for continuous professional development.

This forms the context for the Government of India to launch special and focused programme for teacher development. The Scheme titled Pandit Madan Mohan Malviya National Mission on Teachers & Teaching (PMMMNMTT) was launched during the XII Plan with an outlay of INR 900 crore. The Mission envisages to comprehensively address all issues related to teachers, teaching, teacher preparation and professional development. It is expected to result in developing a strong professional cadre of teachers by setting performance standards and creating top class institutional facilities for innovative teaching and professional development of teachers.

3. The Scheme: Pandit Madan Mohan Malviya National Mission on Teachers and Teaching (PMMMNMTT)

3.1 The objectives of the scheme

The Twelfth Plan envisaged that, in recognition of the central role of teachers in improving academic quality, a National Mission on Teachers and Teaching would be launched. The 274th Report of the Departmental Parliamentary Standing Committee felt that the national mission is a step in the right direction and requested MHRD to take immediate steps to establish the national mission. The Pandit Madan Mohan Malviya National Mission on Teachers & Teaching (PMMMNMTT) was apprised and approved by the Expenditure Finance Committee (EFC) in its meeting on 18 December 2014. The Scheme was formally launched by the Hon'ble Prime Minister on 25th December, 2014.

The PMMMNMTT will be an umbrella scheme which will create synergies among the various ongoing initiatives on Teachers and Teaching under Ministry of HRD and other autonomous institutions dealing with all levels of education. It will comprehensively address all issues related to teachers, teaching, teacher preparation, professional development, curriculum design, developing assessment & evaluation methodology, research in pedagogy and developing effective pedagogy. The approach of the mission will be holistic to deal with the whole sector of education at all India level.

The objectives of the Mission include:

i. Coordinated approach to holistically address issues related to teachers, teaching and research on pedagogical issues.

ii. Strengthen institutional mechanisms for augmenting training and domain knowledge development of faculty and their periodic assessment for excellence.

iii. Empower teachers through training to develop generic skills, pedagogical skills, ICT and technology skills.

The mission is expected to achieve:

a) Orientation and training of one lakh teachers covering school and higher education sectors.

b) Creating good base for teacher educators and create excellence in faculty for academic leadership positions.

c) Create around 88 institutional structures and subject based networks.

3.2 The components of the scheme

The Scheme envisages to focus on the following seven components: i) 30 Schools of Education (in Central Universities); ii) 50 Centres of Excellence for Curriculum and Pedagogy(these include Centres of Excellence in Science and Mathematics Education (CESME), Teaching Learning Centres (TLCs) and Faculty Development Centres (FDCs); iii) 2 Inter-University Centres for Teachers' Education; (iv) one National Resource Centre for Education; (v) 5 Centres for Academic Leadership and Education Management (vi) Innovations, Awards, Teaching Resource Grant, including Workshop & Seminar (vii) Subject Networks for Curricular Renewal and Reforms.

While the components such as Schools of Education, Centres of Excellence and Inter University Centres are institution based, components such as innovations, awards and teacher resource grants are individual oriented, components such as subject networks and national resource centre are network based and others are academic leadership oriented.

Table 1: Components of the Scheme

S. No	Details of the components	Cost Estimates (INR In crore)
1	30 Schools of Education	350.00
2	50 Centres of Excellence for Curriculum and Pedagogy to be selected on Competitive basis (with necessary emphasis on science and mathematics)	330.00
3	2 Inter-University Centres for Teacher education	40.00
4	National Resource Centre	45.00
5	5 Centres for Academic Leadership and Education Management	45.00
6	Innovation, Awards, Teaching Resource Grant including Workshop & seminar	40.00
7	Subject Networks for Curricular Renewal and Reforms	5.00
8	Administration and incidental Expenses @ 5%	45.00
	Total	900.00

3.3 Application and approval processes

The implementing agency of the scheme is the Ministry of Human Resource Development, Department of Higher Education. Therefore, the notification of the scheme and the approval process is facilitated by the MHRD.

After the formal launch of the Scheme 'Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching' on 25th December 2014 by the Hon'ble Prime Minister of India, the scheme was widely disseminated. To provide information and facilitate circulation on a wider scale a letter (F.No.3-1/2015-PN.II) dated 15th may 2015 was sent to all the directors of centrally funded institutes such as IITs, IIMs, IISERs, NITs, IIITMs, NITTRs, ISMU, NIFFT, NITIE, SPAs, SLIET, NERIST, CIT and BOATs). Along with them, in order to attract proposals from the central, state and the supported private institutions, the letter was circulated to the Chairman of UGC, AICTE, Director, NCERT and NUEPA to disseminate the information to the concerned institutions at pan-India level.

The scheme is notified to the central universities and is posted on the MHRD website. The guidelines of the scheme were made available on the MHRD website. The institutions submit their proposal to the MHRD which are reviewed by a Screening Committee and forwarded to the PAB, if found suitable. The institutions are then invited to present the proposal in the subsequent PAB meeting. Based on the quality of the proposal, the PAB may reject/ accept or suggest changes in the project proposal. The revised proposals are to be discussed during the following PAB for final approval. **There have been eight PAB meetings till date (see Annexure).**

3.4 The management structure of the scheme

The PMMMNMTT scheme is implemented and monitored through an institutional structure, which comprises of Executive Committee, Project Approval Board, Screening Committee, National Project Directorate and Technical Support Group at the central level.

Executive Committee (EC): The Executive Committee is the highest body setting the contours of operation within and the MHRD and coordination with the other allied Ministries of the Government of India. The Union Minister of HRD chairs the EC. The members of the EC include Secretaries of the MHRD Departments of Higher Education, School Education and Literacy and other allied departments as members such as Planning and Expenditure. It also includes representatives from the UGC, AICTE, NCTE, DEC, NCERT and NUEPA along with some experts from the area of university and school education sector.

The Terms of Reference (ToR) for the EC are the following:

- Provide directions for programme formulation and implementation framework for the Mission.
- Periodic review of the outcomes and general monitoring of the Mission as a whole.

- Coordination between various central ministries and between the Centre, States and NGOs etc.
- Addition/alteration of powers and functions of any committee under the Mission.
- Decisions regarding delegation of powers to various committee/ authorities/functionaries involved in the Mission.

Project Approval Board (PAB): A project approval board (PAB) under the EC was formed on February 27, 2015. The PAB have the full authority for sanctioning Projects to the state level and other bodies for implementing the new programs to be initiated under the Mission. The PAB is directly responsible to review and approve the proposals received from different institutions. The PAB is also responsible for sanctioning new proposals and evaluate the progress of the projects in different institutions. Creating a feedback system among the ongoing and new projects and make recommendations to the EC on matters of importance is also on the PAB mandate.

The PAB is co-chaired by the secretary (HE) and the secretary (SE&L) and the members also include renowned experts from academia and administration, apart from the representatives from Department of Expenditure, Planning Commission, UGC, AICTE and other allied departments.

The Terms of Reference (ToR) of the PAB are:

i) To sanction new proposals, under different component of the scheme and to evaluate the progress in components being implemented by different institutions.

ii) Coordination to ensure smooth flow of resources.

iii) To enable execution and integration of deliverables

iv) To facilitate coordinated implementation of new proposals with the existing/ongoing Schemes and Projects.

v) To create a feedback system among ongoing and new proposals under the Mission.

vi) To make recommendations to the Executive Committee on matters of importance.

vii) Any other matter identified by the Executive Committee.

The PAB met eight times between 2015 and January 2017. The eighth meeting was held on 24 January 2017. The MHRD has received a total of 96 proposals till date. The PAB has approved 42 proposals. (See the Table 2a and 2b for details)

Screening Committee (SC): During the 2nd PAB meeting held in August 2015, it was observed that MHRD is receiving a large number of proposals from different institutions across the country. To facilitate the process, and to ensure quality, a Screening Committee (SC) was constituted to further examine the proposals in the light of the guidelines. The scrutiny by the SC is at the initial stages to examine the proposals for its quality. The proposals go to the PAB after screening by the committee.

The SC is constituted with the representatives from the MHRD, UGC, NUEPA, NCTE and NCERT. The committee examines the proposals as per its mandate. Those proposals found suitable are referred to the PAB. For example, it can be seen from Table 2b that the MHRD received a total of 107 proposals and only 42 proposals were approved by the PAB.

Table 2a: Number of Institutions Expected and Approved Under Different Components of the Scheme

Name of the Component	Total institutes limit as per guidelines (A)	Total approved institutes (B)	Difference (A-B)
School of Education	30	8	22
Centre for Excellence in Science and Mathematics	5	3	2
Teaching Learning Centres	25	16	9
Faculty Development Centre (20 Nos.)	20	4	16
Innovations, Awards and Teaching Resource Grant/ Support for faculty including Workshops and Seminars	(Scheme Total Limit: As decided by the PAB)	5	
Subject Networks for Curricular Renewal and Reforms (SBN)	(Scheme Total Limit: As decided by the PAB)	2	
Institutes of Academic Leadership and Education Management	5	4	1
Total	**88**	**42**	**50**
The proposals under Innovations & Awards component and SBN are decided by the PAB and there is no set target of numbers. Therefore, for calculating the difference in the target, we have not considered the number of proposals approved under these two components.			

Table 2b: Proposals Examined in Eight PABs of the PMMMNMTT Scheme

Total No. of Proposals Examined in Seven PABs	Approved	Not Approved
99+8= 107	**42**	**63***
*** Two institutes were advised to develop and resubmit a joint proposal.**		

Mission Secretariat: The Mission secretariat is located within the MHRD and supports and coordinates all the activities under the Mission's purview including the ongoing and new schemes/projects. The Mission Secretariat is responsible for organizing the meetings and activities of the EC and the PAB. The Mission Secretariat is headed by the Mission Director who is the Joint Secretary (Planning) in the Department of Higher Education. The Mission Director is assisted by the Technical Support Group (TSG) in managing the affairs of the proposed mission.

Mission Director: As stated previously, the Joint Secretary (Planning) in the Department of Higher Education, MHRD is designated as National Mission Director for the PMMMNMTT scheme. The Mission Director takes all the necessary action, under the guidance of the Mission Authority and PAB to create necessary institutional structures and support mechanisms to administer the scheme.

Officer on Special Duty - OSD (PMMMNMTT): The OSD (NEP) is heading the PMMMNMTT scheme at the national level and serves as a central coordinating officer for the implementation of the programme.

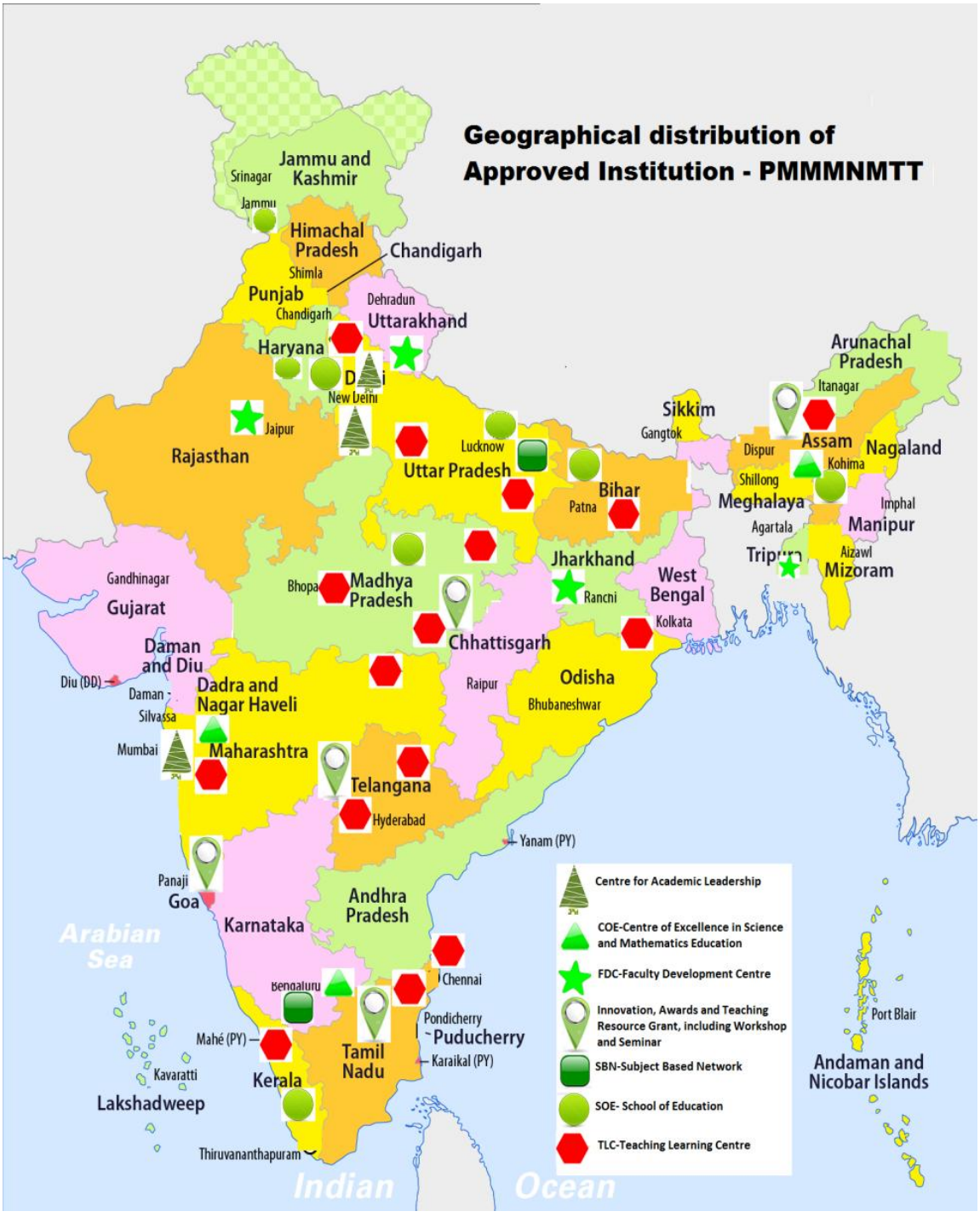
Technical Support Group: The administration of the scheme is through a Technical Support Group (TSG) set up by the MHRD through the Educational Consultants of India Ltd. (EdCIL). The responsibilities of the EdCIL include providing support on various aspects which include coordinating activities, organising meetings, seminars, workshops, studies, visits, managing media outreach activities and any other logistic support as may be required in connection with the monitoring & implementation of the PMMMNMTT scheme. The TSG also provides strategic support to the concerned stakeholders for implementing the Mission and to conduct research and evaluation of the scheme.

The TSG consists of one Program Coordinator, Junior, Senior and Chief Consultants along with the office staff for effective and smooth implementation of the scheme. To reiterate, the TSG provides evidence based support to the National Mission Directorate, MHRD, in the implementation of the scheme. It serves as a think tank by providing support to the Ministry by Ensuring robust monitoring and oversight of the scheme; Monitoring flow of funds and information; Conducting evaluation studies.

3.5 Geographical distribution of schemes and implementing institutions

The map below (Picture 1) gives the geographical distribution of the institutions approved to implement different component of the programme. Table 3 gives details about the institutions implementing each of the components of the programme. It can be seen from the map and from Table 3 indicating that the scheme is implemented by the institutions located across geographical regions of the country.

Picture 1: Map showing geographical distribution of approved institutions- PMMMNMTT[1]



[1] The map reflects the distribution of the institutions with approved proposals across the components of the PMMMNMTT scheme till 7th PAB.

Table 3: List of Institutions by Different Components under PMMMNMTT

Components	Institutions Implementing
School of Education	Jamia Millia Islamia, New Delhi
	Assam University, Assam
	Dr. Harisingh GourVishwavidyalaya, Sagar, M.P.
	Central University of Kerala, Kerala
	Central University of South Bihar, Bihar
	Central University of Jammu, Jammu &Kashmir
	Banaras Hindu University, Banaras
	Central University of Haryana, Haryana
Centres for Excellence in Science and Mathematics Education	Indian Institute of Science, Bangalore
	Indian Institute of Science Education and Research (IISER) Pune
	IIT Guwahati
Teaching Learning Centre	Mahatma Gandhi Antrarashtriya Hindi Vishwavidyalaya, Wardha, Maharashtra
	NIT Warrangal, Hyderabad
	IIT Kanpur, UP
	Indian Institute of Technology (IIT), Hyderabad
	Indian Institute of Science Education and Research (IISER) Bhopal, MP
	IIT (BHU), UP
	Indira Gandhi National Tribal University (IGNTU), MP
	Tezpur University, Assam
	Indian Institute of Information Technology, Design and Manufacturing (IIITDM)Kancheepuram, Tamil Nadu
	Sri Guru Tegh Bahadur Khalsa College, Delhi
	Indian Institute of Technology, Kharagpur
	University of Calicut, Kerala
	IIT Panta, IIT Indore, IIT Kanpur, IIT Kharagpur (combined proposal)
	IIT Madras
	IIT Bombay
	Dr Hari Singh Gour Vishwavidyalaya, Sagar, M.P
Faculty Development Centre	Indian School of Mines, Dhanbad
	Banasthali University, Rajasthan
	Hemvati Nandan Bahuguna Garhwal University, Srinagar
	Tripura University, Tripura
Innovations, Awards and Teaching Resource Grant/ Support for Faculty Including Workshops and Seminars	Indira Gandhi National Tribal University (IGNTU), MP
	National Institute of Technology (NIT), Silchar
	ASCI, Hyderabad
	NIT, Goa
	NIT, Tamil Nadu
Subject Networks for Curricular Renewal and Reforms	National Centre for Biological Sciences (NCBS), Bangalore
	Banaras Hindu University (BHU), Banaras
Institutes of Academic Leadership and Education Management	Aligarh Muslim University (AMU), Aligarh
	Tata Institute of Social Sciences (TISS), Maharashtra
	National University of Educational Planning and Administration (NUEPA),New Delhi

4. Methodology and Sources of Information

The evaluation of the PMMMNMTT scheme has been carried out by the Centre for Policy Research in Higher Education (CPRHE) of the National University of Educational Planning and Administration (NUEPA), New Delhi at the request of the MHRD. The CPRHE/NUEPA agreed to undertake the exercise by mid-December 2016 and the report has been prepared within a period of one and a half months. The evaluation report is based on the information gathered from different sources and a close analysis of the reports and several rounds of discussions which the evaluation team had with the people implementing different components of the scheme. This evaluation by the CPRHE/NUEPA being the third party evaluator of the scheme, those who are involved in the implementation of the schemes including representatives from the MHRD were not party to the evaluation. However, the study could not have been completed without active support from the MHRD, EdCIL and the implementing institutions. While we gratefully acknowledge their role in facilitating the conduct of the study, any opinions or views expressed in this report should not be attributed to them. The Evaluation team at the CPRHE/NUEPA assumes full responsibility for the views expressed in this evaluation report.

The sources of information to prepare the evaluation report are many and they are discussed below.

i) **Review of Documents:** a) The evaluation team reviewed the minutes of the Project Advisory Board (PAB) meetings; b) review of the minutes of the EFC meeting; c) detailed examination of the project proposals submitted under various headings to understand the design of the proposed and approved projects.

ii) **Review of Progress Reports:** PMMMNMTT scheme management unit seeks regular project progress reports along with fund utilisation details from the institutions/project coordinators. These reports were helpful to analyse the progress of the respective projects and issues, if any, raised by the programme coordinator.

iii) **Analysis of Field Visit Reports by the PMMMNMTT team of consultants:** A team of consultants works with the PMMMNMTT scheme. Each consultant has been assigned certain institution which they visit as the MHRD representative for the purpose of monitoring project progress and report issues emerging from the field. The consultants' reports focus on the progress of the implementation of the components. The visit reports were made available and were a good source to assess the progress in the implementation of the different components of the scheme.

iv) **Group Discussion Meeting with the PMMMNMTT Team of Consultants, MHRD PMU:** A meeting of all the consultants engaged with the PMMMNMTT scheme was held in January 2017. The patterns of project implementation and design; financial flows to the projects and their utilisation issues at the institutional level, infrastructure for the projects, process of implementation of the project, problems faced by the project

teams and what can be done to improve the scheme and implementation of the scheme were discussed with the PMMMNMTT consultants.

v) **Group Discussion with the Members from MHRD and EdCIL** was organized in January 2017 to understand the role of EdCIL and MHRD in the implementation of the programme. This meeting was very helpful to understand the division of labour between the MHRD and EdCIL and their views regarding the process of implementation of the scheme and problems involved in the financial allocations and flow of funds to the institutions.

vi) **Meeting with the Nodal Officers participating in the Workshop in Delhi**: In addition to these reports the collective meetings of the groups of components were held in October 2016 in the Jamia Milia Islamia, New Delhi and December 2016 at SGTB Khalsa College, Delhi University, Delhi. The presentations made by the respective programme/ project coordinators were also made available to us by the PMMMNMTT team.

vii) **Field visits by the Evaluation Team:** Two members of the evaluation team visited the selected institutions under the various components of the scheme. The visits were undertaken in the third week of January 2017 to explore the process of project implementation, innovative elements of the projects, difficulties in implementation of the projects, suggestions for improvement and sustainability of the project/programme. The institutional visits were carried out and discussions were held with the nodal officers of the programme components implemented in Jamia Milia Islamia (JMI) on SOE; ASCI, Hyderabad on Innovations & Awards; Aligarh Muslim University (AMU) on CALEM; IISER, Pune on CESME, Khalasa College, Delhi University, on TLC and Banasthali Vidyapith on FDC. These visits were very useful to see and understand the efforts put in and work completed by the implementing institutions.

viii) **Administration of Questionnaire by the Evaluation Team:** The evaluation team developed a questionnaire which was sent in January 2017 to all the implementing institutions/nodal officer/coordinators of the approved programmes. The questionnaire comprised of 24 items. Items on the date of programme approval, nature of the project/programme, processes of implementation, guidelines of MHRD on the PMMMNMTT scheme, reasons for the lag of implementation, difficulties while implementing the programme, availability of funds to the coordinator for implementing the programme, reasons for low rate of fund utilisation, linkages of the programme with other institutions, curricula, other components of the PMMMNMTT scheme, availability of the process documentation, dissemination of the project materials, feedback and follow up with the participants were included as closed end questions. Three items were open ended inviting suggestions for the improvement of the PMMMNMTT guidelines, PMMMNMTT scheme and any other information for the improvement of the scheme. The coordinators were also asked to describe the

governance structure of their project as a diagram and provide a detailed list of participants /stakeholders of their programme to explore the inclusive dimension of the project.

These formal sources of information are in addition to several informal and telephonic conversations we had with several functionaries associated with the implementation of the scheme.

5. Implementation of the Scheme: A Quick Assessment of Various Components

The following paragraphs provide a quick assessment of implementation of each of the components of the scheme by different institutions. This section is based on the document analysis, discussions with those implementing the scheme and field visits. These descriptions are not exhaustive and based on the following criteria;

a) The institutions have shared their progress report

b) The institutions have been visited by the consultants or the members of the evaluation team.

5.1 Component 1: Schools of Education (SOE)

The objectives of schools of education are:

a) To conduct various academic programmes.

b) To establish Centres and conduct research in curriculum development, pedagogy, special education, language teaching.

c) To develop as model institutions for teacher education.

d) To ensure integrated and inter-sectoral linkages.

Assam Central University is implementing the SOE component of the scheme. The initial financial allocation of INR4.15 crore (3.15 crore non-recurring, and 1 crore recurring) was released. The implementation has been slowed down for several reasons including absence of a full time VC (now the VC is appointed) and no Finance officer has been specified to deal with the funds under the scheme. The staff required for implementing the scheme has not yet been recruited. The only concrete activity accomplished by the university under this scheme seems to be the three weeks program organised for the university teachers in February 2016. It seems that the implementation plan of SOE needs to be closely examined.

Dr. Harisingh Gour Vishwavidyalaya, Sagar is implementing the SOE component of the scheme. The effort seems to be in converting the existing department of education (which has four departments) into a SOE. However, there seems to be hesitation to move away from the department structure to SOE structure since they are not clear about the future of SOE after the 12th five year plan period. They have proposed two centres under the SOE, namely, 'Centre for Pre-service Teacher Education' and 'Centre for Professional Development of Teacher Educator'. It seems they are not clear about the norms for operationalising these two centres. Faculty positions and staff appointments have not yet taken place.

They have started the construction of the building. They plan to start an M.Phil.- Ph.D. integrated programme under the 'Centre for Professional Development of Teacher Educator' from the academic session of 2017-18. They had planned to organize a national workshop on 'Lesson Planning and Teaching Skills' from 17 to 23 November, 2016. They are also planning to conduct 2-3 days Seminar in January 2017 on 'Gender School and Society- issues and challenges' for teacher educators, research scholars and students.

Jamia Milia Islamia, New Delhi: The approved proposal at the Jamia Milia Islamia is for the upgradation of the faculty of education and IASE to the school of education (SOE) by setting up six centres namely, i) Centre for Pre-service Teacher Education, ii) Centre for Curriculum Research, Policy and Educational Development, iii) Centre for Learning and Pedagogic Studies, iv) Centre for Assessment and Evaluation, v) Centre for Professional Development of Teacher Educators and vi) Centre for Teacher Resource and Academic Support. The proposal is in line with the vision of the scheme to see teacher education in a holistic manner. However, the focus has been largely on school education related aspects.

Land has been allocated for the project. After soil testing, costing has been done and architect appointed. MHRD has transferred 50% of the non-recurring funds. The building plan is being prepared as per NCTE norms.

In the first year of the project of upgradation to SOE, lot of groundwork is being done in terms of devising guidelines for various aspects of the project. The faculty members have taken up nine research projects. Survey of researches in Teacher Education is under the pipeline. The focus of SOE is largely on school education even the teacher education aspect focuses on teachers and teacher educators only in the area of school education. The plan is to launch 3 years integrated BEd/MEd programme with focus on research based teacher education.

Material for MOOCs is under preparation. Modules /credit based courses on Academic Leadership; Learning with Digital Technology; Academic Writing; and Course for teacher educators on how to supervise practice teaching and how to give feedback to student teachers. Glossary of concepts in teacher education and a manual for learning Braille for teacher educators is also planned. Seven programmes where around 200 participants were benefited have been organised in the first year of the project.

The project funds have been transferred to the account of school of education budget head. No purchase committee has been set up for the project. P&I Control Organisation of the university is responsible for purchase payments. The requisition for material is sent to the Administration for approval. The materials procured from an identified list of sellers. The seller takes direct payment from the accounts.

Progress made: There is delay in the civil work even after the financial transfer has taken place. This is mostly due to procedural issues at the institutional level. Similarly uncertainty regarding continuation of the scheme beyond 2017 is acting as a constraint to restructure the existing departments of education or starting of new SOEs, The implementation of this component seems to be rather slow.

Comments: The objectives of the component clearly state that research in curriculum development, pedagogy, special education and language teaching needs to be carried out. It seems that in the process of implementation, the focus on research is not adequately reflected. Therefore, the SOEs need to focus more on research on pedagogical issues. As of now most of the SOEs are proposing different short duration programmes and long duration programmes leading to a degree. While these elements are important it should also initiate steps to strengthen research in teaching and learning processes in higher education.

Unlike other components, this component of the scheme has some visible variation between the design and practical realities. SOEs are new arrangements created either by upgrading the existing departments of education or through creation of new institutional arrangement. In both cases, it involves a long term commitment since the programmes suggested such as the Masters degree and doctoral level studies will take longer duration to fruition. However, the funding for the programme is uncertain beyond March 2017 and even if renewed the uncertainty after 2020 is deemed to continue. This will act as a serious constraint at the institutional level to design new study programmes or recruiting the required additional academic faculty members on a regular basis. In view of the uncertainty, the institutions may not be able to attract faculty at associate and professor level further undermining the ambition of SOE.

This component is now confined to the central universities. This provision may be extended to the state universities as well. It will help some of the state universities to grow into important centres of research in higher education.

One gets the feeling that all the courses started are traditional courses and no new thinking is taking place in terms of offering innovative courses. Further, when compared with other components of the scheme, implementations of SOEs are moving rather slowly.

5.2 Component 2: Centres of Excellence for Curriculum and Pedagogy

There are three subcomponents under this component of PMMMNMTT.

i) Centre for Excellence in Science and Mathematics Education:

The objectives of this sub-component are to

a) Accelerate science and mathematics education by way of promoting independent, critical and creative thinking.

b) Hand hold the scientific teaching community in facilitating teaching and research for subject specific growth

c) Enable the development of skills engaging latest technological devices as aids to teaching-learning process.

d) Help teachers in capacity building for curriculum designing and scientific assessment and evaluation.

e) Develop innovative programmes that will strengthen the inclusive nature of higher education by bringing in the disadvantaged and marginalized sections of the society.

IISER Pune is implementing the CESME component. This is one of the earliest projects approved (sanctioned on 30/09/2015) by the PAB. The CESME is expected to promote Science and Mathematics Education through interactive model of learning basic scientific concepts for science teachers, and school and college students. IISER-Pune organised workshops, National Teachers' Science Congress, internships, teacher trainings, educational camps, conferences and seminars, student visits, curricula development brainstorming session and annual retreat.

The workshops organized by the Centre are of varying duration between 2 and 9 days and are organized in IISER-Pune. The internship programme is for the duration of 4 to 6 weeks and follows a more hands-on approach where participants, in the presence of the mentors, get a rich lab experience. The camps are organised for the duration of 3 to 7 days and they focus more on the innovative solution of problems pertinent to the participants.

IISER-Pune also collaborated with a few renowned national and international organisations to conduct the programmes. The Centre has already conducted several workshops and more than 6000 teachers have been trained so far which is way more than promised in the proposal. Other activities are continuing. A Science Exploratorium - a Science Museum for teachers, students and general public is yet to start; a Hall for CESME activities has been built in the premises and a computer lab is being developed and lab equipments such as computers, printers have already been purchased.

The IISER-Pune believes in 'enquiry based approach' to teaching and learning in schools and institutions of higher education. IISER-Pune attempts to build a pool of trainers and master-trainers, who will then go and expand the practice of enquiry based teaching-learning further. Therefore, the programmes in IISER-Pune, under the PMMMNMTT scheme are designed to focus on the process of problem formulation, observation rather than the end results. The institute extends its reach to communities and invites participants from rural/ suburban areas to join and solve problem(s) pertinent to them/ their locality/ lives, with the help of mentors from/ assigned by IISER-Pune. IISER-Pune also plans to design a degree course based on the new pedagogy (enquiry based teaching-learning).

It is observed through the studies and implementation of the courses at IISER-Pune that a programme is more successful if it is not limited only to a particular department. It should be a programme of the entire institute and active participation of the all the stakeholders are necessary for the success of the scheme. The IISER-Pune has put an active effort to disseminate the information regarding the training, workshops and other programmes to all the faculty members

and concerned persons in and outside the institute. This, combined with a pro-active participation of the recipients of the information (through mails, web broadcast, and reports) helped bringing new ideas into the programmes.

Indian Institute of Science, Chitradurga, Bangalore: The Centre has organised training programmes to train higher education teachers using experimental pedagogic methods. The Centre has already trained 2793 teachers from the states of Karnataka, Maharashtra, Manipur, Tamilnadu, Andhra Pradesh, Uttar Pradesh, West Bengal and Assam. The Centre also conducts Pre-test and post-test evaluation of trainees to evaluate the impact of the training. These test results are documented. The Centre has constructed an experimental hall which can accommodate 60 participants and is fully functional; a multimedia lecture hall, research laboratory and general laboratory.

There was a concern that the training programme should be made a refresher course for API purposes. It was suggested that the refresher courses conducted by academic staff colleges can adopt the training module developed by the centre. Since the Karnataka government does not organise any training programmes from January to the end of the school year, the Centre is not in a position to organise programmes as proposed. There seems to be clash with the training programmes organised by the state government.

Progress made: The implementation of this component is progressing well and as per schedule. The civil work component is also moving fast and the implementing institutions have succeeded in organizing several programmes under this component. The programmes implemented are innovative in nature. They have exceeded the target number of participants attending programmes.

Comments: IISER and IISc are premier institutes with the best teachers and researchers in the country. It also has the expertise to collaborate with other national and international institutes and other forms of intellectual expertise. The programmes which they are organising are innovative. The effort needs to focus also on to disseminate the initiatives of these institutions to other less endowed institutions.

The IISER-Pune has plans to set up a Science-Centre where interactive learning through science exhibits and technology will be possible for all. There should be mechanisms by which the benefits of this programme are spread to more people.

5.3 Component 3: Teaching Learning Centres

The objectives of this sub-component are to:

a) Develop discipline-specific curricular framework and evaluation methods for incorporation into workshops and short-term professional development programmes of;

b) Outline and recommend pedagogy and schemes of assessment appropriate for the curricular framework;

c) Develop learning materials, including textbooks and handbooks and to organize their translation into regional languages;

d) Be repositories of resources, including reference services and electronic data bases, for promoting research on issues relating to teaching and learning practices.

Tezpur University: Tezpur University is implementing the TLC component. The TLC activities are being implemented by the department of education. They also have proposed to construct a building for TLC activities. While they organised workshops, unlike in other institutions implementing the scheme, it was on a partial cost recovery basis. They levied a registration fee and did not provide TA to the participants of the workshop.

Concerns were raised by the implementing institution about the continuity of the Scheme and locational disadvantage for the participants to come to participate in the programmes. Similarly, use of 'English' as a medium of instruction in the workshop is a disincentive to integrate local government school teachers in the programme.

Indian Institute of Technology (IIT), Hyderabad (TLC): Indian institute of Technology, Hyderabad implements the TLC component of the scheme. The land for TLC building is already allocated and the construction is yet to begin. The TLC started functioning only from February, 2016. The TLC has already conducted 30 one-day workshops against the target of 12 workshops and trained 550 teachers against the target number of 480. Teachers from all branches of engineering are participating in the programme to write the proposal for content development. Some of the workshops organised by the TLC is through institutions located in other states. The TLC programme has prepared kits for training of teachers across EE, CS, ECE, IT branches of engineering.

The selection of project staff on contractual basis is delayed and the programme is run with the help of ad hoc staff mostly drawn from other programmes. . It seems allocation of funds under different heads is a constraining factor and they wanted to know the flexibility in changing the heads of accounts while the programme is being implemented. Similarly, unless the fund flow is regular and on time the temporary staff cannot be retained.

National Institute of Technology, Warangal (TLC): Although the infrastructural facilities are yet to be created, the TLC has organized pre-conference workshops on 'Technology for education' for teachers. More than 350 teachers participated. Similarly a GIAN programme workshop was organized in collaboration with TLC.

The response to the announcement of the programmes is not very encouraging. It seems the teachers would like to participate in those programmes which will be accounted for their API scores. The programmes organized by the TLC are for one or two day duration only. Teachers prefer to join workshops which are of duration of more than 6 days which will enable them to get API scores.

The Centre feels that re-appropriation of budget among the sub-heads within allocated budget may be permitted to improve the efficiency in implementing the component. Similarly, they also feel that there is a need to prepare a list of experts on various topics connected to Teaching Learning in Higher education to draw into the programme as resource persons.

IISER Bhopal (Teaching Learning Centre-TLC): IISER has established the Centre for Research in Advanced Technology for Education in Sciences (CREATES) as a Teaching–Learning Centre under PMMMNMTT. A temporary space in a classroom has been established as development centre for the CREATES. The separate building for the TLC is nearing its completion. It has three types of facilities: namely, a Studio AIR for facilitating Adaptive, Immersive and Reactive learning; a DEMO Lab for demonstrations, education media and outreach and a classroom facility to explore new methods of teaching.

TLC has organised an internship program for development activities like software development, e-content development, graphic design and graphic library from April 2016 to August 2016 in which 8 interns participated. The interns in Physics, Chemistry and Mathematics at the TLC developed about 500 micro e-content, in the form of multiple choice questions. Currently three software developers are working towards the beta that was released on 21st October, 2016. Interviews are conducted to hire more software developers for further development of the core technology and the backbone framework.

A pool of e-content is prepared by the experts on various topics and will be share with others very soon. They are expecting that in next two years this facility will reach out to about 1000 authors/educators in the country and about 40000 learners or students. More features are continuously being added to improve the services and facilitate new type of micro content development. The TLC is working on Technology Enabled Modular Proactive Teaching (TEMPT).

IISER, Bhopal is also planning to conduct 2-3 day long workshop for IISER professors/authors to learn how to create e-content. They are also working towards outreach and education media development.

IIT Patna: The Teaching Learning Centre for Internet of Things (TLC-IoT) has been in operation since July 2016. The IIT Patna has allotted 1300 sq. ft. to develop two labs and an office for TLC. The TLC-IoT is in the process of procuring office and lab furniture and the equipment for the laboratories and engagement of staff on contractual basis. The first course under TLC-IoT on "Smartgrid: Cyber Physical Energy System" has been organized.

Indian Institute of Information Technology, Design and Manufacturing: The proposal of IITD&M was approved in the 3rd PAB meeting and the budget amount has been transferred to the institution in October 2015. The major objective is to establish TLC for design & manufacturing education and to Disseminate developed technologies and pedagogical materials; develop discipline specific D&M education technologies; and Innovative and creative teaching and learning materials.

The TLC has established a Recording Studio in the lecture hall and has purchased prototyping and 3D printers and developed D&M education modules. The TLC has designed the low cost CNCs (Computerized Numeric Control) which can be used by the teachers as well as the students of the engineering across the three broader domains i.e., electronics, computer and mechanical. As of now, they have developed five low cost CNC machines namely CNC Mill, CNC Laser Cutter, TLC Custom developed Quadeopter, TLC CIM system and 3D Printer Building Workshops for teachers.

The TLC staff has also collaborated with the community and schools nearby and has visited schools for demo of high tech projects. The school children are exposed to the robots in the real life. A TLC website has been created for displaying materials of the TLC online for benefit of the faculty as well as the students. The TLC has also developed some online course management tools. They are currently working on to design low cost portable, automated biometric fingerprint attendance system for Moodle. They have also developed some projects on the concept of humanitarian technology and low cost mosquito sensor machines and robots for Swachh Bharat Abhiyan and so on. They are also planning to launch virtual labs for the teachers and planning to conduct a workshop with the teachers in December, 2016.

Five workshops have been conducted by the TLC during this period:

- Android Mobile App Development Workshop - Feb 13-14 and 20-21, 2016 - Participants 100 UG and PG students
- Beginners Arduino Workshop - Oct 17, 2015 - 40 UG students
- Arduino Day Workshop - April 02, 2016 - 20 local school students
- Beginners Arduino Workshop - August, 2016 - 40 I year UG students
- Hands-on Raspberry Pi Workshop - Sept, 2016 - 30 UG students

They are writing manuals for the development of low cost equipments. They also plan to conduct workshop for teachers of universities, colleges and polytechnics.

Sri Guru Tegh Bahadur Khalsa College, New Delhi: The SGTB Khalsa College of the University of Delhi is implementing the TLC component of the programme. The focus of the TLC in SGTB is on development and dissemination of e-content and is deeply involved in the MOOCS and SWAYAM initiatives. Given the emphasis on e-learning, the TLC programmes of the College is ICT based and situated at the Centre for e-Learning. The TLC focuses on improving the qualities of teachers and teaching in the subjects of Chemistry, Commerce and Economics.

The college organizes workshops on preparation of learning material, workshops/training, knowledge dissemination through website and portals and developing small website/ mobile app. The workshops follow a mix of conventional approach of training with the practical sessions, where the participants learn to use the software and other tools pertinent to that area. The programme develops learning materials which are uploaded online once finalized. The

workshops are organized in house where participants come to attend. It is important to mention that SGTB Khalsa College does not provide any TA to the participants, only local hospitality is provided.

The SGTB Khalsa College has also developed a website (www.tlckhalsa.in), which is provides interactive platform, tools and material, both focusing subject content and teaching.

Progress made: There is variation in implementation of the scheme by the participating institutions. Some of the institutions have organized several programmes while others have not succeeded to that extent. Some of the institutions reported that response to the notification of the programmes under the scheme is not encouraging. In some instances the participants are not paid money for their travel and stay to participate in the programme.

Comments: Two issues that came up especially in the context Tezpur University are locational disadvantage and language disadvantage. Because of difficulties of access both participants and resource persons are hesitant to come to Tezpur University. 'English' as a medium of instruction in the workshop is a constraint for teachers, especially school teachers to participate in the workshops.

A comparison among institutions implementing TLC component shows that they vary in terms of programmes and the way in which they are organizing the programmes. Sometimes there are less innovative components in the programmes organized by the TLCs.

5.4 Component 4: Faculty Development Centres

The objectives of this sub-component are:

a) to promote organizational strategies for faculty development so as to incentivise teachers to grow professionally and enable the institutions to

b) Faculty development is expected to result in improved teaching performance and better learning outcomes for students and teachers.

c) Promotes new ways of thinking about the student-teacher relationship, and increased commitment to educational scholarship.

d) Developing all round skills are a prominent aspect for faculty development.

Banasthali Vidyapith, Rajasthan: Banasthali Vidyapith is implementing the component on Faculty development of Higher Education and Teacher Education. The Faculty Development Centre (FDC) aims to achieve institutional effectiveness and professional growth and scientific temper among faculty members.

The University had proposed long term (3-6 months), mid-term (3 weeks) and short term (up to 1 week) programmes in the proposal. The FDC attempts to organise short term programs for developing interpersonal skills, online guidance programme for career development and discipline specific workshops for course design and development.

The ground floor construction of the FDC is complete. The FDC has already organised three programmes and another five are expected to be completed by March 2017. The library is enriched by purchase of new books and journals. The University successfully managed to create a network of experts and renowned academics, which they are expanding further. The academics/ experts come to the institute as resource persons. In this regard, it seems important to mention that the University not only invites senior faculty/ experts, but also welcomes junior faculties with contributions in the field.

Hemavati Nandana Bahuguna Garhwal University, Srinagar, Uttarakhand: The Hemvati Nandana Bahuguna Garhwal University is running the Faculty Development Centre (FDC) under PMMMNMTT. The FDC has conducted a short-term course for Teacher Educators in Higher Education in September, 2016 for a week and 26 participants from the Uttarakhand state participated in the programme. The FDC is collaborating with the State Institute and Azeem Premji Foundation for preparation of modules for the in-service training needs of the school teachers at the senior secondary level. The construction work is in progress.

Progress made: The implementation seems to be slow. The civil work is in progress. There is a need to give more attention to planning of the programmes under this component.

Comments: There seems to be overlap between the programmes organised by TLCs and FDCs. The faculty development is seen more as participation in workshops than in orienting to research in pedagogical dimensions.

5.5 Inter-University Centres for Teacher Education

The objectives of the Inter-university Centre are the following:

- Provide common advanced centralized facilities/services for universities not available within individual stand alone institutions.
- Bring convergence among the various activities of Schools of Education in CUs.
- Offer the best expertise in teacher education
- Continuous upgradation of teacher education curricula.
- Publish advanced research studies relating to teachers' education.

Note: No institutional proposal has been approved so far under this component.

5.6 Innovations, Awards, Teaching Resource Grant including Workshops and Seminars

The objectives are:

- Innovations could be in curriculum, pedagogy, evaluation, technology, promoting inclusion, funding, collaborations.
- Promote innovations through the resource grant to the teachers.

- Recognize and identify talent among the teachers and reward the teachers at the institutional, state and national level
- Workshops and seminars to evolve strategies for faculty matters.

Administrative Staff College of India (ASCI), Hyderabad: The ASCI is implementing the Innovations and Awards component which is the individual oriented component of the PMMMNMTT scheme. The programme focuses on awarding the teachers for innovations in teaching. The process of programme implementation involved setting up a three member team of experts to evolve guidelines for the teaching innovator award. The programme has changed over the time since its conceptualisation.

The selection process involves a three-stage process for the award. The first stage consists of inviting applications from teachers through online submission of self-nominations based on the eligibility conditions stipulated in the announcement itself. ASCI received around 230 applications. In the second stage, the applications are screened by a team of three Research Associates (RAs), who are MA Education graduates from TISS Mumbai. The broad criteria for screening at the first stage are: novelty, relevance, scalability, social impact, sustainability. Institutional endorsements are invited in the third stage. ASCI is planning to develop case studies of innovations. After the selection of individuals, the ASCI had planned to organize a conference along with awards ceremony. However, the plan for the conference has been dropped due to the funding cap of INR 50 lakh by the ministry and therefore only awards ceremony will be organised.

The programme implementation got delayed. One of the reasons for the delay is the difficulty to conceptualise and define 'innovation' in teaching to develop relevant guidelines. Second the target group of the programme changed from the teachers in public institutions, especially state universities to that of those in the private universities. It is felt that the award would have attracted more attention and credibility among teachers in higher education if the award was announced by the MHRD similar to the Prime Minister's Awards for Excellence in Public Administration.

NIT, Silchar is implementing the component Innovations, Awards and Teaching, Resource Grant/Support for Faculty. They organized one workshop of one week duration on 'Fuzzy Logic' for teachers and scholars to promote and showcase imaginative ideas in science and technology. It was attended by 200 faculty members, 10 resource persons and 2600 students including 2500 from NIT. Another workshop on pedagogy was in December 2016 for digital content development. To organize a meeting on the 'Rashtriya Avishkar Abhiyan' they identified three schools with one KV and two Assam government schools and organized a fair for schools and lectures in various disciplines in schools. NIT is collaborating with IIT Bombay in MOOCs.

The major constraint NIT Silchar faces is the availability of good resource persons. The solutions suggested are either organizing the programmes outside Silchar or rely more and more on ICT based programmes only.

NIT Goa: NIT Goa is implementing the component of Innovation, Awards and Teaching Resource Grant including Seminars and Workshops (IATRG). The NIT organized three workshops. The workshops are named as Three Fold Encouragement Program (TFFEP) and two workshops have already been conducted. NIT Goa is running in a rented place and no dedicated place for conducting workshops is assigned.

National Institute of Technology, Tiruchirappalli is implementing the component on Application of ICT Tools for Pedagogy Development to Engineering Teachers. The NITT conducted a one week workshop on application of ICT Tools for pedagogy development to technical education teachers. A total of 52 participants from twenty two institutions attended the workshop. Resource persons were invited from IIT Kharagpur, IIT Bombay, IIT Madras and NITTR. Common themes discussed during the workshops were related to outcome based education pedagogy, need for pedagogy in Engineering Education, Assessment and Evaluation, planning for effective pedagogy tools, e-content, integration of technology into education and learning objectives and active learning strategies. The participants got hands on opportunity after each and every session and also delivered lectures using the ICT tools on the last day of the workshop.

The participants were trained on some of the commonly used open sources for effective teaching and learning such as MOODLE which can be used by the teachers to create lesson plans. The participants were also trained in CLICKER which is like an online poll to the students. It is the e-learning system software and CLICKERS can communicate through wireless medium and RF. The participants were also given training on MOOCs and how to use flash to generate e-content. The participants were also provided with the information on application of Wiki space. Wiki space classrooms can be used for collaborative writing, social newsfeed, organizing classrooms and monitoring student progress. The participants were trained on using the tools for designing their own lectures, courses and materials. All the sessions of the workshop were recorded and a web link provided to all the participants.

Progress made: There is a need to define clearly the definition of innovations in teaching. A lack of clarity in this respect is delaying the process of identification of individuals for award. It seems budgetary provisions act as a constraint to organize international seminars planned under the component. The programmes organized are mostly re-packaging of existing programmes rather than any innovative programmes. There is a need for added focus on innovations in the sector. Although this component is the individual based component of the scheme, there have not been many applications from the higher education institutions under the component.

Comments: Several new ideas are being tried under this project which may be welcome because those ideas have not been implemented in Indian higher education institutions so far. Though the newness of the ideas and new contexts should be encouraged there is still dearth of innovations under this component.

5.7 Subject Networks for Curricular Renewal and Reforms

The objectives are:

- Electronic network for the teachers and researchers of specific domain areas in higher education.
- Create a website and other appropriate tools to support information exchange and dissemination.
- Pooling / sharing subject based resources -teachers & professionals.
- Help members of the network on subject specific problems
- Share & analyze research findings to help fresh researchers

National Centre for Biological Science (NCBS) Bangalore (establishment of Subject Network for Curricular Renewal and Reforms in life sciences): National Centre for Biological Science (NCBS), Bangalore is implementing subject network component. NCBS conducted a workshop on Meaningful pedagogical techniques in Biology classroom attended by 12 participants from 5 institutes. Similar workshops are being repeated in Bangalore and Pune. They have regular online networking through social media accounts and newsletters. They have also increased their academic discourse activities through 'online discussion board' on IndiaBioscience website. They interact through 'Wiki Edit-a-thons' with the undergraduate teachers and women scientists. The same is also being planned for Jaipur and Mumbai. The centre is working for creating comprehensive database of science education institutions across the country which will be incorporated as a part of IndiaBioscience website. The centre has created online discussion forum through google groups for undergraduate teachers to have interaction with education professionals (Scientists, Teachers and Researchers). The centre is involved in contributing and increasing education related content on IndiaBioscience website.

Progress made: The initiative seems to be good and innovative. The workshops are planned in other cities also. The online networking and discussion forum are progressing well. The reasons behind less number of participants, is not very clear. There were only 12 participants in the workshop they organized. The Centre may be encouraged to continue with these initiatives.

Comments: The website is not yet functional due to funding delays both at the institutional level as well as MHRD level. Therefore networking aspect of the project is facing setback.

The programme approved under the scheme is largely an extension of what the NCBS has already been doing. The project has scope of benefiting large number of scientists, teachers and researchers through online networking when the website portal becomes functional. More institutions may be encouraged to put proposals under this component.

5.8 National Resource Centre for Education /Higher Education Academy

- Create a database for all teachers in higher education
- Develop an electronic network for the teachers and researchers in higher education.
- Assemble all support material in electronic form
- Disseminate material to all registered subscribers of HE.
- Organize workshops, seminars and short term courses in HE
- Strengthen the resource base for the faculty in HE

Note: No institutional proposal has been approved so far under this component.

5.9 Academic Leadership: Institutes of Academic Leadership and Education Management (5 Nos.)

- Evolve a programme on the training needs of academicians in leadership positions.
- Provide entry-level orientation on requisite functional proficiency and attitude orientation.
- Create a pool of academic managers in school education
- Develop training resources for academic managers of DIETs, SCERTs, other teacher education institutions
- Develop educational managers who are able to coordinate the efforts of all stakeholders to improve effectiveness of an organization.

CALEM Human Resource Development Centre (HRDC), Aligarh Muslim University (AMU): HRDC had proposed for two components under the PMMMNMTT scheme. One proposal was for the Faculty Development Centre and the other was for CALEM. The proposals for conducting workshops under both the components are very similar. The approved proposal for CALEM proposed to conduct workshops which are the capsule version of the workshops that were proposed under FDC. HRDC had already been running a project titled 'NALANDA' on similar lines, supported by the Minority Commission.

The mode of delivery of the programme is also different from the faculty development workshops usually conducted by the HRDC. The programme is conducted all over India at the minority managed degree colleges (MMDCs). HRDC conducts regional workshops for the principals of MMDCs and from them seeks the expression of interest for conducting week long workshops on the proposed themes. The institutions which have been beneficiaries of the UGC schemes are selected. The interested college/institution hosts the workshop in their premises for a group of around 40 faculty members. The faculty members are mostly from the host college but may also be drawn from other colleges in the area. Local TA/DA is paid to the workshop participants. Thus, even the colleges located in remote locations are able to organise workshop

for the benefit of their faculty with the support of HRDC. A budget of INR 400 per participant per day is available to the host institution of which 200 per day is given to the participants to cover local travel and 200 is spent on food.

HRDC had conducted a survey of MMDCs in 1990. The information is further being updated on MMDCs. The network and information on MMDCs is built through asking participants/faculty attending the courses for details on the MMDC institutions in their area. The information is verified by the HRDC team.

The resource persons for the course travel to the host institution for conducting the workshops enabling them to understand the context of the institutions and the participants. The course coordinator is appointed three months in advance. The course for each institution is customised and designed according to the need of the institution and the participants. So far 41 courses for 2000 participants have been conducted by the HRDC. The first course was conducted at the Mallapuram Centre of the AMU.

National University of Educational Planning and Administration, New Delhi (CALEM): NUEPA has proposed Online Programme on School Leadership and Management with focus on School Heads. The Programme design is based on the National Curriculum for School Leadership Development and divided into 7 Key Areas and units. Each key area will include e-content in the form of reading material or modules; Reference reading material with active links, videos, you tube presentations; Self learning material with practice exercise and activities; and Assessment through multiple choice questions (MCQs), assignments, practice exercises, discussion forums and portfolios.

The programme covers the entire journey from school leadership to school-based transformation and is envisioned in three levels: Basic, Intermediate /moderate and advanced- supported by moodle platform. In the first year of the programme NUEPA is initiating 'Basic' level only. Space on website has been allotted and a person to put the materials online has been appointed. State level workshops with the resource persons are being conducted. Pilot is complete in Gujarat and Haryana.

Tata Institute of Social Sciences (TISS), Mumbai (CALEM): The CALEM at TISS has been built on the experience of administering HE Leadership Programs under HELA (RUSA) and Obama Singh Knowledge Initiative. School Leadership Needs Assessment consultations have been undertaken, three Higher Education Leadership Programmes conducted with total 150 participants. Leadership training programmes for School and Higher Education with 250 participants for each area have been planned.

Progress made: One notices two modes of organizing programmes under this component. AMU sends a team to different places to organize workshops and programmes. TISS invites participants to their campus. One needs to assess the cost effectiveness and reach out through these two modes. AMU and TISS are making fast progress. The programme for school education to be implemented by NUEPA is conceived well and it is expected to be implemented soon.

Comments: Trained faculty members are necessary for the quality of teaching learning. The programmes have been built on the previous programmes, which the institutions had already been conducting. New mode of delivery and format is undertaken in the programme. These programmes of academic leadership are contributing through training faculty as good teachers and good administrators.

6. An Assessment of the Management Structure and Fund Flow at the Institutional Level

6.1 The Governance Structure of the Projects at the Institutional Level

There are two broad categories of institutions which have the projects approved under the PMMMNMTT scheme. The first category is that of Universities (Central, state and deemed) and the second category is that of Autonomous institutions. The autonomy of the project/programme coordinator for the smooth implementation of the project is reflected in the governance structure of the project at the institutional level.

The governance structure could be very simple with more control to the nodal officer for taking financial and academic decisions. The other form of structure could be a more complex one consisting of either a long chain of decision making authorities above the project coordinator. An analysis of the governance structure of the approved proposals shows that both of the governance structures have their advantages and limitations.

We analysed the questionnaire based responses on the governance structure of the project shared by the project coordinators. Limitation of this analysis is that it is difficult to understand the actual process and hierarchy of decision making and implementation works in certain institutions. This needs to be further elaborated.

In some instances the simple structure is more effective for quick decision making (University of Jammu) but in some other instances where many decisions related to infrastructure development and purchases need to be undertaken and where the programme coordinator does not have financial decision making autonomy, a simple structure may become problem due to the lack of a proper finance committee, purchase committee or infrastructure development committee (NIT Warangal; Tezpur University, Assam). However, in autonomous institutions the simple structure is more effective as the decision making authority is with the programme coordinator (HRDC, AMU, Aligarh; IISER Pune; IITD Kancheepuram; IIT Patna). There is a direct linkage with the top management/administration which expedites smooth operation.

Complex governance structures are more organised from an administrative point of view and could be efficient (IIT BHU, Varanasi; Khalsa College, University of Delhi). Complex structure can also be more cumbersome and lead to delays in implementation due to long chain of decision making process. In our analysis we observed that both instances are present. Universities are more likely to have complex governance structures as compared to the autonomous institutions. We also found that deemed universities though have complex structure compared to those at the autonomous institutions, the decision making is faster. Further exploration reveals that this could be due to the involvement of the top management of the institution into the project

management unit (Banasthali Vidyapith). It could be part of the strategic design to include the top management in the project PMU which has limitations since the smooth operation become subject to the interest of the incorporated individual.

Overall analysis found that project works in more efficient way when coordinator has more autonomy in decision making vis a vis financial aspects, and is in direct communication with the top management. This also amounts to the fact that there are clear institutional guidelines to support the coordinator for financial and other decision making processes.

6.2 Allocation and Utilization of Funds

The total outlay of the scheme (PMMMNMTT) proposed in the XII Finance Commission (2012-17) was INR 1700 crore. This was reduced to INR 900 crore in the year 2014. The allocations are based on the approval by the PAB. The funds are released only after the review of the proposal and approval of the same by the PAB. The MHRD is responsible for the release of funds based on the recommendations of the PAB indicating both the amount to be released and the schedule of release.

The funds are transferred to the institutions in the name of the Vice-Chancellors/ Registrars/ Directors, whose account number are registered with the Public Fund Management System (PFMS) in the MHRD. This is done to avoid delay in the release of funds, and, early functioning of the centre located in the University/institutions. The University/institutions are expected to release the fund to the respective account, opened specifically for the allocated component under the scheme. However, in some cases, (e.g. Central University of Haryana), the fund was directly transferred to the account opened for the component (school of education) under the scheme. This became feasible in case of the Central University of Haryana (CUH), as the coordinator, after opening of a separate account in the name of the component, got it registered with PFMS in the ministry. Actually, the process of getting the account registered with PFMS is a longer process, and, usually takes 3-4 months. Therefore, when the project is approved, the fund is usually released directly to the University. These allocated institutions, in turn, are responsible for the delivery of outcomes stated against the release of funds.

The funds allocated to the institutions are under recurring and non-recurring expenditure heads and are as per the budgeted amount in the proposal. In case of the component of *Innovations, Awards and Teaching Resource Grant, including workshops and seminars,* only recurring amount are applicable for conducting workshops/seminars/conferences. Recurring expenditure of each component includes expenditure towards salary/fee for coordinators, faculty/consultants, whereas, the non-recurring expenditure includes creation of infrastructure in various central/state universities/ other higher education institutes.

The money is released to the institutions on advance basis in two installments. The first installment is released immediately after the approval of the project. Disbursement of released fund usually takes two to three months. The second installment of the approved fund is usually released after the submission of Utilization Certificate (UC) and the Progress Report by the

institutions. The grantee institutions are expected to submit a 'Statement of Accounts' duly audited by a chartered accountant, stating out the expenditure incurred on the approved project and the utilization of the grant in the preceding years to the Government of India along with the progress reports. If the UC is not submitted within the prescribed period with the Form (GFR19A), the grantee shall arrange to refund, immediately, the whole amount of the grant received together with interest thereon, at the prevailing borrowing rate of the Government of India, unless, specially exempted by the Government. The balance amount is similarly released to the institutions after receiving the request from them along with the Utilization Certificate and detailed Statement of Expenditure.

The decisions regarding sanctioning and disbursing of the money to the institutions are taken by the PAB. The MHRD used to provide an advance of fifty percent for both- recurring and non-recurring grants till the3rd PAB (held on 9th September, 2015). However, in the following PAB meeting the Board decided to grant the full amount for the recurring expenditure and fifty percent for non-recurring expenditure.

It is also envisaged that the centre would become self-sustaining over a period of time, and, would not require any recurring cost after the closure of the Mission. However, it has been informed to the respective institutions that, at any given point of time, the accounts of the grantee organization can be reviewed by the Comptroller and Auditor General of India or his nominee at his discretion. The grantee organization will remain open to a review by the Government of India, MHRD by appointing a committee or, in any other manner decided by the Government of India, as and when, deemed necessary.

The flow of funds are governed by the relevant provisions contained in Rule 209 to Rule 212 of GFRs, 2005, which inter-alia, prescribe the procedure for release of Grant-in-Aid; Accounts of the Grantee Institutions; Audit of Accounts of Grant-in-aid by the grant sanctioning authority and C&AG and submission of UCs [Form GFR 19-A] by the grantee Institutions.

Table 4a: Financial Achievements

Year	(INR in crore)approx.
2014-15	1.25
2015-16	59.95
2016-17	*59.99*

Table 4b: Fund Release under PMMMNMTT for the F.Y. 2016-17 (01.04.2016 to 31.12.2016)

Sr. No.	Agency Name	Total Releases (in INR lakh) approx.
1	Aligarh Muslim University	445.00
2	Banaras Hindu University	458.00
3	Banasthali Vidyapith	210.26
4	Central University of Haryana	462.00
5	Central University of Jammu	575.00
6	Central University of Kerala	562.50
7	Central University of South Bihar	575.00
8	Dr. Harisingh Gour University	274.00
9	EdCIL	94.02
10	Indian Institute of Science, Bangalore	155.27
11	Indian Institute of Science Education & Research, Bhopal	75.39
12	Indian Institute of Science Education and Research, Pune	137.08
13	Indian Institute of Technology, Bombay	322.00
14	Indian Institute of Technology, Kanpur	198.58
15	Indian Institute of Technology, Patna	267.50
16	National Institute of Technology, Warangal	272.00
17	National University of Educational Planning and Administration	445.00
18	Sri Guru Tegh Bahadur Khalsa College, Delhi	95.23
19	Tripura University	314.00
20	EdCIL	62.00
Grand Total		**5999.83**

Table 4c: Fund Release under PMMMNMTT for the F.Y. 2015-16

Sr. No.	Agency Name	Total Releases (in INR lakh) approx.
1	Administrative Staff College of India	65.00
2	Aligarh Muslim University	445.00
3	Assam University	415.00
4	Banasthali Vidyapith (Tonk)	258.00
5	Dr. Harisingh Gour University, Sagar	438.00
6	EdCIL (India) Ltd	54.96
7	HNBGU Srinagar Garhwal (A Central University)	264.00
8	Indian Institute of Information Technology Design and Manufacturing Kancheepuram	150.00
9	Indian Institute of Science Bangalore	232.00
10	Indian Institute of Science Education & Research, Bhopal	268.75
11	Indian Institute of Science Education and Research, Pune	282.00
12	Indian Institute of Technology (Banaras Hindu University), Varanasi	269.00
13	Indian Institute of Technology, Chennai	55.00
14	Indian Institute of Technology, Kanpur	264.00
15	Indian Institute of Technology, Kharagpur	210.00
16	Indian Institute of Technology, Guwahati	95.00
17	Indian Institute of Technology, Hyderabad	162.00
18	Indian School of Mines University, Dhanbad	269.00
19	Indira Gandhi National Tribal University	98.00
20	Jamia Millia Islamia	475.00
21	Mahatma Gandhi Antarrashtriya Hindi Vishwavidyalaya	269.00
22	National Centre for Biological Sciences	12.50
23	National Institute of Technology, Goa	8.00
24	National Institute of Technology, Silchar	22.00
25	National Institute of Technology, Warangal	263.00
26	National Institute of Technology, Tiruchirappalli	12.00
27	Sri Guru Tegh Bahadur Khalsa College, Delhi	133.00
28	Tata Institute of Social Sciences	199.00
29	Tezpur University	252.00
30	University of Calicut	52.50
Grand Total		**5992.71**

Table 5: Fund Allocation and Utilization under PMMMNMTT[2]

Name of the Institutions	Financial aspects					
	Recurring			Non-recurring		
	Allocated (in INR crore)	Transferred (in per cent)	Utilized (in per cent)	Allocated (in INR crore)	Transferred (in per cent)	Utilized (in per cent)
School of Education						
Central University of Kerala	**not intimated**	2 crore	13.26	**not intimated**	3.6crore	**Nil**
Central University of Jammu	2.00	100.00	**under process**	7.50	50.00	**70**
Centres for Excellence in Science and Mathematics Education						
IISc, Bangalore	3.00	61.44	65.00	4.64	65.29	70.00
IISER, Pune	5.06	29.45	81.20	4.50	59.78	84.70
Teaching Learning Centre						
NIT Warangal	5.38	20.45	12.00	4.25	100.00	52.30
IISER, Bhopal	3.00	2.656	88.54	3.60	0.97	26.91
IIT BHU	3.30	16.67	60.00	3.90	54.87	100.00
IGNTU	1.10	50.00	100.00	0.18	**BOOKED**	100.00
Tezpur Univ	0.49	100.00	46.00	2.03	100.00	2.00
IITDM, Tamil Nadu	0.45	100.00	64.90	1.05	100.00	96.60
SGTB Khalsa	3.16	40.84	44.86	1.65	60.10	71.98
IIT, Kharagpur	0.59	11.60	86.00	0.42	50.00	71.00
IIT Patna, IIT Indore, IIT Kanpur, IIT Kharagpur (Combined proposal)	1.04	19.50	74.83	2.22	50.00	99.67
IIT Madras	0.97	20.71		3.53	9.93	92.00
Faculty Development Centre						
Banasthali University	2.87	15.33	100	4.28	50.00	100.00
Hemvati Nandan Bahuguna Garhwal University	1.10	50	10	4.18	50.00	**Nil**
Tripura University	1.00	100.00	1.00	2.14	100.00	
Innovations, Awards and Teaching Resource Grant/ Support for Faculty including workshops and seminars						
IGNTU	0.50	50.00	100			
ASCI, Hyderabad	1.30	50.00	75.00			
Subject Networks for Circular Renewal and Reforms (SBN)						
NCBS	0.95	10.526		0.50	50.00	
Institute of Academic Leadership and Education management						
AMU	2.80	100.00	80.00	6.10	100.00	90.00
NUEPA	1.40	100.00		3.05	100.00	

[2] The analysis is based on the twenty three responses received to the evaluation team's questionnaire from the institutions implementing PMMMNMTT components.

It is found that there is variation in the fund allocation and utilization between institutions implementing the same component of the scheme. For example, under the TLC component, NIT Warrangal is allocated INR 5.38 crores while Tezpur University and IITDM gets only 0.49 and 0.45 crores under the recurring budget head. It is not clear how such variations in cost can be justified, especially under the recurring budget head. The institutions budgeted higher amounts also do not indicate high utilization rates of the transferred amount.

In general the utilization rates are higher under the non-recurring category than under recurring category. This may imply that the programme implementation is at a slower rate than the infrastructure development. Some of the institutions, such as Tezpur, have utilized only 2 per cent of their non-recurring expenditure (Table 5).

Many of the nodal officers pointed to the fact that resource transfer from MHRD to the institution implementing the components was fast. However, delay took place to transfer the amount from the institution to the nodal officer to implement programmes under the component. Therefore, it is advisable to have the amount transferred to a project specific account with an element of operation freedom to the nodal officer even if the budgeted amount is initially transferred to the institutional budget.

7. Overall Assessment of Implementation of the Scheme

The PMMMNMTT is a major initiative by the MHRD. The scheme is in recognition of the crucial role played by the teacher in influencing learning outcomes. The scheme is very comprehensive and covers most of the distinct but related aspects of teaching -learning process.

One of the success elements of the scheme is its ability to mobilise a large number of top ranking and high quality higher education institutions of India. This helps in establishing an academic leadership role of these institutions in leading academic changes in higher education. Needless to add, the programme has succeeded in attracting some of the best minds from these top ranking institutions and from other institutions.

MHRD guidelines and institutional autonomy to design programmes: The implementation of this scheme is guided by the guidelines prepared by the MHRD. Most of the implementing teams are, in general, happy with the guidelines and their reliability while designing the programmes under various components. However, some of the teams implementing the scheme felt that the guidelines are not sufficiently detailed about the specifics of the actions to be undertaken at the institutional level. This is a point which needs further discussion. Very detailed guidelines will be restrictive and will be a constraint to promote individual and institutional initiatives. Such restrictive guidelines do not give any autonomy to the institutions and they will eventually become merely implementers of the scheme.

The Scheme envisages to channel innovative ideas and to promote institutional autonomy in designing programmes and in implementing the scheme. In fact, one of the reasons for the success for the program is the autonomy and freedom it provides to the institutions regarding

designing its programmes and implementing it. This approach, in our view, is better than an approach where all the details are decided and stipulated by the MHRD. The same component and its implementation may vary among institutions implementing the component. Such variations may not be a sign of weakness in implementation of the programme. The success of the scheme will depend on designing the programme by taking into account the contextual variations. The guidelines may reiterate the commitment to promote innovations and highlight the envisaged aspect of institutional autonomy and advice the institutions to device the guidelines according to their respective institutional frameworks.

One of the suggestions can be that while institutional autonomy in designing the programme is respected the financial part of the guidelines can be more detailed so that the institutions implementing the scheme can transfer funds without much procedural difficulty. This may help avoiding delays in the transfer of money from the institution to the project.

Overlap between programmes under some of the components: It seems there are concerns specific to some of the components such as TLC and FDC. There is a feeling that there is similarity, if not overlap, between different programmes implemented under both the components. This may be partly due to the lack of clarity in the guidelines or the way the guidelines are understood by the institutions. In any case, clarifications are necessary in such situations to avoid duplication of efforts.

Some of the institutions implementing the programme felt that their initial proposal has limitations. The limitations stem from the fact that the proposals were prepared within short time and the challenges of implementation became clear only when the implementation process started. In other words, the limitations are becoming clearer while the programme is being implemented. Some of nodal officers expressed the view that they should be permitted to revise the proposals after the first year of the implementation of the programme. This seems to be a good idea to make the proposal more realistic and implementable.

The idea of having yearly meetings of those implementing same components and related components may be helpful. The MHRD organized similar workshops in 2016. Such exercises may be repeated as an annual event.

Transfer of funds: The institutions implementing the scheme faced various constraints and consequent delay in the implementation of the scheme. They were very happy with the MHRD team for their prompt responses and swift actions. It seems the transfer of financial resources from MHRD to the concerned institutions was a reasonable faster process than the transfer of resources from the university to the project coordinator. The institutional procedures and processes, in fact, delayed implementation in many instances. The MHRD may consider possibilities of transferring funds to the project account directly with some degree of freedom for the project coordinator to withdraw the amount, utilize as per the budgeted heads, re-appropriate the funds in limited cases.

Notification of the Scheme: One of the limitations noticed is that the number of institutions applying for the scheme and getting approval is less than expected. The slow institutional response results in limited number of the components being implemented. There is a possibility of getting better response if the scheme is more widely notified.

The process adopted for notifying the programme was mostly among the central universities and institutions. It is expected that SOEs will be opened in Central universities. This provision may be extended to the state universities as well. It will help some of the state universities to grow into important centres of research in higher education. It seems there is a need for much wider circulation of invitations. No doubt the MHRD has notified the programme, the guidelines and other details on its website. It seems there is a need to announce these programmes more widely. A letter from the UGC or MHRD to all the universities may be helpful in addition to the efforts already made.

Uncertainty Regarding Continuation of the Scheme: One of the difficulties faced by the institutions implementing the scheme is uncertainty regarding its continuity beyond March 2017 – the end period of 12th Five Year Plan. Many of the institutions are not willing to plan for the programme due to this uncertainty. The element of uncertainty is acting as a severe constraint, especially in components such as SOEs since the expectation is to upgrade the existing department of education into SOE or start a new SOE. In both cases the efforts and activities are of long duration. Unless the continuation of the programme and fund flow is ensured, it becomes difficult to implement some of the programme elements. Therefore, it is important that an assurance on the continuity of the scheme is given to the institutions implementing the scheme. Given the nature of processes and procedures required at the MHRD level, it may not be possible for it to issue such an assurance till the programme is renewed for the period beyond 12 th five year plan period.

This uncertainty affects implementation of the component of SOEs the most. SOEs are new arrangements created either by upgrading the existing departments of education or through creation of new institutional arrangements. In both cases, it involves a long term commitment, since the programmes suggested such as the Masters degree and doctoral level studies will take longer duration to see fruition. However, the funding for the programme is uncertain beyond March 2017 and even if renewed the uncertainty after 2020 will continue. This will act as a serious constraint at the institutional level to design new study programmes or recruiting additional academic faculty members on a regular basis.

Staff engagement: An assessment of the process of implementation indicates that institutions where engagement of contractual staff was necessary to implement the programme, in many instances, the rules and regulations in the institutions made it difficult for fast appointment. Therefore, the staff deployment did not take place and programme could not be implemented. There is a need to interact with the universities concerned so that temporary engagement of staff on contractual basis is facilitated without delay due to procedural and administrative issues.

Another issue related to staff engagement under the scheme is the duration of the appointment. This is a general issue pertaining to any new scheme. What will happen to the staff engaged on a contractual basis once the project period is completed? **Getting Resource Persons**: An effective implementation of the programme depends on the institutions' capacity to mobilize resource persons from outside. Some of the institutions implementing the scheme are well endowed with high quality resource persons. That is not the case with some other institutions. Therefore, it may be useful both in the short run and in the long run to prepare a list of experts in the most of the areas of intervention by the scheme. This list may be jointly prepared by the institutions and finalized by the MHRD. All institutions implementing the project may be in a position to invite these experts. This will help widen the involvement of larger pool of experts in the design, review and overall implementation of programmes under this scheme. However, the expectation is not to confine only to those resource persons listed for organizing programmes.

The issue of cost of organising programme came up for discussions in many institutions. Some of the institutions felt that the remuneration indicated for the resource persons is rather inadequate, especially to invite high profile resource persons from prestigious institutions. Another difficulty is the condition to travel by Air India only. In some instances, the connections are difficult and it takes a lot of travel time. Moreover, the cost of travel goes up because tickets are available, at times, in other air lines at a cheaper rate.

Attracting Participants: The visits and discussions with the institutions implementing different components, under the scheme, indicate that getting participants for many of the programmes is a difficult task. The difficulties arise for different reasons. First, institutions are not keen to nominate or sponsor faculty members to participate in the programme since they do not see these programmes are essential and prescribed by the UGC or government. They give priority to the programmes notified by the higher education authorities. Second, the participants are keen to attend programmes for which they get API scores. Since these programs are not in the approved list of programmes notified by the UGC, the university/college teachers are less enthusiastic to participate in the programme. Third, many of the programmes organized under the scheme is of short duration (less than 6 days) which by definition will not qualify for API scores. Fourth, the cost of participating (travel cost etc.) is not met by the organizers in some instances. The programme may be notified on the MHRD portal. This will give visibility and legitimacy to the programme.

Financial Aspects: One also notices that different patterns emerge in respect to payment of cost of travel and stay to participants. In some instances the organizing institutions pay travel allowance and hospitality. In other instances the travel cost is borne by the participants and the organizing institution extends only hospitality. In limited number of instances the organizing institutions engage in partial cost recovery by levying an amount for participation in the programme. It is felt that the financial implications of attending a programme should be totally on the organizing institution since they receive budgetary allocations from the MHRD. After the programme has been through a substantial phase of implementation and stabilised, the

implementing institutions may think about the possibilities of cost recovery. However, this may be avoided in the initial stages.

There is scope for some form of interventions by MHRD to get the programmes under the scheme notified by the regulators to ensure API scores are awarded to the participants It may also be desirable to discuss this issue with UGC so that the programmes of at least one week duration may be included in the approved list of programmes to award API scores. However, it may not be desirable to extent the duration of programmes to only make them eligible for API scores.

Management Structure: We were closely examining the management structure and implementation arrangements at the institutional level. The management structure varies among different institutions. In many instances the institutional hierarchy rather than the compulsions of implementation influence the structure. There is a need to strengthen the position of the nodal officer for effective implementation of the scheme at the institutional level. It may, perhaps, be a good idea to specify the management structure at the institutional level to implement the programme.

Meetings to Exchanges Experiences: Many of the institutions implementing the scheme felt that there should be provisions for exchanging experiences among those implementing different components of the programme. MHRD has organized workshops to discuss the implementation of the programmes. Such efforts may be continued in the future also since many of the participating institutions found such meetings very useful. Further, there is a provision for regular interaction and networking among institutions implementing the programme.

Wider dissemination of programmes under different components: MHRD can also take a necessary step in this direction by developing a system of disseminating the information (about seminars, workshops, new sub-schemes under PMMMNMTT), reports and other resources to a wider level. A common portal where all components are represented will be a good idea to experiment with. This would not only help spreading the news about PMMMNMTT, but also facilitates in creating an environment of adopting new and more effective pedagogies in teaching and learning across the Indian educational institutes as well as enabling institutions to develop inter-component linkages.

8. Suggestions for Interventions to Improve Implementation

i) The PMMMNMTT is a major reform initiative in India focusing on the crucial role played by the teachers in improving teaching learning processes and learning outcomes. It is important that such a scheme is implemented uninterruptedly and be made regular programmes of the higher education sector.

ii) The scheme mobilises top ranking institutions and high quality academics to provide academic leadership in higher education in India. Such efforts in the programme need to be further strengthened and continued.

iii) The guidelines prepared by the MHRD are comprehensive and provides good scope for institutional autonomy to design the programmes under various components. These aspects of the guidelines may be reinforced.

iv) The guidelines may also indicate the need for encouraging participants from the disadvantaged groups and locations.

v) It is also felt that the financial part of the guidelines can be more detailed to reduce the procedural delay in transferring resources within the institution – from the institution to the project.

vi) The transfer of financial resources from MHRD to the implementing institutions was fast. However, the institutional procedures and processes delayed transfer of resources from the institution to the project. The MHRD may consider possibilities of transferring funds to the project account directly with some degree of freedom for the project coordinator to withdraw the amount.

vii) All those contacted for this evaluation were highly appreciative of the role of MHRD in facilitating implementation of the scheme. The responses from MHRD have been prompt and they helped in the fast implementation of the scheme. These mechanisms of communication and responses should be retained.

viii) At times the programmes under some of the components seem like re-packaging of the existing programmes with minor modifications. There is a need to examine the innovativeness of the programmes and the MHRD may request the implementing institutions to report it under a separate heading.

ix) It seems there are overlaps between programmes suggested under different components. If these results into duplication of efforts, they may be closely examined and corrected.

x) The limitations of the initial proposals and the design of the programmes become clear while the programme is implemented. The implementing institutions may be permitted to revise the proposals after the first year of the implementation. This may make the proposal more realistic and implementable.

xi) It is a good idea to have yearly meetings of those implementing same components and related components. The MHRD organized similar workshops in 2016. Such workshops may be continued as an annual event.

xii) The number of institutions applying for the scheme and getting approval is less than expected. There is a need for the scheme to be widely notified. A letter from the UGC or MHRD to all the universities may be helpful in addition to the efforts already

made.

xiii) Institutions implementing the scheme are concerned about the uncertainty regarding its continuity. There is a need to have a reassurance to institutions on the continuity of the scheme and the scheme becoming a regular feature of higher education development in the country

xiv) The staff to implement the programme is recruited on a project basis. The programme can attract good candidates only when there is a guarantee regarding job security. Therefore, a part of the staff may be recruited as regular staff members of the institution.

xv) The implementation of the programme envisages mobilization resource persons from outside the implementing institutions. It may be useful to prepare a list of experts jointly with the implementing institutions and the MHRD. This will help widen the involvement of larger pool of experts in the design, review and overall implementation of programmes under this scheme.

xvi) Some of the institutions felt that the remuneration indicated for the resource persons is rather inadequate. They also felt that the condition to travel by Air India only is a constraining factor. MHRD may look into the possibilities of facilitating a faster and cheaper process.

xvii) At times it is difficult to get participants. There is a need to get nominations from the institutions. Another difficulty is the disincentive for faculty members to participate in the programme since it is not included in the list of programmes awarding API scores. MHRD may initiate steps so that regulators such as UGC may prescribe the programmes under the scheme as part of faculty improvement and include these programmes under those notified to award API scores

xviii) All participants may be provided travel cost and accommodation arrangements.

xix) The management structure at the institutional level may be made simple and the role of the nodal officer may be strengthened.

Annexure

List of Documents Referred

i. PMMMNMTT Guideline

Department of Higher Education, Ministry of Human Resource Development, (2015). *Scheme of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT) Guidelines* . New Delhi: Government of India.

ii. Proposals

Component: School of Education (SoE)

Jamia Millia Islamia

Assam Central University

Dr. Harisingh Gour Vishwavidyalaya, Sagar (M.P.)

Central University of Kerala

Central University of South Bihar

Central University of Jammu

Banaras Hindu University

Central University of Haryana

Component: Centres for Excellence in Science and Mathematics Education (CESME)

IISc, Banglore

Indian Institute of Science Education and Research (IISER), Pune

IIT Guwahati

Component Teaching Learning Centre (TLC)

Mahatma Gandhi Antrarashtriya Hindi Vishwavidyalaya, Wardha

NIT, Warrangal

IIT, Kanpur

Indian Institute of Technology (IIT), Hyderabad

Indian Institute of Science Education and Research (IISER) Bhopal

IIT, (BHU)

Indira Gandhi National Tribal University (IGNTU), MP

Tezpur University, Assam

Indian Institute of Information Technology, Design and Manufacturing (IITDM)Kancheepuram, Tamil Nadu

Sri Guru Tegh Bahadur Khalsa College, Delhi

Indian Institute of Technology, Kharagpur

University of Calicut, Kerala

IIT Panta, IIT Indore, IIT Kanpur, IIT Kharagpur (combined proposal)

IIT, Madras

IIT, Bombay

Dr.Harisingh Gour Vishwavidyalaya, Sagar

Component: Faculty Development Centre (FDC)

Indian School of Mines, Dhanbad

Banasthali University, Rajastan

Hemvati Nandan Bahuguna Garhwal University, Srinagar

Tripura University

Component: Innovations, Awards and Teaching Resource Grant/ Support for Faculty Including Workshops and Seminars

Indira Gandhi National Tribal University (IGNTU), MP

National Institute of Technology (NIT), Silchar

ASCI, Hyderabad

NIT, Goa

NIT Tamil Nadu

Component: Subject Based Networks for Curricular Renewal and Reforms (SBN)

National Centre for Biological Sciences (NCBS), Bangalore

Banaras Hindu University (BHU)

Component: Institutes of Academic Leadership and Education Management

Aligarh Muslim University (AMU)

Tata Institute of Social Sciences (TISS), Maharashtra

NUEPA, New Delhi

iii. Progress Report

Component: School of Education (SoE)

Jamia Millia Islamia

Assam Central University

Central University of Kerala

Component: Centres for Excellence in Science and Mathematics Education (CESME)

IISc, Banglore

Indian Institute of Science Education and Research (IISER) Pune

IIT Guwahati

Component Teaching Learning Centre (TLC)

Mahatma Gandhi Antrarashtriya Hindi Vishwavidyalaya, Wardha

NIT Warrangal

IIT Kanpur

Indian Institute of Technology (IIT), Hyderabad

Indian Institute of Science Education and Research (IISER) Bhopal

Indira Gandhi National Tribal University (IGNTU), MP

Tezpur University, Assam

Indian Institute of Information Technology, Design and Manufacturing (IIITDM)Kancheepuram, Tamil Nadu

Sri Guru Tegh Bahadur Khalsa College, Delhi

Indian Institute of Technology, Kharagpur

University of Calicut, Kerala

Component: Faculty Development Centre (FDC)

Indian School of Mines, Dhanbad

Banasthali University, Rajastan

Hemvati Nandan Bahuguna Garhwal University, Srinagar

Component: Innovations, Awards and Teaching Resource Grant/ Support For Faculty Including Workshops And Seminars

Indira Gandhi National Tribal University (IGNTU), MP

ASCI, Hyderabad

NIT, Goa

NIT, Tamil Nadu

Component: Subject Based Networks for Curricular Renewal and Reforms (SBN)

National Centre for Biological Sciences (NCBS), Bangalore

Component: Institutes of Academic Leadership and Education Management

Aligarh Muslim University (AMU)

Tata Institute of Social Sciences (TISS), Maharashtra

NUEPA, New Dehi

iv. Field Visit Reports

Component: School of Education (SoE)

Jamia Millia Islamia

Dr. Harisingh Gour Vishwavidyalaya, Sagar (M.P.)

Component: Centres for Excellence in Science and Mathematics Education (CESME)

IISc, Bangalore

Indian Institute of Science Education and Research (IISER) Pune

NIT, Warrangal

Component Teaching Learning Centre (TLC)

IIT, Kanpur

Indian Institute of Technology (IIT), Hyderabad

Indian Institute of Science Education and Research (IISER), Bhopal

IIT, (BHU)

Indira Gandhi National Tribal University (IGNTU), MP

Tezpur University

Indian Institute of Information Technology, Design and Manufacturing (IIITDM)Kancheepuram, Tamil Nadu

Sri Guru Tegh Bahadur Khalsa College, Delhi

Indian Institute of Technology, Kharagpur

University of Calicut, Kerala

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Component: Faculty Development Centre (FDC)

Banasthali University, Rajastan

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Component: Innovations, Awards and Teaching Resource Grant/ Support For Faculty Including Workshops And Seminars

National Institute of Technology (NIT), Silchar

ASCI, Hyderabad

NIT, Goa

NIT, Tamil Nadu

Component: Subject Based Networks for Curricular Renewal and Reforms (SBN)

National Centre for Biological Sciences (NCBS), Bangalore

Banaras Hindu University (BHU)

Component: Institutes of Academic Leadership and Education Management

Aligarh Muslim University (AMU)

v. Questionnaire

Centre for Policy Research in Higher Education/ NUEPA. (2017). PMMMNMTT Evaluation Questionnaire. New Delhi: National University of Educational Planning and Administration (NUEPA)

vi. PAB Meetings

PAB 1 meeting report- Date of the meeting- 13.03.2015

PAB 2 meeting report- Date of the meeting- 10.07.2015

PAB 3 meeting report- Date of the meeting- 09.09.2015

PAB 4 meeting report- Date of the meeting- 15.12.2015

PAB 5 meeting report- Date of the meeting- 23.02.2016

PAB 6 meeting report- Date of the meeting- 13.07.2016

PAB 7 meeting report- Date of the meeting- 28.11.2016

PAB 8 meeting report- Date of the meeting- 24.01.2017

vii. Workshops

MHRD Workshop on PMMMNMTT Scheme on Schools of Education, Subject Networks for Curricular Renewal and Reforms, Innovations, Awards and Teaching Resource Grant/Support for faculty including Workshops and Seminars, Institutes of Academic Leadership and Education Management – Dated 20-21.10.2016

MHRD Workshop on PMMMNMTT Scheme on Centres Of Excellence In Science And Mathematics Education, Teaching Learning Centres , Faculty Development Centre – Dated 16-17.12.2016

viii. PMMMNMTT Consultants and Officials interacted with

Ameesha Oberoi, Consultant
Dharma Rakshit Gautam, Consultant
Mithlesh Mishra, Consultant
Sajjad Ahmad, Consultant
Uzma Naz Ansari, Consultant
Vandana Indoria, Consultant
Sonia Wadhwa, Project Coordinator, PMMMNMTT, EdCIL

Amandeep Singh, MHRD
Padam Singh, MHRD

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