INDIA

RASHTRIYA MADHYAMIK SHIKSHA ABHIYAN (RMSA)

Eighth Joint Review Mission

September 20-30, 2016

Aide Memoire

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7. Acronyms

AWP&B	Annual Work Plan and Budget
ASER	Annual Survey of Education Report
ATR	Action Taken Report
BE	Budget Estimates
BRC	Block Resource Centre
B.Voc.	Bachelors in Vocational Education
CAL	Computer Aided Learning
CBSE	Central Board of Secondary Education
CCE	Comprehensive and Continuous Evaluation
COBSE	Committee of Boards of Secondary Education
CTE	College of Teacher Education
CTET	Common Teacher Eligibility Test
CTS	Child Tracking Survey
CRC	Cluster Resource Centre
CWSN	Children with Special Needs
DCF	Data Capture Format
DFID	Department for International Development
DIET	District Institute of Education and Training
DISE	District Information System for Education
DP	Development Partner
DoSEL	Department of School Education & Literacy
DRG	District Resource Group
Ed.CIL	Educational Consultants India Limited
EMIS	Educational Management and Information System
EU	European Union
EVS	Environmental Science
FM&P	Financial Management and Procurement
GER	Gross Enrolment Ratio
GoI	Government of India
GIS	Geographic Information System
GPS	Global Positioning System
HR	Human Resource(s)
IASE	Institute for Advanced Studies in Education
ICT	Information Communication Technology
IDA	International Development Association
IEDSS	Integrated Education of the Disabled at Secondary Stage
IGNOU	Indira Gandhi National Open University
IPAI	Institute of Public Auditors of India
IRT	Item Response Theory
IT	Information Technology
ITPDP	In-service Teacher Professional Development Programme
IT/ITeS	Information Technology/Information Technology-enabled Services
IUFR	Interim Unaudited Financial Report
JRM	Joint Review Mission
KGBV	Kasturba Gandhi Balika Vidyalaya
KRP	Key Resource Person
MCS	Model Cluster School
MHRD	Ministry of Human Resource Development
MI	Monitoring Institution
MIS	Management Information System
MS	Mahila Samakhya
NAS	National Achievement Survey
NCERT	National Council of Educational Research & Training
NCF	National Curriculum Framework

NCFTE	National Curriculum Framework for Teacher Education
NCTE	National Council for Teacher Education
NE	North East
NER	Net Enrolment Ratio
NGO	Non-Governmental Organisation
NIAR	National Institute of Administrative Research
NIC	National Informatics Centre
NLAS	National Learning Achievement Survey
NROER	National Repository of Open Educational Resources
NPE	National Policy of Education
NPEGEL	National Program for Education of Girls' at Elementary Level
NSQF	National Skills Qualification Framework
NUEPA	National University of Educational Planning & Administration
OBC	Other Backward Caste
OECD	Organisation for Economic Co-operation and Development
OOSC	Out of School Children
PAB	Project Approval Board
PGT	Post Graduate Teacher
PISA	Programme for International Student Assessment
PMIS	Project Management Information System
PRI	Panchayati Raj Institutions
PSSCIVE	Pandit Sunderlal Sharma Central Institute of Vocational Education
PTA	Parent Teacher Association
PTR	Pupil Teacher Ratio
QMT	Quality Monitoring Tool
RCI	Rehabilitation Council of India
REMS	Research, Evaluation, Monitoring and Supervision
RIE	Regional Institute of Education
RMSA	Rashtriya Madhyamik Shiksha Abhiyan
RMG	Repair and Maintenance Grant
RP	Resource Person
RTE	Right to Education
SC	Scheduled Caste
SCERT	State Council for Educational Research and Training
SDP	School Development Plan
SEMIS	Secondary Education Management Information System
SES	Selected Educational Statistics
SFD	Special Focus Districts
SFG	Special Focus Groups
SIEMAT	State Institute for Educational Management and Training
SLAS	State Level Achievement Survey
SIS	State Implementation Society
SMC	School Management Committee
SMDC	School Management and Development Committee
SPO	State Project Office
SPD	State Project Director
SRP	State Resource Person
SSA	Sarva Shiksha Abhiyan
SSHE	School Sanitation and Hygiene Education
ST	Scheduled Tribe
TCF	Technical Cooperation Fund
TE	Teacher Education
TET	Teacher Eligibility Test
TGT	Trained Graduate Teacher
TLE	Teacher Learning Equipment
TLM	Teaching Learning Material
TOR	Terms of Reference

TSC	Total Sanitation Campaign
TSG	Technical Support Group
UAM	Universal Active Mathematics
UC	Utilization Certificate
UEE	Universal Elementary Education
UDISE	Unified District Information System for Education
UPS	Upper Primary School
UT	Union Territory
VE	Vocational Education
VEC	Village Education Committee
VER	Village Education Register
WSDP	Whole School Development Plan

1. Introduction

1.1   Rashtriya Madhyamik Shiksha Abhiyan (RMSA) is a Programme of the Government of India, implemented in partnership with the State Governments with the main objective to make secondary education of good quality available, accessible and affordable to all young persons. The scheme seeks to enhance enrolment in classes IX and X by providing a secondary school within a reasonable distance of every habitation, to improve quality of education imparted at secondary level by ensuring all secondary schools conform to prescribed/ standard norms, to remove gender, socio-economic and disability barriers and to achieve universal access to secondary level education by 2017, i.e. by the end of the 12th Five Year Plan.

1.2   RMSA was launched in 2009, funded through national resources (central government + state government) and now has tied up for external funding by Development Partners (DP) – World Bank's International Development Association (IDA), United Kingdom's – Department of International Development (DFID) and European Union (EU). As part of the agreement for external aid from the DPs which came into effect in November, 2012, the Joint Review Mission (JRM) is to be conducted every six months in the months of January and July/August each year. The January Mission undertakes states' visits, while the July/August mission is a desk review.

1.3   The Eighth Joint Review Mission (JRM) of Rashtriya Madhyamik Shiksha Abhiyan was held from *September 20- 30th, 2016*. The Mission was a Desk Review Mission to review programme implementation, and was led by the Government of India (GoI).

1.4   The Mission put a special focus on the following aspects of the programme:

i.   Quality interventions:
1.   Discussion on learning outcomes - NAS class 10 National and State reports
2.   Secondary school readiness/ remediation programs
3.   Subject Teacher deployment for equitable distribution of subject teachers across schools

ii.   Equity interventions:

1.   Policies and programs to enhance gender and social inclusion:

   a. Initiatives that have enhanced participation of girls (including through girls' hostels, incentive schemes) and challenges in achieving gender parity
   b. Efforts that have enhanced participation of students with special needs (IEDSS - including curriculum adaptation and pedagogical approaches, incentive schemes) and challenges
   c. Initiatives that have improved participation of students from disadvantaged social groups (ST and SC- including policies in practice, incentive schemes) and challenges

iii.   Vocational Education:

1.   Curriculum development and certification for Vocational Education in Secondary Education
2.   States' experience with curriculum transaction and certification process

iv.   Access interventions and gaps:

1.   Habitations yet to be covered for secondary education - overview of GIS mapping of schools
2.   Use of GIS for school site planning while optimizing facilities of existing schools

1.5   The Mission would like to acknowledge the work done by teams in the Ministry of Human Resource Development (MHRD), the participating state governments for their insightful presentations of their state experience and national agencies like PSSCIVE, NSDC and NUEPA for their presentations, the close support of the Technical Support Group (TSG) for the detailed information made available to the Mission. In addition, the NAS team at National Council of

Education Research and Training (NCERT) and the UDISE team at the National University of Education Planning and Administration (NUEPA) provided valuable inputs. The Mission has greatly benefited from the discussions and would like to put on record its gratitude to all the above mentioned.

2.   Recommendations of the 8th RMSA JRM

2.1   The JRM has noted that a number of recommendations listed below, especially pertaining to Financial Management, Procurement and Civil Works, are continuing from the past JRMs. They are being reiterated at this JRM as so far, they have either not been addressed or inadequately responded to in the ATR. These recommendations are on serious issues that need urgent attention and these issues should be resolved on high priority.

	Recommendations	Action timeline
	Quality interventions	
1.	The NAS results need to be presented in a clearer way that expresses what students can and cannot do. Greater clarity will enable a better understanding of what the results show. This should be a priority action for NCERT and clearly presented in the state report cards. It would help states if this included specific areas on the tests where performance was of particular concern.	December 2016
2.	States should use available data and evidence on learning achievement to develop well-targeted, focused interventions for learners. Particular emphasis should be given to SC, ST, OBC and minority community students given the NAS results point to particular concerns over these groups. Responses should involve a package of interventions (rather than rely exclusively on training) including appropriate materials, improved pedagogy, and school level support for teachers. The use of technology should be explored. It is also important to monitor the effect of such programmes to check if they are actually making a difference, and if not find out why and change them.	To be included in the AWP&Bs of 2017-18, update on progress at next JRM
3.	Initiate actions to ensure that all vacant positions of teachers and head teachers/principals of secondary schools are filled within the next two years. This should include undertaking reforms that ensure fair and transparent recruitment and deployment, such as those being pioneered in Karnataka, Tamil Nadu and Himachal Pradesh. Specifically, such reforms should include: (i) systems to predict current and future subject-wise demand for teachers, (ii) establishment of clear and inclusive recruitment, deployment and transfer norms, (iii) ensuring an equitable distribution of teachers with incentives to teach in harder to reach areas, (iv) use of technology to improve efficiency and transparency.	Update on progress at next JRM
	Equity Interventions	
4.	Strategies need to be developed and rolled out to address the low levels of learning achievement by SC, ST and OBC children in all subject areas. In particular the school experience of ST students warrants particular attention, as per the recommendation (#6) of the 6th JRM which advocated for a study which to date has not been taken forward. Remediation programmes may go some way to meet immediate needs, but the overall approach of teachers needs to be examined and overhauled.	To be included in the AWP&Bs of 2017-18, update on progress at next JRM
5.	Afford greater priority to CWSN by ensuring funds are released and utilized effectively. This should be made a standing item in regular programme management and review processes.	Update on progress at the next JRM
6.	Improve the information contained in the Monitoring Institutions reports to provide a more qualitative assessment on the school-level experience of girls and CWSN that better examine the use and impact of the various provisions for girls and CWSN under RMSA. The RMSA Montoring Tools for MIs should be amended to include greater attention to CWSN and the requirement to report in greater	Amend ToRs and Tools for MIs by TSG by November 2016.

	detail made clear through including more specific reference to CWSN at Section 5 of the ToRs.	
	Vocational Education	
7.	*Deliberation on the purpose of vocational education at the secondary level:* Given the rate of expansion of the vocational education program and concerns regarding the overall objective the scheme, a working group could be set up to further deliberate on how the scheme can be revised to improve employability of secondary students. This group could discuss issues related to the focus on employability versus employment, offering students a bouquet of courses versus focusing on one sector, and the length of courses, among other issues.	By December 2016
8.	*Impact evaluation and Process evaluation of the vocational education scheme:* Previous JRMs have emphasized the need for a rigorous evaluation of the program and this JRM has reiterated the critical importance of the same. It is recommended that the evaluation study planned generate evidence to answer the following questions - • What is the impact of the vocational education scheme on the dropout rate in participating schools versus schools not implementing the scheme? • What is the impact of the vocational education scheme on the employability of participating students versus those students not participating in the scheme? • What, if any, are the financial, social, and academic trade off's for participating students? • To what extent are states following the guidelines for selecting schools to implement the scheme? What are the bottle-necks, if any, being faced by states in adopting these guidelines? • Is the scheme cost-effective in terms of improving dropout rate and employability among secondary and higher secondary students?	Update on progress (findings of study) at the next JRM
	Access interventions and gaps	
9.	The RMSA strategic interventions in the coming years to improve access and participation could focus on consolidation of the secondary school network, with option for selective expansion based on GIS based school mapping (i.e. schoolGIS). Upgrading the current schoolGIS in terms of resolutions; use of actual walking distance in defining catchment area of a school; EMIS/U-DISE data synchronisation; and adding features to generate dynamic school maps. States need to be given administration and editing rights of schoolGIS; and accordingly their capacity is developed with technical support from the NIC. A User Guide and a Technical Note are necessary to make schoolGIS more useful for mapping access to school education.	To be completed by end of FY 2016-17 and update at the next JRM
10.	Student-wise database being created by states with technical support from NUEPA should also track grade VIII students, and in the process, include key socio-economic status variables like parental education and occupation to understand the factors that prevent certain groups of children from transiting to grade IX. Empirical research is important to understand the dynamics of low transition to secondary education and variations across states need to be better understood for improving programme planning.	Include variables in the DCF for UDISE 2017-18
11.	Given the resource crunch and unsatisfactory quality of secondary schooling provisions in terms of availability of core facilities and staff,	Core facilities and weightage to

	the "whole school approach" for strengthening secondary schools under the RMSA need to be looked into to reduce the number of items in the basket of core facilities. One option could be to assign appropriate weightage to different facilities and track the essential facilities that are being provided for.	be finalized by December 2016
	Civil Works	
12.	MHRD is required to review the status of the pending civil works approved during the 11th FYP period and take appropriate actions, including cancellation of sanctioned works wherever necessary. The Ministry may present a detailed action taken report to the next JRM.	Detailed action report to the next JRM
13.	In order to ensure minimal level of infrastructure and facilities in a school, MHRD may consider developing standard designs (including provisions for solar light and water pumping systems, by also taking advantage of schemes of Ministry of Drinking Water and Ministry of New and Renewable Energy) in consultation with the states and issue appropriate guidelines.	To be completed by March 2017
	Financial Management	
	For MHRD:	
14.	Complete Financial Review of the Program by March 2017 by independent domain experts from the area of government finance and accounting systems (continues from 7th JRM Rec.# 27). This task is critical as successive JRMs have noted serious issues in financial management (from the documents shared with the JRM) that need to be resolved on a high priority basis.	To be completed by March 2017
15.	Timelines should be set for freezing of state-wise annual expenditure figures based on audited figures in the Project Management System (PMS) which should be no later than March 31 of the next financial year. To promote accountability and transparency, MHRD should consider putting up on its portal state-wise and year-wise data on fund releases (Centre & State), utilization, and the balance of funds as on September 30 and March 31 every year.	To be completed by March 2017
16.	Strengthen TSG to provide guidance and training on financial management to the SIS and improve program oversight. A team of at least two full-time finance personnel is required to manage a Program of this magnitude and spread.	To be completed by December 2016. Update progress at the next JRM
	For states/UTs:	
17.	Conduct a special drive to address significant audit issues raised by the Auditors since FY 13-14 and submit Action Taken Report to MHRD by March 31, 2017. Going forward, set up an appropriate mechanism to ensure that audit observations are addressed in a timely manner and reported to all the stakeholders including development partners. Set up a program audit committee at the level of SIS chaired by the State Project Director. States should provide management comments on the audit reports before submitting to MHRD.	To be completed by March 31, 2017
18.	Put an Internal Audit System in place (particularly states having expenditures of INR 25 crores and above).	To be completed by March31 2017
	Procurement	
	For MHRD:	
19.	Priority should be accorded for hiring support staff for procurement at national level to coordinate dissemination of the provisions of FM&P manual for wider compliance in the states. Besides it is recommended that MHRD write to states regarding the importance of procurement plans and ask them to prepare realistic procurement plans in consultation with executing agencies and work on them for efficient and timely procurement (continues from Rec #32 of 7th JRM).	To be completed by December 2016. Update progress at the next JRM

	For states/UTs:	
20.	It is recommended that states, who have not yet prepared a monitoring framework, prepare a detailed monitoring framework (preferably on line tracking system) with procurement plan as the base document and follows the same meticulously both at school and district level for efficient execution & completion of civil works(continues from Rec. # 31 of 7th JRM).	To be completed by December 2016. Update progress at the next JRM

3. Overview and Key Issues

3.1. **Secondary school education in India has been brought to focus through the Rashtriya Madhyamik Shiksha Abhiyaan (RMSA).** The implementation of the program has been gaining momentum since its launch in 2009-10 with significant growth of secondary schools and increase in student enrolment by about 11 million since 2009-10 and one million over the last year. This is a phenomenal increase in such a short period of time. The overall access to secondary school education has also seen an impressive increase in the participation of students from different regions and social groups. It is noteworthy that the enrolment of girls has outgrown that of boys when compared to their respective shares in their age group in the population (GER of girls: 81, GER of boys: 79). With the massive expansion in the schools and student enrolment, there has also been a large increase in the number of teachers at the secondary level through accelerated recruitment efforts by states. Formulation and execution of secondary education reform policies, particularly related to teacher recruitment, have received impetus as a result of the RMSA program. In -service teacher training at the secondary level has been introduced under RMSA and provides an excellent opportunity for their professional development. The National Achievement Survey conducted for the first time at the secondary level in 2014-15 has given critical insights into the quality of secondary education through measurement of student learning levels. The RMSA guidelines for implementation have helped streamline processes for school and systemic reform (for e.g. increasing engagement of the School Management Committees in school development and management, use of school grants, financial management and procurement processes in the states).

3.2. **The expansion of secondary schools has to now overcome the major challenges of inequity in access, retention and learning.** The unprecedented expansion of the secondary school system in diverse settings is bound to be accompanied by its set of challenges. Regional disparities in enrolment and retention of all categories of students, provision of schools with inadequate facilities and availability of subject teachers (including their autonomy and accountability) continue to ail the system. There is much more scope for developing teacher knowledge and skills in use of better and more effective pedagogical practices in the classroom. Cumulative learning gaps from the previous years of schooling stack up at the secondary level (with large number of students below expected average and at the bottom end of the performance scale). This leaves insurmountable challenges for the teachers and the system to address and remediate over just the two years of classes 9 and 10. This is by far at the core of all challenges faced at the secondary education level. Efforts to improve access, retention and learning must use new and innovative strategies (like behavioral interventions) including cross learning between states/UTs. Successive chapters have focused on these in more detail.

3.3. The issues presented in this section are in continuation with key issues discussed in the Aide Memoires of previous JRMS and may be considered together with the suggestions of the previous JRMs:

3.4. **The mission mode of RMSA needs to be mainstreamed with the regular secondary education system in the states/UTs.** The RMSA management structure has been in existence for more than six years and it is time for its review to understand how best (perhaps over a period of about five years), the parallel structure of RMSA with its innovations and good practices identified during its implementation can be mainstreamed with the existing system of secondary education. Increasing the collaboration between the offices of the secondary education departments and the RMSA project at the state and district levels for review and analysis of different types of data (for e.g. UDISE, teacher MIS and NAS data), joint planning and monitoring of interventions (particularly for academic support and supervision in schools and teacher development), and joint reviews of budgets and expenditure will foster deeper linkages.

3.5. **Periodic structured internal reviews of RMSA will go a long way in strengthening implementation and ensuring outcomes.** Along with the external biannual JRM process, a more structured internal review mechanism is required at the national level. This may be done at least once in two months on specific themes and issues (with some critical issues like comprehensive financial reviews done more frequently and repeated at every alternate review) between the Central and

state/UT governments under the chairmanship of the Joint Secretary, RMSA, MHRD. An annual review plan with schedules could be set up at the beginning of the year and communicated early on for states'/UTs' participation. It is important for all stakeholders to be apprised of developments regularly for early interventions and remedies to improve management and implementation of the program. Similarly, to ensure that issues receive adequate deliberation during the JRM, the dates for the JRM should be fixed at least two months in advance and background materials circulated at least a week before the JRM schedule. This will allow for sufficient preparation time for everyone involved.

3.6. **Special attention is required for specific areas and select states to help achieve the national goals of RMSA.** The regional disparities have led to inequity in participation of girls and students from all social groups in secondary education. Some states (and districts within states) face this disadvantage more than others and should be identified to develop targeted interventions to address the challenges. This will require closer oversight and monitoring to help them cover the gaps and catch up to help achieve the national goals. Improving the situation in some of the larger states (with large populations of boys and girls in the relevant age group, a larger share of the total student enrolment, and larger share of teachers in the total number) will make a dramatic difference to the national progress.

3.7. **School size matters when it comes to efficiency of education service delivery.** Secondary schools can deliver education outcomes more efficiently if they are of the optimum size (student enrolment) and equipped with the adequate physical facilities and staff. Not all schools set up under RMSA just for grades 9 and 10 have been demand based (i.e. taken into consideration the number of students residing and ready to come to school from neighbouring communities/within the distance norm) and those functioning with sub-optimal enrolment should be reviewed. These stand-alone schools still need the full complement of principals and subject teachers, laboratory and library facilities, etc. thereby increasing the cost burden on the system at the expense of effectiveness and efficiency. Integration and consolidation of secondary schools with either nearby elementary or senior secondary schools with a common management will increase the pool of available subject teachers and ensure better transition and completion rates for students at all school education levels.

3.8. **Providing more flexibility in the norms to meet specific needs of each state/UT will lead to more efficient use of funds.** The regional and socio-cultural diversity between and within states makes it challenging to apply the same norms universally across different geographies (for instance, distance norms for construction of secondary schools). If states/UTs specify their needs and context specific strategies to address these needs (for e.g. options for provision of transport facility or hostel provision instead of establishment of small schools that may be inherently unviable even in the long run) the Centre could consider providing some flexibility in the funding norms which will ensure better outcomes. Given the funding constraint, this could also allow for some flexibility in the budget line items (at the activity level) under each parameter/component in the integrated RMSA scheme to accommodate state specific needs.

3.9. **Development of longer term perspective plans by states/UTs will strengthen planning and program management towards meeting the goals of RMSA.** The states/UTs and the central government should consider preparing three year perspective plans and then draw out their annual plans based on the longer-term perspective plans. The current Annual Work Plans and Budgets of states/UTs focus on taking short term measures on different components of RMSA which may not be clearly linked with their longer term vision. This link is important for the states/UTs and the Centre to understand the long term direction of their program and how well it is aligned to the RMSA goals.

3.10. **Data available to the states/UTs should be analyzed more rigorously for planning and monitoring.** There is considerable effort being put into collection of data at the secondary school level which is a valuable resource for planning and monitoring of the RMSA program. Currently, the attention leans more towards data for monitoring but equal use of data should be made for planning. The comprehensive UDISE database (data of which has stabilized in the last few years) can be used for school, district and state/UT level planning, and go beyond just reporting on standard

indicators like GER, NER, GPI, drop out, transition, pass rates and so on. From this year the UDISE will capture individual child-wise data which will be a valuable source of information for planning interventions at all levels, provided this data is updated regularly and verified with rigour. Similarly, states are beginning to develop management information systems for teachers and principals which should be used for rationalizing equitable distribution of subject teachers. The data from the first round of NAS grade 10 should be made available to the states/UTs and published in the public domain so researchers and experts can contribute to richer insights through different kinds of analyses. At the central government level the Project Monitoring System (PMS) captures comprehensive information from states on their physical and financial progress. If links are provided to the UDISE data, users will be able to retrieve information on many more parameters through this single system. This will also improve the accuracy of the UDISE data reported by the states/UTs.

3.11.   **Linking part of the fund releases to achievement of targets will sharpen the focus of implementation to align with the targets.** States/UTs should analyse all the available information to identify areas of challenges and possible solutions based on evidence. Annual state plans with annual targets must then be prepared linking specific activities to annual targets. Part of the fund release in the current year may be made conditional on achievement of targets of the previous year, or the second instalment in the year may be released based on in-year performance till date. In the current financial year, the central government has made remarkable progress in releasing 62% of its budgeted estimate for the year to the states. This provides sufficient time and funds to states/UTs to implement their annual plans. Linking funds to achievement of targets will prevent accumulation of unspent funds with the state implementation societies to a large extent and help complying with the audit reports. In addition, developing state/UT level results framework documents (RFD) will strengthen the planning process and help monitor implementation better. These RFDs should be developed using the format of the national RFD. The national RFD should ideally be an aggregation of all the states'/UTs' RFDs. RFDs can also help in making mid-course correction in implementation if required, based on progress updates.

3.12.   **Regular monitoring and support mechanisms are required at the state and district levels.** This area remains underdeveloped despite the rapid expansion of schools and teachers in the last few years. The secondary education system does not have a management structure for monitoring and support at the sub-district level. In this scenario, the district education and RMSA project offices may collaborate their efforts for monitoring, support and supervision of schools with the DIETs, CTEs and IASEs. While there is a system of external monitoring by the Monitoring Institutions (MIs) for a small sample of schools, it is not clear how their observations are taken on board and actioned upon by the district level officials.

3.13.   **The availability of subject teachers is critical for enhancing the quality of secondary education.** While states/UTs have made significant progress on teacher recruitment, the latest data shows that only 21% of secondary government schools have the full complement of principals and subject teachers. Attention on a priority basis has to be paid to recruit subject teachers, particularly for mathematics, science and English. So far the teacher adequacy has been measured through the simple PTR as at the elementary level, which has made it difficult to estimate the number of subject teachers available. However, the pupil teacher ratios should be based on subject wise availability of teachers and this indicator should be standardized for measurement consistently across states/UTs.

3.14.   **Effective use of technology should be encouraged to promote student learning.** Teachers face considerable diversity of learning levels of their students in their classrooms and they need to be able to support each student starting from that student's learning level. States/UTs should review, with the help of subject specialists and IT experts, the relevant IT solutions/softwares available that can enable students to build their knowledge and skills starting from their level towards their grade appropriate level. ICT should also be made use of for teacher professional development. Part of the in-service training can include teachers using ICT facilities in their schools or homes for accessing online courses, open educational resources (for e.g. the NROER among other resources) relevant for their subjects, with credits/certificates awarded for completion of such courses and assignments.

3.15. **The scheme for vocationalisation of education at the secondary and higher secondary level offers an opportunity to impart critical non-cognitive skills essential for further education and the labor market**. Vocational *education* at the secondary level of schooling is distinct from vocational *training*. The latter prepares individuals for employment in a particular trade while the former, in the case of RMSA, aims to enhance the employability of youth. This distinction implies that employment or placements should not be the primary measure by which the success of vocational education at the secondary and higher secondary level is gauged. Instead, the focus should be on providing the *transferable* skills important for employment (and further education). These include skills such as problem-solving, critical thinking, communication, team work and so on, that could be taught in the context of the general academic curriculum or in the context of vocational subjects that students might find more attractive.

3.16. **Given the funding constraints under RMSA, activities should be prioritized to overcome the biggest challenges.** A major shift is required to direct efforts with adequate human and financial resources to solve the problems of inequity in participation and learning. In the current integrated scheme, a wide gamut of interventions is included which is spreading the resources thinly across the program. The 2014-15 data shared by MHRD at the last JRM showed that the expenditure for equity and quality interventions made up only 1% and 3.8% respectively out of the outlay of 6% and 20% respectively. Further, more flexibility is needed in the budget activity template to allow states to plan and spend on activities outside predetermined budget line items.

4. Progress towards RMSA Goals

4.1.   The RMSA has now completed more than six years of its implementation. The RMSA has contributed substantially in terms of expanded access to secondary schooling, increased participation and reduction in gender and social category gaps in participation in secondary education.

Goal 1: To improve access to secondary schooling

4.2.   The RMSA seeks to enhance enrolment in secondary education (Classes IX &X) by making available a secondary school within a reasonable distance from every habitation, to achieve a Gross Enrolment Ratio (GER) of over 90% in secondary education by 2017.

4.3.   Substantial progress has been achieved in terms of expansion of secondary schooling facilities. The major RMSA interventions that had a direct bearing on the expansion of schooling facilities and achieving the goal of universal access to secondary education include upgradation of existing schools and opening of new secondary schools, and construction of additional classrooms in existing schools. Since the commencement of the RMSA, a total of 12,394 new secondary schools were sanctioned. Of the new schools sanctioned, 10,397 (83.89%) schools have been made functional. New secondary schools have been sanctioned in 30 states/UTs and over 50,000 additional classrooms have been sanctioned. As a result, the percentage of habitations having a secondary school or section within the specified distance norm (five kilometers from the habitation) has gone up from 68.2% in 2011-12 to 86.48% in 2015-16.

4.4.   Overall *there has been substantial growth in enrolment in secondary education in the country.* Between 2009-10 and 2015-16, total enrolment in Grades IX and X has increased by 27.7% (from 30.7 million in 2009-10 to 39.2 million students in the academic year 2015-16). The percentage increase in enrolment in secondary education during the period 2009-10 to 2015-16 was higher for girls (34.8%) than that for boys (21.3%). There has been steady improvement in Gross Enrolment Ratio (GER) in secondary education. The national average GER increased by 17.1 percentage points (from 62.9% in 2009-10 to 80.01% in 2015-16).

Issues/challenges that need attention

4.5.   *Insufficient progress in enhancing GER and transition rate.* The RMSA target of a national GER of 90 percent by 2017 is unlikely to be met. The annual growth rate since 2009-10 has been 4% per year. The annual growth rate in GER will need to increase to 11.8% during the year 2016-17, if the programme target is to be reached by March 2017. Further, there are significant regional disparities in transition rate and GER. The transition rate from upper primary to secondary stage during the academic session 2014-15, ranged from 79.2% in Jharkhand to 99.9% in A&N Islands. Eleven states recorded a transition rate that was lower than the national average.

4.6.   *Over-aged and out-of-school children.* The gap between the GER and NER continues to be substantial. While the GER in 2015-16 was 80.01%, the NER was only 51.26% (50.66% for boys and 51.93% for girls). When the NER is compared with the GER, the difference between the two highlights the incidence of over-aged enrolment in secondary education. GER and ANER (Adjusted Net Enrolment Ratio) also continues to be substantial. The ANER was only 63.37% (62.52% for boys and 64.33% for girls) in 2015-16. The key difference between GER and ANER is that ANER includes children of secondary school age who are enrolled in both secondary and higher secondary stages of education. The relatively lower ANER reflects the magnitude of out-of-school children the age group 14-15 years.

## Goal 2: To bridge gender and social gaps

4.7.   The RMSA has mainstreamed gender concerns in all activities under the programme. In addition to programmatic interventions undertaken to promote girls' education within the mainstream secondary education system, girls' education is pursued through several interventions subsumed under RMSA. Some of these include: interventions undertaken for creating awareness for

educating girls, life skills programmes, Kishori Utkarsh Manch, stipend to girls, provision of girls' hostels in Educationally Backward Blocks for girls belonging to SC, ST and BPL families, and so on.

4.8. ***Significant progress has been made in reducing gender disparities in education.*** The gender gap in GER has reduced from 8 percentage points in 2009-10 to – 1.81 percentage points in 2015-16, with the GER for girls and boys being 80.97% and 79.16% respectively.

Figure 1: Trend in secondary GER by Gender
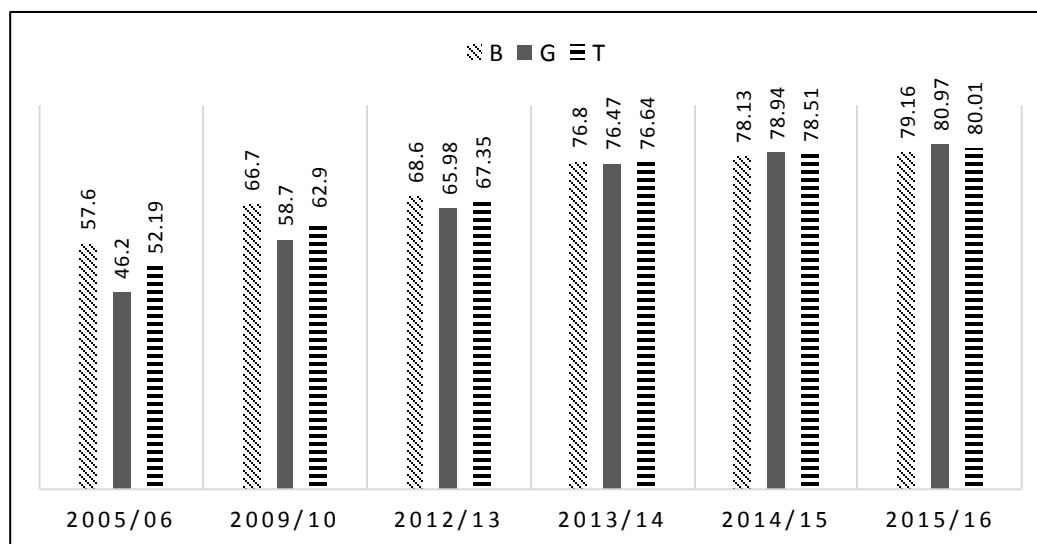
4.9. ***Significant progress has also been made in achieving Gender Parity for GER.*** The national average GPI for GER in ***secondary*** education has improved from 0.88 in 2009-10 to 1.02 in 2015-16. The state of Bihar recorded the highest improvement in GPI for GER (from 0.75 in 2009-10 to 1.18 in 2015-16). While the GPI for GER increased in several States/UTs, the GPI decreased in 7 states.

4.10. ***Participation of SC children in secondary education has recorded substantial increase.*** Substantial ***progress*** has been made in terms of the participation of SC and ST children. The GER of SC now stands at 85.32% (2015/16), above the national average for all categories, compared to a GER of 67.80% at the start of RMSA.

Figure 2: Trend in GER by Social Category
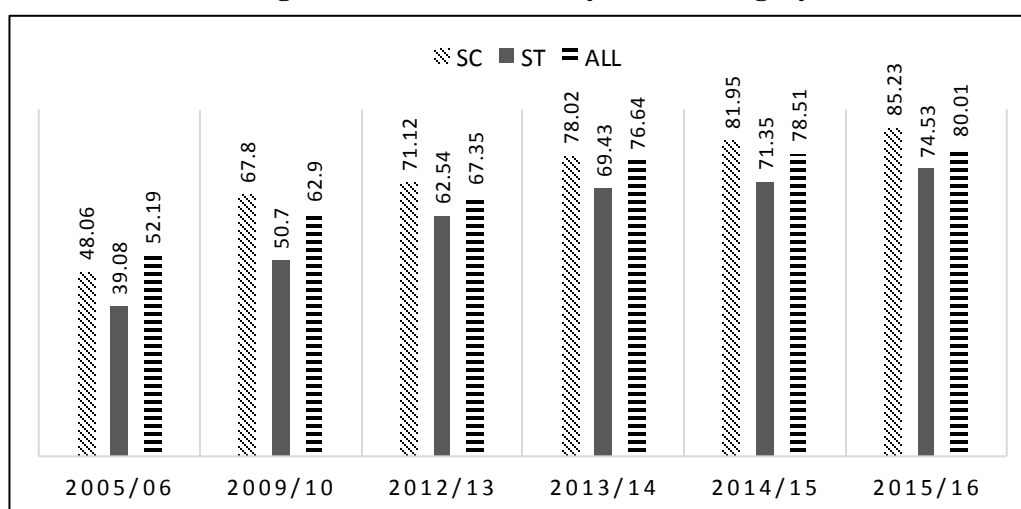
4.11.   Participation *of ST children in secondary education has also recorded substantial increase.* Between 2009-10 and *2014*-15, the enrolment of ST children in secondary education increased by 1.2 million (from 2.1 million to 3.3 million). The total enrolment of ST children in secondary education has increased by 57.1%. Between 2009-10 and 2015-16, the GER for ST children has increased by 23.8 percentage points (from 50.7% in 2009-10 to 74.5% in 2015-16). In 9 states, the GERs for ST children were lower than the national GER for STs.

4.12.   Education *of differently-abled children.* More than 250,000 children (of secondary-school age) with special needs have been identified. Most states/UTs have successfully integrated inclusive strategies into education to facilitate enrolment and retention of differently-abled children in secondary education. Nearly 4,000 CWSN resource rooms and more than 3,000 special educators have been established to support education of the differently-abled children.

Issues/challenges that need attention

4.13.   *The transition from upper primary to secondary education and enrolment in and completion of secondary education remain relatively lower for ST students:* While some states like Rajasthan, Assam and Chattisgarh have shown significant rises in ST enrolment, ST students continue to lag behind their peers in other groups in most states. From a gender perspective, the percentage of girls' enrolment within each social category is at or above the overall percentage of girls enrolment in the general population, the exception being OBC girls who are marginally below the general average.

4.14.   *Relatively lower enrolment/retention rates among differently-abled children.* While every state/UT has made progress in terms of implementation of integrated education of differently-abled children, most states continue to experience difficulty in enrolling and retaining a significant proportion of differently-abled children. A significant number of secondary school-age differently-abled children continue to remain out of school. Transition rates of CWSN from class VIII to class IX remain in decline: from 70.03% (2013/14) to 56.3% (2015/16).

Figure 3: Trend in Total CWSN Enrolment by class
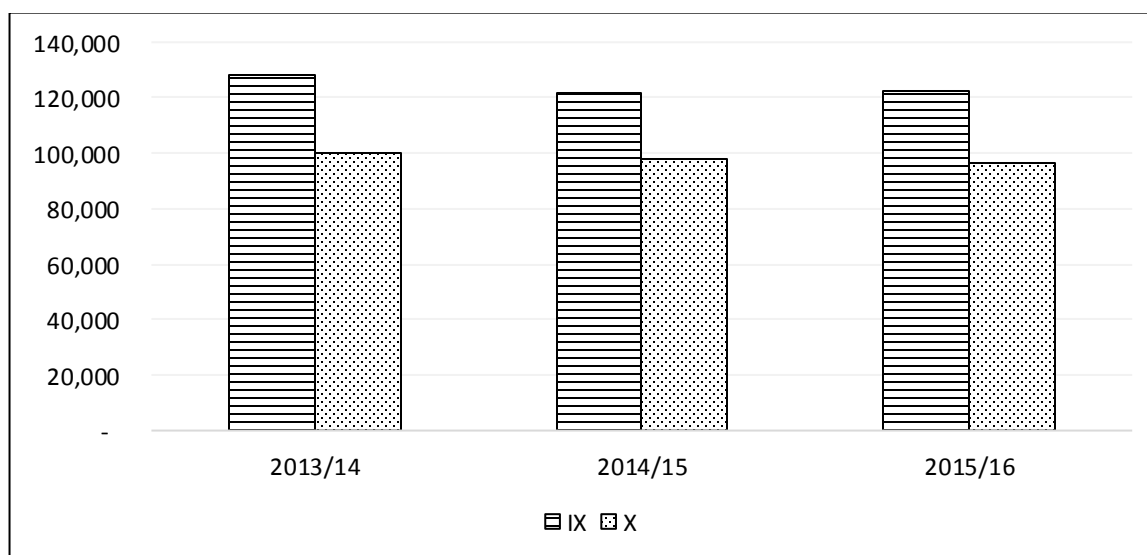
4.15.   *Relatively lower transition rates.* The focus of attention on bridging gender and social gaps has been very largely focused on ensuring greater parity in enrolment. In the case of transition from elementary to secondary, the rates for SC, ST, and Muslims – for both boys and girls – are below that of the general population. Rates reported for 2015/16 for all categories show little variation from those of 2014/15, the exception being for SC where a drop is reported: 3.07 percentage points for boys and 2.36 percentage points for girls.

4.16.   ***Regional disparities in gender parity.*** Whereas the overall picture for the participation of girls and social categories shows progress, national figures mask regional disparities. A number of states lag well behind the national averages, in particular Gujarat and Rajasthan have the lowest GPI (0.83 and 0.86 respectively), though both have shown improvement since 2009/10. Closing these gaps remains a priority. The same is true of the participation of children from the special social categories. State level disparities extend further to district and bock level and continued progress will depend on the ability of states to develop context-specific approaches to bring these hardest to reach groups into secondary education. This will in all probability require approaches that are not necessarily constrained by the norms of RMSA.

Goal 3: All children retained in education system

4.17.   Retention in secondary education is measured using two indicators, dropout rate and transition rate. The progress in transition rates has been discussed in the previous section in the context of gender and social groups. Progress on the second indicator, i.e. dropout rate, is highlighted here.

4.18.   The national Annual Average Dropout Rate at Secondary stage of education in 2014-15 was 17.06%. The dropout rate for girls was slightly lower (16.88%) as compared to boys (17.21%).

Issues/challenges that need attention

4.19.   ***Relatively higher dropout rates.*** Higher dropout rates in secondary education remains a serious concern. The annual average dropout rate in secondary education recorded a slight increase from 14.54% in 2012-13 to 17.06% in 2014-15. This indicates that more than 18 out of 100 students who enter Class IX drop out before they complete secondary education. The drop-out rates for SC, ST and Muslims are higher than the rates for the general population; the exception being OBC where their average transition rate (93.67% for boys, 88.7% for girls) is greater than for the general population (92.48% for boys, 88.66% for girls) and average drop-out rates are similar (17.35% for boys, 16.7% for girls) to the general population (17.21% for boys, 16.88% for girls).

Goal 4: Education of good quality

4.20.   In order to enable access to good quality secondary education accessible and affordable to all in the age group of 14-18 years, the RMSA framework stresses on provision of required infrastructure (especially library, science and mathematics laboratories, computer lab); providing teachers in all the subjects – especially mathematics and science; remedial courses to enable students to reach grade IX level and review of the curriculum to meet the NCF 2005 norms. The RMSA framework also calls for the need to reform the examination system to move away from rote learning. More attention should be paid to interventions such as adolescent education programmes, school-level counselling and sensitization of the school head and teachers. The framework also emphasizes the importance of learning assessment in the school and periodic state level assessment to get an understanding of student learning levels so that it can feed into research on where students make mistakes, thereby influencing teacher support material and continuing professional development of teachers.

4.21.   **National Achievement Survey for Class X (NAS):** NCERT completed the National Achievement Survey (NAS) for class X students during 2014-15 across 34 states/UTs. The main objectives of NAS are to: (i) study the achievement levels of students of Class X in English, Mathematics, Science, Social Science and one Modern Indian Language (MIL); (ii) study the difference in achievement levels with regards to area, gender, social group, school management; and (iii) study the effect of intervening variables like home, school and teacher characteristics on students' achievement levels. NCERT has prepared State Reports Cards which have been sent to the states/UTs for taking necessary action so as to improve the learning outcomes in the states.

The key findings of NAS include the following:

4.22.   Subject-wise Mean achievement: The analysis of subject-wise mean achievement scores indicate that the average performance of more than half the states is well below the overall average in nearly all subjects. Average performance in science and mathematics is the lowest with 24 out of 34 and 21 out of 34 states, respectively, performing below the overall average.

Table 1: Overall performance of States relative to mean achievement

Subject	Number of states significantly above average score	Number of states at or around average score	Number of states significantly below average score
English	7	7	17
Mathematics	4	6	21
Science	3	4	24
Social Science	4	8	19
Modern Indian Languages	6	3	19

4.23.   **Subgroup-wise performance on NAS:** Overall, it was found that there was no **significant** difference in achievement of boys and girls in all subjects except in **MIL** (favouring girls). Urban students were found to outperform rural students and students from the OBC group showed better average performance than those in the SC and ST categories. Finally, with regard to school management, students at private schools performed better than students from both the Government, and Government-aided schools.

Issues/challenges that need attention

4.24.   The Class X NAS findings reveal that the learning levels of students at secondary stage fall well below the expected levels. The difference in performance by groups reflect a serious challenge to the goal of 'equity in learning'. The phenomenon of under-achievement among pupils reflects the quality-related deficiencies facing the secondary education system. Despite important progress, the educational processes in schools remain deficient resulting in unsatisfactory levels of student learning. The unsatisfactory levels of student learning underscore the fact that fostering quality education should be the key focus of attention in the coming years.

5. Quality interventions

5.1   This JRM focussed on selected aspects of the quality component under RMSA to understand the status and progress in the following areas:
- Learning outcomes as measured by National Achievement Survey (NAS) in grade 10
- Teacher recruitment and equitable distribution of subject teachers in secondary schools
- Secondary school readiness and remedial teaching programs

Learning outcomes as measured by NAS grade 10

Status and achievement

5.2   The Class X NAS survey was conducted in April 2015. The survey had a sample of 2.77 lakh students in 7,216 schools across 34 states/UTs. The successful conduct of such a large-scale survey and the quality of the report is a commendable achievement for NCERT. It provides arguably the most valuable measure of system effectiveness and, as such, the evidence needed to support programmes aimed at improvement. It is vital that the report is widely disseminated, understood, and used.

5.3   NCERT has also produced state-level reports highlighting key findings for each state. The purpose of the reports is to help states understand and take stock of grade 10 learning outcomes in their schools and develop strategies to address learning gaps.

Issues and challenges

Figure 4: Distribution of state average scale scores in mathematics by dispersion in scores
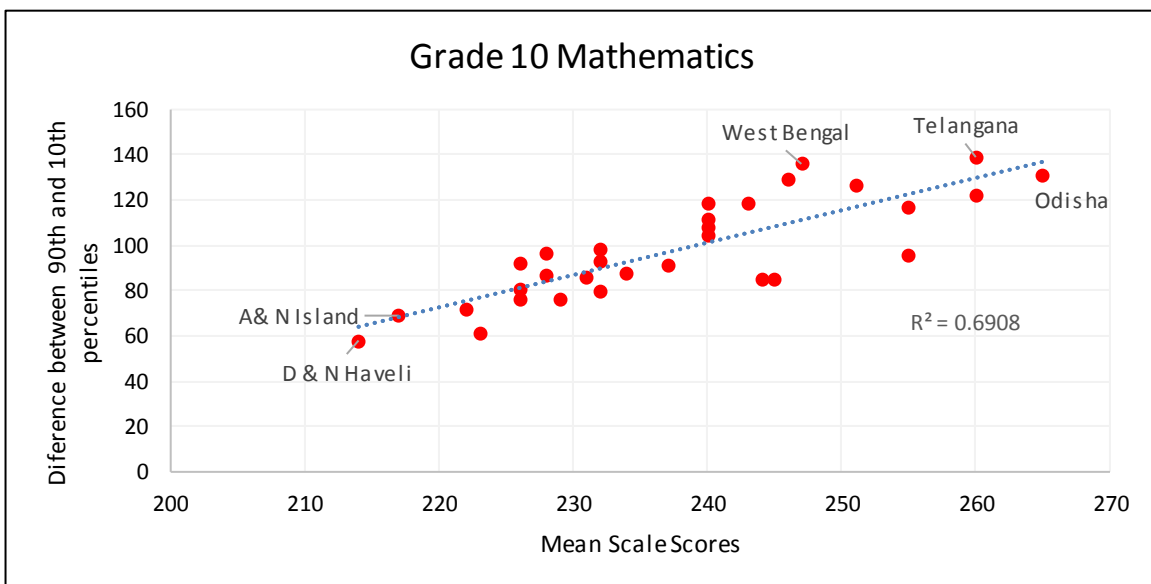
Source: National Achievement Survey – Grade 10 (2015)

5.4   The Class X NAS findings reveal that the learning levels of students at the secondary stage fall well below expected levels. The results also reveal a wide spread in the performance of students. In mathematics for instance, the gap between scores of students who are in the top 10 percent and those who are in the bottom 10 percent is 124 scale score points – a large difference amounting to nearly 2.5 standard deviation units. There is also a strong correlation between average student

performance in a state and the spread of or dispersion in student of performance for that state. Figure 4 shows this relationship. What this means is that states that are well-performing include a significant share of students whose performance is at the lower end. In states like Odisha and Telangana, as shown in the graph, a significant number of students are being left behind.

5.5   The Class X NAS results show an overall picture of lower performance by SC, ST and OBC children. Mean scores for ST and SC in particular lag well below that of the general population, with OBC children performing better but still below the general population. SC, ST and OBC children make up the majority of those students in the low performers category (scoring below 200) in all subjects. Much of this may be explained by a *learning deficit* inherited from the elementary level, but systematic attention needs to be given to meeting the learning needs of lower performers, including substantial numbers of SC, ST and OBC students.

Figure 5: Average scores by Social Group and Subjects
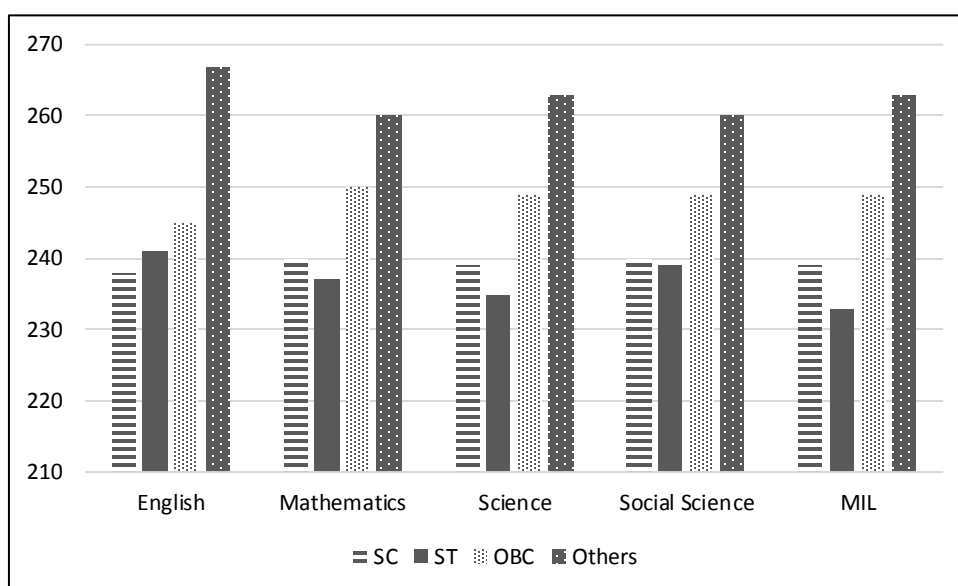
Source: National Achievement Survey – Grade 10 (2015)

Teacher Recruitment and Deployment

Status and achievements

5.6   The success of any effort to improve the quality of education is dependent upon the quality of the teacher. There are, undoubtedly a large proportion of teachers in the Indian education system who constantly strive to uphold the high ideals of the teaching profession, and show genuine commitment to learners and teaching. Quality issues in secondary education are linked to teacher development and management processes involving recruitment of qualified and their continuing professional development while in service.

5.7   ***Teacher availability has improved:*** The RMSA has been investing a substantial proportion of its funds in recruitment of additional teachers for government schools. The priority under RMSA has been on increasing the availability of subject-wise teachers in schools. Since the commencement of RMSA, approval has been granted for appointment 120,284 teachers. These include 1,276 headmasters/principals and 67,701 teachers for the 12,393 newly upgraded Government secondary schools and 41,307 additional teachers for the existing government secondary schools. In addition, 76,297 (36,554 teachers for new schools, including 3,380 head teachers and 39,743 additional

teachers) have been recruited by States/UTs. The states where teacher recruitment process remains relatively lower include Bihar, Chhattisgarh, Gujarat, Jharkhand, Orissa and Uttar Pradesh.

5.8   *Improving teacher recruitment and deployment*: With the expansion of secondary schools, the priority under RMSA has been on increasing the availability of subject-wise teachers in existing and new secondary government schools. The revised NCTE guidelines on teacher qualifications are being followed by states in formulating their teacher recruitment policies. At the secondary level, the teacher recruitment and deployment process becomes more complex as fewer subject specific trained teachers are available. There is also an uneven distribution of teachers across the rural and urban areas. Standard eligibility criteria based on NCTE guidelines for secondary level teachers exist but practices between and within states vary as found in the nine state study conducted jointly by NUEPA and the World Bank (2015)[1].

5.9   A supplemental World Bank study on the teacher recruitment and deployment policies, and processes in Karnataka and Tamil Nadu, presented at the JRM, shows that both have relatively advanced and streamlined systems and processes. While Karnataka has established an effective management of its teacher workforce using technology for the entire process of recruitment, deployment and transfer, the use of technology in Tamil Nadu is evolving with the counselling process made completely online. Both states have separate recruitment boards for teacher recruitment. Himachal Pradesh, presented at the JRM, is another example where an effective system has been established for equitable distribution of teachers. This has resulted in reducing vacancies to 4-5 % at the state level. The system has ensured that once a teacher is transferred, he/she is not relieved from the position till the arrival of another teacher. Quite a few other states are undertaking reforms to streamline their recruitment and deployment processes. High level political will and commitment to reform, a broader policy towards establishing e-governance, bureaucratic support for implementation of policies and engagement with key stakeholders (teachers, teacher unions, local political bodies) have been found to be important factors in the change process.

5.10   *The Pupil-Teacher Ratio (PTR) has improved*: The efforts to recruit teachers have contributed to improvement in PTR at the secondary level to 27:1 in 2015-16. This achievement brings the national average at par with the norms set (30:1) under the RMSA. However, over 10 states have a PTR at or above 50:1.

5.11   *Programmes have been put in place to support professional development of teachers.* An important component of quality improvement initiative under RMSA relates to professional development of teachers through in-service training. Since 2009-10, approval has been granted for training over 4 million teachers and head teachers. These programmes are designed to strengthen teacher capabilities in teaching subject contents, especially mathematics, science and social science; new pedagogical approaches, inclusive education, and learner-centred classroom transactions.

Issues and challenges

5.12   *Teacher vacancies are high in some states, particularly in math, science and English (Figure 7)* : As per AWP&B (Model Tables) 2016-17, the total number of sanctioned teaching posts in government secondary schools in 36 states/UTs is 644,826. Out of this a total of 584,981 teachers are in position. The total number of vacant positions is 102,575 (15.91%), though the proportion of vacant teaching posts has reduced from 25.82 percent in 2013-14 to 15.91 percent in 2016-17.

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[1] Teachers in the Indian Education System, NUEPA (2015)

Figure 6: Trend of vacant teacher posts (in percentages)
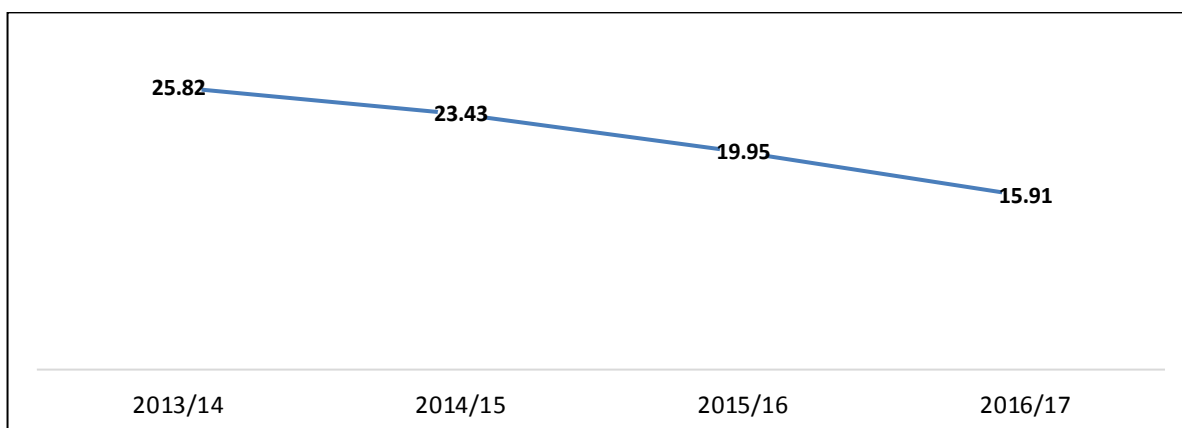
5.13   However, a large proportion of teaching posts remain vacant in states like Jharkhand (83.8%), Uttar Pradesh (54.63%), West Bengal (39.43%) and Bihar (35.16%). Data supplied to the JRM by MHRD based on the application of RMSA PTR norms for secondary schools gives the subject wise requirements for secondary teachers. This gives a much higher total of vacancies of 208,435 teachers. The majority of teacher vacancies are for English (42% of total), followed by Maths (20% of total).

5.14   So far, PTR has been reported as a measurement of teacher adequacy, but at the secondary level, this indicator does not provide the right information as availability of five subject teachers is the norm under RMSA. States/UTs should calculate the ratio using subject teacher numbers and provide information on the PTR for each subject. This will help planners to determine subject teacher demand and plan for subject teacher recruitment and rationalization for equitable distribution of subject teachers.

Figure 7: Teacher vacancies by subject
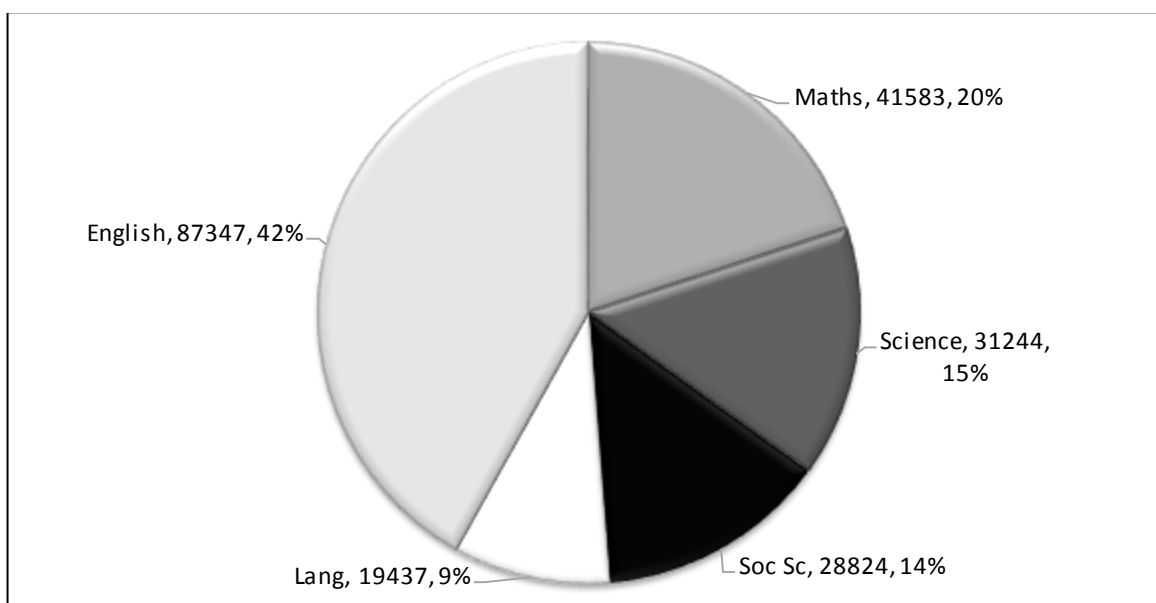
5.15   *Head teacher vacancies:* Another matter of concern relates to the vacant posts of headteachers/principals posts is a matter of concern. As per AWP&B (Model Tables) 2016-17, the total number of sanctioned posts of head teachers/principals in government secondary schools in 36 states/UTs is 94,709. Out of this a total of 65,802 teachers are in position. The total number of vacant positions is 28,907 (30.52%).The states with relatively larger proportion of vacant positions of headteachers/principals are Jharkhand (94.16%), Gujarat (97.11%), Bihar (70.31%), Chhattisgarh (57.16%) and Uttar Pradesh (62.99%), Madhya Pradesh (50.56%), Maharashtra (52.48%), Orissa (50.11%) and Uttarakhand (46.97%).

5.16   *Lack of a teacher database:* Currently there is no systematic way of tracking a teacher's professional development and growth process. In most states, the only information available is the number of teachers who have undergone the different training programmes offered. There is no teacher database indicating the profile of teachers, including the kind of training programmes attended by each teacher during the past few years.

5.17   Teacher professional development is limited to in-service training: There is wide variation among states/UTs in the management and coverage of teacher training. The needs assessment before delivering training and the follow-up of the effect of training is limited. The JRM is pleased to note that MHRD is conducting a study to understand this issue better. Moreover, professional development should expand to cover more opportunities for teachers to enhance their knowledge and skills. Earlier JRMS have focussed on this issue and given that this is not a focus theme for this JRM, the discussion on this area is limited here.

Secondary School Readiness/Remedial Teaching

Status and achievements

5.18   The findings of the NAS showing low learning outcomes in various subject areas and point to the need for immediate attention and remedial action. Teachers' ability to match their teaching to the actual learning levels of their students is the most effective way they can support student learning. School readiness/remediation programs can help teachers use this pedagogical approach to support individual student's learning needs. NCERT has developed a Secondary School Preparedness Package which has been piloted in 3 states. This will soon be finalized and made available to states to support their remediation programmes.

5.19   States are taking forward secondary school preparedness and remediation programmes. In Tamil Nadu, as shared at the JRM, a four-fold strategy is being rolled out to raise performance as well as motivation of weaker learners. This targets learners at upper primary as well as secondary, to safeguard against potential drop out. The presentation from Assam at the JRM showed that community linkages and support are used as part of their remediation programme which also includes curricular support to underprivileged student, mentoring in curricular and co-curricular areas, and the use of bridge materials to promote effective learning.

Issues and Challenges

5.20   Low levels of learning achievement contribute to low transition between class IX and X. There is an absence of clear strategies and mechanisms to resolve this problem. Approaches frequently rely on additional classes during zero hour/assembly sessions or during the vacations or school breaks. A challenge therefore is ensuring regular student attendance in such classes. Furthermore, segregating weaker students may add a degree of stigma and runs contrary to the principles of inclusion. Remediation programmes need to be closely monitored for consistency and to see their actual effect on improving learning achievement.

Recommendations for quality improvement

1. The NAS results need to be presented in a clearer way that expresses what students can and cannot do. Greater clarity will enable a better understanding of what the results show. This should be a priority action for NCERT and clearly presented in the state report cards. It would help states if this included specific areas on the tests where performance was of particular concern.

2. States should use available data and evidence on learning achievement to develop well-targeted, focused interventions for learners. Particular emphasis should be given to SC, ST, OBC and minority community students given that NAS results point to particular concerns over these groups. Responses should involve a package of interventions (rather than relying exclusively on training) including appropriate materials, improved pedagogy, and school level support for teachers. The use of technology should be explored. It is also important to monitor the effect of such programmes to check if they are actually making a difference, and if not find out why and change them.

3. Initiate actions to ensure that all vacant positions of teachers and head teachers/principals of secondary schools are filled within the next two years. This should include undertaking reforms that ensure fair and transparent recruitment and deployment, such as those being pioneered in Karnataka, Tamil Nadu and Himachal Pradesh. Specifically, such reforms should include: (i) systems to predict current and future subject-wise demand for teachers, (ii) establishment of clear and inclusive recruitment, deployment and transfer norms, (iii) ensuring an equitable distribution of teachers with incentives to teach in harder to reach areas, (iv) use of technology to improve efficiency and transparency.

6. Equity interventions

Status and achievements

6.1   RMSA's second goal is *to bridge gender and social gaps.* Arguably one of the stand out achievements in Indian education over the past decade has been the increase in girls' participation in both elementary and secondary education. Having achieved overall gender parity at the elementary level (measured by the GER), the secondary GER for girls is now also higher than that for boys. Overall progress in ensuring girls, children with special needs (CWSN) and children from disadvantaged social categories (SC, ST, OBC) are fully able to participate in secondary education has been summarized in section 4.2 above.

6.2   States are now implementing a range of strategies aimed at increasing the enrolment and retention of girls, the majority focused on the marginalized and vulnerable. Under the girls' hostel scheme, a total of 2,483 girls' hostels have been approved to be opened in all Educationally Backward Blocks (EBB). Out of this total 1,043 (42%) have been completed and a further 728 (29%) are in progress. A total of 952 are functional with a total enrolment of 77,168 girls. Other initiatives to promote girls participation include stipends for needy girls and ensuring schools have adequate toilet facilities. To overcome the constraint of distance from the nearest secondary school, bicycles are provided to needy girls. Programmes also target education officials and teachers to promote greater gender awareness, and tools and guidelines are being produced.

6.3   *Significant effort has been placed on community awareness and outreach to promote girls enrolment.* A number of states are taking forward motivational camps for girls to support improved learning of girls. Career guidance, Health Awareness, and various programmes aimed at adolescent girls and mothers are being implemented in states.

6.4   *Similar progress has been made in the participation of SC and ST children,* with the GER of both of these groups having increased under RMSA. This has been achieved through focusing a substantial proportion of new and upgraded schools in Special Focus Districts (SFD) with a high proportion of SC, ST, OBC and other minority populations. Activities being implemented include special enrolment drives, life skills programmes and encouraging parents to become more involved with schools. In Bihar, a three day programme on emotional resilience has reached over 5,000 ST/SC girls. In Madhya Pradesh, 30 different scholarship schemes from 9 different departments, have been merged and now work through a single portal, with direct transfers to a child's bank account. The introduction of unique child tracking is helping to reduce abuse and duplication, ensuring benefits reach those intended.

6.5   *Progress has been slower on inclusion of CWSN within secondary education*, despite provisions being made through RMSA under the Inclusive Education for Disabled at Secondary Stage (IEDSS) scheme. There is a total of 59,030 schools (government and government-aided) in which CWSN are currently enrolled. Provisions being made under IEDSS include the construction of 1,088 CWSN resource rooms, provision of over 22,000 disabled friendly toilets (covering 22% of schools) and the removal of physical barriers in 61,070 schools (61.87%). In addition, aids and appliances are being provided, special educators recruited and subject teachers trained to better meet the needs of CWSN. Sensitisation and awareness programmes are being implemented to reduce the stigma associated with CWSN and promote their inclusion in schools. However, overall enrolment is not increasing and the secondary level GER for CWSN may be estimated at only around 22%. [2]

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[2] Official figures estimate 2% of the population has some form of disability; therefore out of a total population of 14 and 15 year olds (class IX and X) of 987,254, a total of 218,455 are enrolled. This gives a CWSN GER for secondary of 22.13%

Issues and Challenges

6.6   Whereas the overall picture for the participation of girls and social categories shows progress, national figures mask regional disparities. A number of states lag well behind the national averages, in particular Gujarat and Rajasthan have the lowest GPI (0.83 and 0.86 respectively), though both have shown improvement since 2009/10. Bihar has shown the highest improvement in GPI, from 0.75 (2009/10) to 1.18 (2015/16). Closing these gaps remains a priority.

6.7   A number of states need to increase enrolment in girls' hostels, including Assam, Gujarat, Karnataka, Punjab, Rajasthan, Uttar Pradesh and Uttarakhand. The experiences of Rajasthan were shared with the JRM in which the need to revise RMSA norms for hostels on non-recurring items such as construction, hand-pumps, furniture and bedding was highlighted.

6.8   The same is true of the participation of children from the special social categories. State level disparities extend further to district and bock level and continued progress will depend on the ability of states to develop context-specific approaches to bring these hardest to reach groups into secondary education. This will in all probability require approaches that are not necessarily constrained by the norms of RMSA.

6.9   *The monitoring of performance with regard to equity relies very largely on the good quality, disaggregated quantitative data available through UDISE.* This has enabled accurate tracking of indicators reporting levels of participation at national, state and district levels. What is not available are qualitative data and studies that examine the efficacy of specific interventions. Better understanding of the real effects of the various and substantial investments in girls and marginalized groups can help improve targeting and value for money. This is particularly important for less tangible activities such as sensitization and training.

6.10   For children with special needs, attending a secondary school will remain a distant prospect for the majority unless and until states afford this group of highly marginalized children far greater priority. The testimony of two states, Andhra Pradesh (AP) and Punjab presented at the JRM highlighted a number of issues. Firstly, are inadequate resources being released for IEDSS? AP report no releases despite approved budgets, for the past three years and although funds are available in Punjab they report "insufficiency and irregular supply of funds to implement the scheme in an effective way". Whereas it is risky to base assumptions on the evidence of two states, careful scrutiny of approvals, releases and expenditures at both national and state levels is needed to ensure appropriate priority is given to this group of most marginalized young people. Without this their situation will not change and the vast majority will remain excluded from education and further reduction of their already limited lifetime opportunities.

6.11   Secondly, careful consideration should be given to the nature and scope of interventions available for IEDSS. In a context of constrained resources there is a need to balance provision of services more closely to need. The norm driven approach risks losing this degree of sensitivity and may not best match up resources provided, including training of teachers, to where CWSN actually are. AP for example plans to provide training to almost 30,000 subject teachers; what guarantee is there that they will actually find themselves teaching the 10,000 children currently enrolled? Creating a CWSN focal point within each school and provided support and training through that teacher to provide peer support to others within the school may be a more cost-effective way approach than targeting all teachers – releasing funds for other activities and materials.

6.12   The Monitoring Institutions reports do not adequately cover the issues of either girls education or CWSN. Treatment is generally patchy and superficial, lacking in both consistency and analysis, with the focus very much on quantitative information. The ToRs and monitoring tools give guidance for a more qualitative assessmet of girls' participation (ref. TSG RMSA Monitoring Tools

for MIs 2015-17, Section 2.II.1, p.8) though this is frequently not adequately reported on. Further more, this requirement for a more qualitative assessment is not extended to CWSN. This is an opportunity missed to provide richer, more contextualized information that would help understand the efficacy of interventions, for both girls and CWSN.

Recommendations

4. Strategies need to be developed and rolled out to address the low levels of learning achievement by SC, ST and OBC children in all subject areas. In particular the school experience of ST students warrants particular attention, as per the recommendation (#6) of the 6th JRM which advocated for a study which to date has not been taken forward. Remediation programmes may go some way to meet immediate needs, but the overall approach of teachers needs to be examined and overhauled.

5. Afford greater priority to CWSN by ensuring funds are released and utilized effectively. This should be made a standing item in regular programme management and review processes.

6. Improve the information contained in the Monitoring Institutions reports to provide a more qualitative assessment on the school-level experience of girls and CWSN that better examine the use and impact of the various provisions for girls and CWSN under RMSA. The RMSA Montoring Tools for MIs should be amended to include greater attention to CWSN and the requirement to report in greater detail made clear through including more specific reference to CWSN at Section 5 of the ToRs.

7. Vocational Education

Status/Achievements since the 7th JRM

7.1   The scheme for vocationalisation of secondary and higher secondary education (VSHSE), subsumed under the Rashtriya Madhyamik Shiksha Abhiyaan in the 12th Five-Year Plan, aims to improve employability among youth, and to reduce the dropout rate at the secondary level of education. Since 2013, the scheme has expanded to 27 states and 5 UTs with over 3500 schools approved in 5 additional states since the last JRM. Of all approved schools, about 4700 (in 21 states/UTs) are now offering vocational courses while implementation of the program is still pending in 11 states/UTs where schools have been approved. A state-wise listing of the number of schools approved and implementing this scheme is included in the Annexure.

7.2   A key feature of the scheme is its alignment with the National Skills Qualifications Frameworks (NSQF) designed to allow for vertical mobility between general and vocational education. As part of this, modular competency-based curricula and courseware has been developed for job roles in over 15 sectors (see Annexure for state-wise offerings of vocational courses). The development of curricula, student and teacher resources for an additional 100 job roles will be undertaken in 2016-17 ensuring that vertical mobility is established. As recommended by the last JRM, subject matter experts from industry are sought for the design and development of curricula and courseware, for identification of job roles and the development and pilot testing of curricula. The objective is to ensure relevance of the content to the world of work.

7.3   The National Skill Development Corporation (NSDC) plays a key role (through the SSCs) in assisting states with implementation and delivery of vocational education through partnerships with local industries. In states that have a MoU with NSDC local vocational training providers (VTPs) are identified to assist with all aspects of implementation of the program including industry participation in getting instructors, internships and placements.

Issues/Challenges

7.4   *Impact on dropout rate:* One of the stated objectives of the scheme on vocational education is reducing dropouts at the secondary level. There is as yet no information on the impact this program has on keeping students in school. This information is critical not only for establishing program success but also for addressing the large dropout rates in northeastern states, and states like Bihar and Gujarat where schools have been approved but implementation of vocational education has been relatively slow.

7.5   **"Employability":** The main objective of this scheme is enhancing employability of participating students. As discussed in previous JRMs, this includes imparting the cognitive and transferable skills deemed necessary for students as they move ahead and pursue education and careers. However, the focus on placements or employment as the sole outcome of the program potentially limits the attention that needs to be given to the development and assessment of *transferable skills*. Further, the experience from Haryana shows that only a small proportion of students participating in schools meet the age criteria (18 years and above) for placements. In Haryana this group comprised only 17 percent of participants. In effect, the focus on placements alone disregards majority of participating students.

7.6   *Will multiple vocational courses better serve students?* The focus on a single sector over 4 years of secondary and higher secondary could also pose a concern for the overall objective of

employability. It might be worth considering if students would perhaps benefit more from exposure to various job roles rather than a single job role over the 4 years. A multiplicity of offerings would give them the opportunity to experience and dabble in various sectors thus increasing their knowledge about the many options available to them after completing school. Further, students would have the opportunity to learn and skills in different contexts.

7.7   ***Duration of training for job roles:*** The length of the vocational education program for a particular job role is very concerning especially from the point of view of external providers offering the same certification (at Level 4) in a fraction of the time. This is true for several job roles that are included in the scheme (unarmed security guards, retail store operators, and so on). There is an urgent need to gather information on the time taken by external vocational training providers to certify individuals in the job roles selected for inclusion in the vocational education scheme. This comparison will not only have possible implications for costing of the program but also highlight possible redundancies in curricula.

7.8   ***Career guidance:*** Employability also entails building awareness among secondary school students with regard to various options available to them for education and careers. This enables students concretize their aspirations and plan for the future. The role of a career guidance counselor cannot be emphasized enough in this regard. The current scheme on vocationalisation of education at the secondary stage has thus far not considered the inclusion of career counselors as a way of providing students information critical for future decisions, and thus improving employability.

7.9   ***School selection for vocational education:*** Previous JRMs have recommended that a strategic approach be adopted in identifying schools for implementing the vocational education program. Factors such as location (urban/semi-urban) and proximity to economic centers are key to the success of the program. While skill gap analysis (carried out by NSDC) provide some information on the supply and demand for particular skills across districts and states, this information is most useful for identification of relevant sectors for course offerings. In the absence of internship opportunities or experiential learning environments close to the school where students can apply skills being learned in real-life situations, they remain disengaged from the subject and school. Efforts need to be made to ensure that selection of schools across states strictly adheres to the guidelines.

7.10   ***Student demand:*** The experience from Karnataka demonstrates that student perceptions of the program can be a significant determinant of program success. The perceived low status of vocational education perhaps continues to be a deterrent to participation in some contexts. The vocational education program's alignment with NSQF ensures vertical mobility from higher secondary school to higher education (B.Voc or other academic degree) but does not indicate equivalence to postsecondary TVET. The lack of horizontal mobility is possibly a deal-breaker for students who plan to pursue ITI certification or similar offerings. For students who want to continue to general higher education, the program must signal its relevance in terms of providing them with the skills necessary for further education and the labor market.

Recommendations

7. Deliberation on the purpose of vocational education at the secondary level: Given the rate of expansion of the vocational education program and concerns regarding the overall objective the scheme, a working group could be set up to further deliberate on how the scheme can be revised to improve employability of secondary students. This group could discuss issues related to the focus on employability versus employment, offering students a bouquet of courses versus focusing on one sector, and the length of courses, among other issues.

8. Impact evaluation and Process evaluation of the vocational education scheme:

Previous JRMs have emphasized the need for a rigorous evaluation of the program and this JRM has reiterated the critical importance of the same. It is recommended that the evaluation study planned generate evidence to answer the following questions -

- What is the impact of the vocational education scheme on the dropout rate in participating schools versus schools not implementing the scheme?
- What is the impact of the vocational education scheme on the employability of participating students versus those students not participating in the scheme?
- What, if any, are the financial, social, and academic trade off's for participating students?
- To what extent are states following the guidelines for selecting schools to implement the scheme? What are the bottle-necks, if any, being faced by states in adopting these guidelines?

Is the scheme cost-effective in terms of improving dropout rate and employability among secondary and higher secondary students?

Annexure to Chapter 7: Vocational Education in Secondary Schools

Table 2. Approval and implementation status of vocational education scheme in secondary schools

State	Prior to 2013	2013-14	2014-15	2015-16	2016-17	Total Approved	Total Implemented
Total	732	327	947	1644	3798	7448	4757
Haryana	40	100	100	250	500	990	990
Himachal Pradesh	100	0	100	300	467	967	850
Punjab	0	0	100	300	380	780	400
Rajasthan	0	0	70	220	380	670	670
Maharashtra	0	0	347	0	164	511	310
West Bengal	93	0	0	196	211	500	289
Chhattisgarh	0	25	0	96	270	391	391
Jammu & Kashmir	*0*	*22*	*110*	*0*	*220*	*352*	*0*
Madhya Pradesh	0	50	0	0	263	313	313
Karnataka	250	0	0	0	0	250	100
Odisha	*0*	*30*	*0*	*0*	*178*	*208*	*0*
Uttar Pradesh	100	0	0	0	100	200	100
Uttarakhand	*0*	*11*	*33*	*36*	*120*	*200*	*0*
Jharkhand	0	0	0	53	107	160	53
Assam	59	0	0	95	0	154	57
Andhra Pradesh	*26*	*0*	*0*	*0*	*100*	*126*	*0*
Sikkim	44	0	8	12	57	121	64
Telangana	20	0	0	0	100	120	20
Arunachal Pradesh	0	10	11	0	78	99	21
Goa	0	0	37	38	3	78	75
Tamil Nadu	0	0	0	0	67	67	0
Manipur	*0*	*9*	*30*	*0*	*3*	*42*	*0*
Bihar	*0*	*38*	*0*	*0*	*0*	*38*	*0*
Delhi	0	22	0	0	0	22	22
Gujarat	*0*	*0*	*0*	*20*	*0*	*20*	*0*
A & N Islands	0	0	0	5	12	17	5
Chandigarh	0	5	1	4	2	12	12
Mizoram	0	0	0	10	1	11	10
Nagaland	0	5	0	0	5	10	5
Meghalaya	*0*	*0*	*0*	*5*	*5*	*10*	*0*
Daman & Diu	*0*	*0*	*0*	*2*	*3*	*5*	*0*
D & Nagar Haveli	*0*	*0*	*0*	*2*	*2*	*4*	*0*

Table 3. Trades offered in secondary-level vocational education by state

Trades	Agriculture	Apparel	Automobile	Beauty & Wellness	BFSI	Construction	Electronics	Healthcare	IT & ITeS	Logistics	Media Entertainment	Multi Skill	PE & Sports	Retail	Security	Telecom	Travel & Tourism
A & N									*								*
Andhra Pradesh																	
Arunachal									*								*
Assam	*							*	*					*	*		
Bihar			*	*										*	*		*
Chandigarh			*	*					*					*			
Chattisgarh	*		*		*			*	*		*			*		*	
Daman & Diu								*						*			
D N H								*						*			
Delhi			*						*					*	*		
Goa	*	*	*	*	*	*	*	*	*	*	*		*	*		*	*
Gujarat			*					*				*		*			
Haryana	*	*	*	*	*			*	*		*		*	*	*		*
Himachal Pradesh	*		*		*			*	*		*		*	*	*	*	*
Jharkhand			*	*				*	*		*			*	*		*
J & K	*		*	*				*	*		*		*	*	*	*	*
Karnataka			*	*				*	*					*			
Madhya Pradesh			*	*	*		*	*	*				*	*	*		*
Maharashtra			*	*				*				*	*	*			*
Manipur				*				*	*				*	*	*	*	*
Meghalaya									*								*
Mizoram			*					*	*								
Nagaland									*								*

Trades	Agriculture	Apparel	Automobile	Beauty & Wellness	BFSI	Construction	Electronics	Healthcare	IT & ITeS	Logistics	Media Entertainmt	Multi Skill	PE & Sports	Retail	Security	Telecom	Travel & Tourism
Odisha			*						*								
Punjab	*		*	*				*	*				*	*	*		*
Rajasthan			*	*				*	*					*	*		*
Sikkim									*					*			*
Tamil Nadu	*				*			*	*					*			
Telangana				*					*					*			*
Uttar Pradesh			*						*					*	*		
Uttarakhand			*	*				*	*					*			*
West Bengal			*					*	*					*	*		
	8	2	20	14	6	1	1	20	26	1	6	2	8	25	13	5	18

8. Access interventions and gaps

Programme Interventions and Current Status

(a) Physical access to secondary schooling facilities have improved significantly during the last seven years covering more than 86% of habitations in the country

8.1   The *Rashtriya Madhyamik Shiksha Abhiyan* (RMSA) has made significant contributions towards achieving the goal of making secondary education available and accessible for all. In 2009/10 when RMSA was launched, only 79.94% of rural habitations had access to secondary schooling facilities in their neighbourhood; In 2009/10, more than 34% of habitations predominantly inhabited by STs (i.e. STs constituting more than 50% of the total population of the habitation) did not have access to secondary schooling facilities within a distance of 5.0 kms. Further, almost all north-eastern states (except Assam) and Jharkhand were also falling short of the national average (i.e. Gross Access Ratio=80%) in providing secondary schooling facilities.

8.2   Now, the scenario has improved significantly with the availability of secondary schooling facilities in the neighbourhood of around 86% of rural habitations (MHRD, 2016). Currently, most of the un-served habitations are found to be sparsely populated and located in tribal, hilly and difficult areas. Since 2009/10, RMSA alone has added around 12,394 secondary schools/sections in the government sector thereby expanding physical access to secondary schooling opportunities.

(b) School mapping using web based Geographical Information System (GIS) platform is being implemented for planning location of secondary schools

8.3   Presentations by the RMSA-TSG, Gujarat and Bihar on GIS based school mapping (i.e. schoolGIS) revealed that, GIS, as a decision support tool, is immensely useful in planning location of secondary schools/sections, and designing and implementing appropriate interventions for improving access, retention and completion rates in secondary education. The Mission was informed that eleven major states (i.e. Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Kerala, Manipur, Mizoram, Rajasthan, Uttar Pradesh and West Bengal) have conducted GIS based school mapping to plan location of new secondary schools/sections. While the National Informatics Centre (NIC) at the national level has been given the responsibility of developing and maintaining the schoolGIS for both SSA and the RMSA; some of the states have outsourced the job to ICT companies of GIS Centres/Departments of state funded universities, thereby creating a dual school-GIS system. The schoolGIS thus created by the NIC and the states is being seen mostly as a product rather than a decision support tool. Details on the schoolGIS process are provided in the Annexure.

8.4   The schoolGIS currently being used by the NIC and some states has not been able to facilitate school location planning. While state-led schoolGIS software has options to identify catchment areas of existing and proposed schools; the NIC led schoolGIS has no buffering or navigation options. Both state and NIC led schoolGIS do not have the facility to generate query based school maps to rationalise core facilities and teacher deployment across schools in a given administrative unit (for example, revenue district; a CD block) because of lack of synchronisation of select EMIS/U-DISE data with schools' geo-spatial data. However, the U-DISE based school report cards have been integrated with schools by providing a link (as shown in the map in the Annexure). This makes the school maps generated by schoolGIS static, making it less effective as a decision support tool. Moreover, the base map with poor resolution does not help design alternative interventions to expand access to secondary schooling; for example, identifying school bus pickup locations to provide access to small un-served habitations.

8.5   The resolution of the base map used by the NIC led schoolGIS is poor, which makes CD Block/GP level school maps less explicit. Because of absence of data on actual walking distance from habitation to school and from school to school, schoolGIS makes use of aerial distance as the radius to identify the catchment area of a school, which is often misleading as it overestimates the actual walking distance, particularly in hilly and tribal areas. However, the schoolGIS has the feature to measure the actual distance from one point to another, which has not been used while planning for location of new schools/sections.

8.6   The GIS based school mapping application, therefore, needs to be appropriately customised to use actual distance data in the mapping exercise. It should also synchronise key educational indicators like enrolment size, core infrastructure, teachers, student flow rates, and so on with the location data of schools to generate layers of school maps for designing programme interventions. Further, the schoolGIS application needs to be made cost effective and user friendly. While MHRD should take the responsibility for developing the schoolGIS software and build capacity of states to use it for school location planning and programme management and monitoring, states should be given the administration and editing rights of the schoolGIS. In-house management of schoolGIS by states holds the key to its sustainability as a decision support tool.

(c)   Physical access to secondary education has happened mainly through small secondary schools/sections, which mostly lack the enabling core facilities

8.7   The expansion of access to secondary education facilities has happened mostly by establishing small schools/sections (see Fig. 1). As on 30th September 2015, while around 31% of schools in the country had a total enrolment ≤50, the proportion of government managed very small schools (where total enrolment ≤50) was as high as 37% in the country. More than 12% of stand-alone secondary schools (with grades IX and X) are very small; and one in every four stand-alone secondary schools has an enrolment size ranging between 51 and 100. Around 84% of government schools having secondary sections have total enrolment <200 whereas this number is as low as 14% in secondary schools with upper primary sections.

Figure 8: Percentage distribution of government managed schools by enrolment size, All India, 2015-16
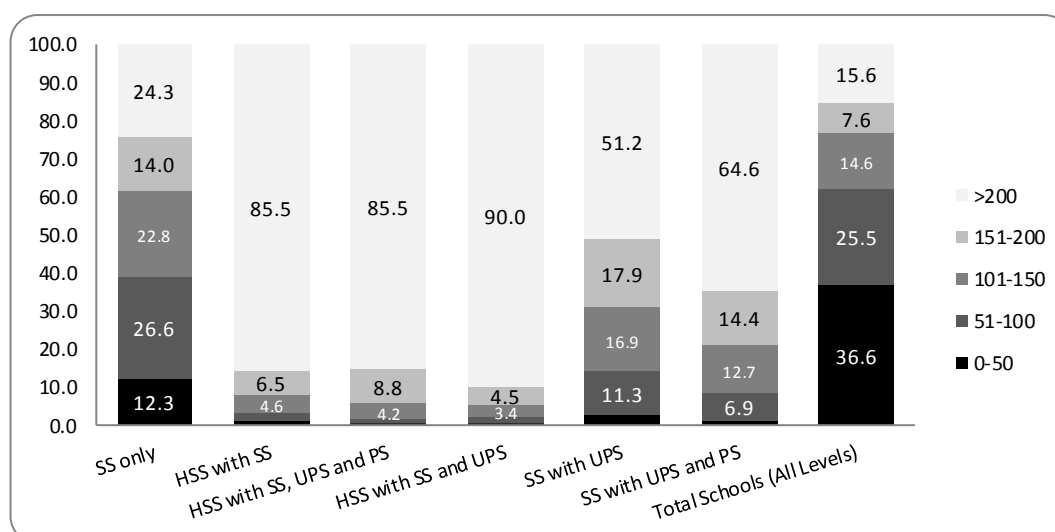

Source: Estimates using U-DISE data, 2015/16

8.8   Presence of an overwhelming proportion of small secondary schools has made it very difficult and expensive to ensure a reasonable teaching-learning environment in schools in terms of basic infrastructure, ancillary facilities, staff and other key quality inputs. This is evident from the fact that, even after tremendous efforts made by both the State and Central Governments under RMSA, most secondary schools/sections function without the basic infrastructure and staff in position (see Figures 9 and 10). During the last four years, RMSA alone has provided 40,560 units of core facilities in secondary schools/sections. Even after focused interventions for strengthening schools under the RMSA, more than half of the secondary schools do not have adequate pucca classrooms; an integrated science laboratory, and at least, four toilets.

8.9   Deployment of subject teachers in secondary schools continues to be a major challenge in government schools. Although 88% of State/UT government managed schools have a minimum of six teachers in position; only 21% these schools have core subject teachers. The deployment of subject teachers in the government schools is, in fact, deteriorating over the last three years (see Fig. 3). Paradoxically, while the secondary school network in the country is characterised by a large proportion of small schools, classrooms in secondary schools are found to be overcrowded in many states including Bihar, West Bengal, Jharkhand, Tripura, Chhattisgarh, Odisha, Uttar Pradesh, Madhya Pradesh, Maharashtra and Gujarat. These are the states which also report a large number of teacher vacancies at the secondary level (U-DISE Flash Statistics, 2015/16). All these deficits in basic facilities and staffing have made access to secondary schooling opportunities further limited and highly uneven. In fact, the Mission feels that a school/section with minimum facilities and staffing should be considered as the unit for analysing the availability of secondary schooling opportunity; and not a school building and a few teachers.

Figure 9: Distribution of secondary schools/sections with certain basic facilities, All India (in percentages)
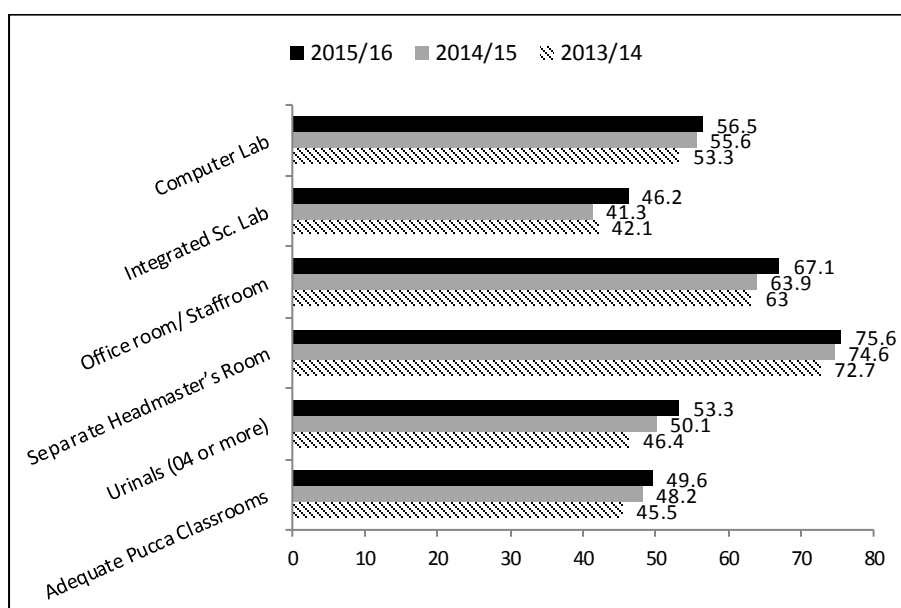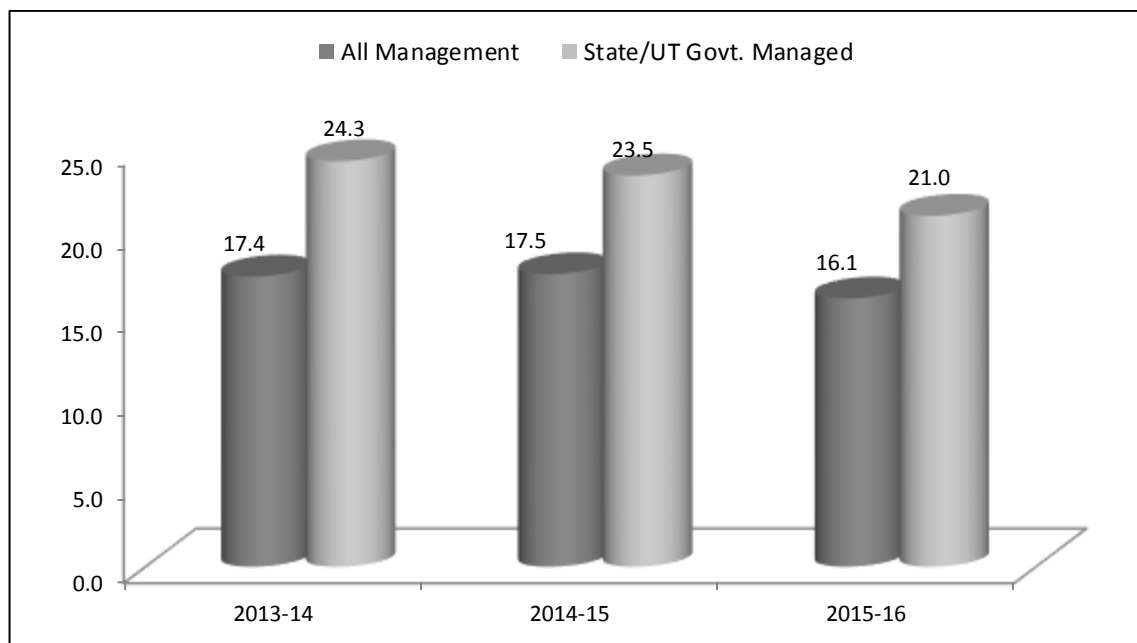

Source: Results Framework Document of RMSA, 2015/16.

8.10   However, it seems that the poor quality of secondary school infrastructure has not largely come in the way of increased participation in secondary education. From 28.3 million in 2019/10, enrolment in secondary education has increased to 39.2 million in 2015/16. During this period, the

participation rate of girls in secondary education relative to that of boys has also improved and enrolment of SCs and STs has gone up significantly. The government schools have largely absorbed this increase in the enrolment of SCs and STs. Gross Enrolment Ratio (GER) in secondary education has reached 80.1% in 2015/16, which falls short of the RMSA target (GER=90%) by around 10 percentage points. Very low GER value for girls in secondary education is reported in Gujarat, J&K and Uttar Pradesh. GER of STs, also continues to be far below the RMSA target in most states as well as at the national level (U-DISE Flash Statistics, 2015/16).

Figure 10: Distribution of secondary schools/sections by core subject teachers, All India (in percentages)

Source: Results Framework Document of RMSA, 2015/16.

(d) *While participation in secondary education is increasing in absolute terms, transition from grade VIII to grade IX is declining*

8.11   The RMSA has made concerted efforts to improve access and transition to secondary education. Apart from state specific interventions, strategic interventions adopted under the RMSA to improve access and transition to secondary education include opening of new schools and upgradation of upper primary schools in un-served habitations; strengthening of existing schools in terms of infrastructure, ancillary facilities and staffing; providing ICT and skill development facilities in schools; tracking grade VIII pass outs; making schools friendly for CWSN; and building community awareness.

8.12   Particularly, the Mission appreciates the recent initiative taken by the MHRD and NUEPA to create a student-wise database for tracking their schooling status and help states generate evidence for developing appropriate strategic interventions to improve access, retention and completion rates in school education. The Mission feels that the data on socio-economic status of children and their performance in school would help identify children who do not transit to secondary education; and those who do not progress through secondary grades.

8.13   Although the student flow from elementary to secondary education has improved since 2009/10, on an average, 10% transition loss between elementary and secondary stages still exist. In fact, there is a decline in the transition rates of boys and girls over the past few years (see Figure 11). The transition rate of girls to secondary education is relatively less than that of boys. The transition loss is as high as 20% for Muslims and 15% for STs (see Figure 12). A huge transition loss between elementary and secondary stages arrests the rate of participation in secondary education. Needless to mention, the transition rate to secondary education varies widely across states and UTs from 79% in Jharkhand to 99.8% in Kerala (U-DISE Flash Statistics, 2015/16). Besides supply-side issues, RMSA, therefore, should now try to understand the nature of household demand to enable it to improve access and retention in secondary education by generating evidences through large scale research and extension activities.

Figure 11: Transition from grade VIII to IX is declining since 2012/13
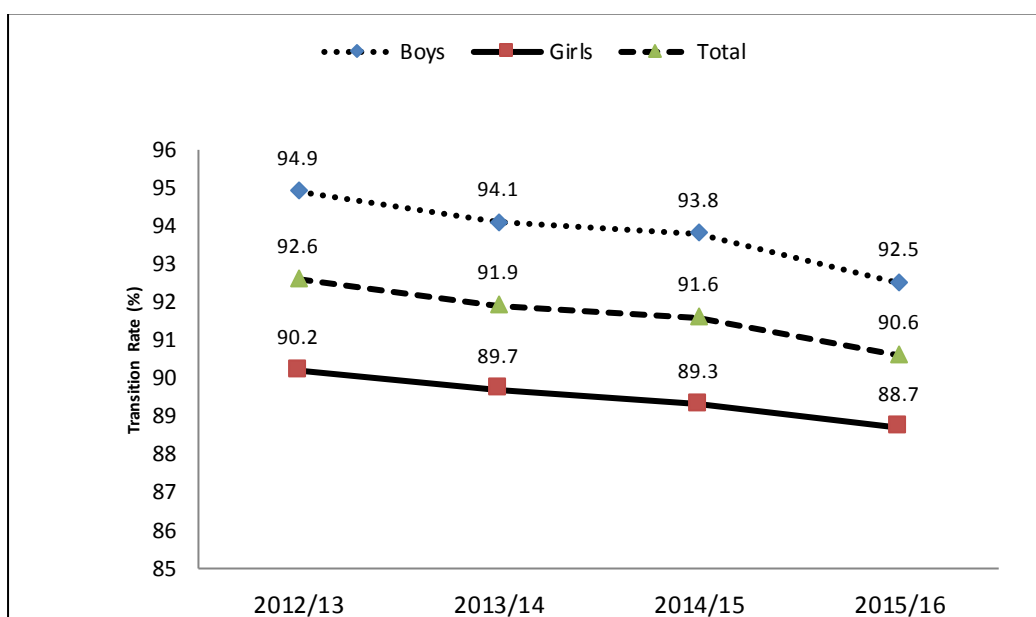
Source: *Ibid.*

Figure 12: Transition rate from grade VIII to IX by Social Category, All India
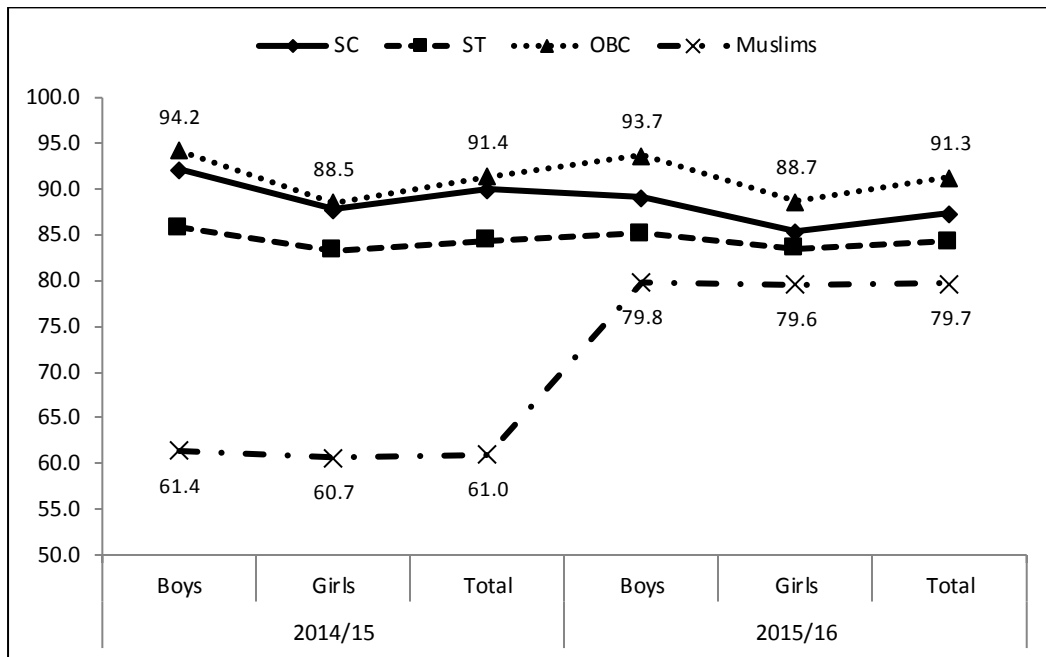
Development Challenges and the Way Foreword

8.14   Making quality secondary education available and accessible for all young persons is a huge challenge in the Indian setting. Given the low internal efficiency of elementary education (in terms of survival to grade VIII and completion rates) and large transition loss between grades VIII and IX, participation in secondary education is not improving at the desired pace. Key challenges for improving access and participation in secondary education include reaching out to the last 10% of habitations by making secondary schooling facilities available in their neighbourhood; making secondary schools confirm to certain minimum facilities and staffing (i.e. making core subject teachers deployed in secondary schools); reducing the transition loss between grades VIII and IX, particularly that of socio-economically disadvantaged groups and girls; and generating evidence on intervening variables of access and participation in secondary education by undertaking empirical research. The Mission, therefore, recommends the following strategic interventions under the RMSA to improve access and participation in secondary education:

Recommendations:

9.   The RMSA strategic interventions in the coming years to improve access and participation could focus on consolidation of the secondary school network, with option for selective expansion based on GIS based school mapping (i.e. schoolGIS). Upgrading the current schoolGIS in terms of resolutions; use of actual walking distance in defining catchment area of a school; EMIS/U-DISE data synchronisation; and adding features to generate dynamic school maps. States need to be given administration and editing rights of schoolGIS; and accordingly their capacity is developed with technical support from the NIC. A User Guide and a Technical Note are necessary to make schoolGIS more useful for mapping access to school education.

10. Student-wise database being created by states with technical support from NUEPA should also track grade VIII students, and in the process, include key socio-economic status variables like parental education and occupation to understand the factors that prevent certain groups of children from transiting to grade IX. Empirical research is important to understand the dynamics of low transition to secondary education and variations across states need to be better understood for improving programme planning.

11. Given the resource crunch and unsatisfactory quality of secondary schooling provisions in terms of availability of core facilities and staff, the "whole school approach" for strengthening secondary schools under the RMSA need to be looked into to reduce the number of items in the basket of core facilities. One option could be to assign appropriate weightage to different facilities and track the essential facilities that are being provided.

Annexure to Chapter 8: Access and Participation

a.   The ArcGIS software based schoolGIS process in the country uses the ESRI's (California based Environmental Systems Research Institute's or from other sources) open street and other related physical maps to create the base map with high resolution and navigation options. This enables clear view of revenue village boundaries; habitations, their geo-physical features, including elevation levels from sea level; road and other communication networks; and school networks, including related infrastructure. Geo-spatial (including longitude and latitude data), demographic and key educational statistics are then synchronised with the base map. This base map is used to generate layers of dynamic school maps using select indicators (like the one shown in the Annexure). The ability of schoolGIS to generate query based layers of physical maps up to village/school level (based on select indicators) makes the school mapping an important decision-support tool.

b.   While planning for location of schools/sections, the GIS based school mapping software developed by the NIC and some states uses the school map (a physical map showing location of schools, habitations and road and other communication networks) to identify habitations served by a given level of education. The second step involves generating the school map of all un-served habitations of that block along with the location of primary and upper primary schools. The third step involves considering the distributional patterns of un-served habitations and upper primary schools; generating options for locating new secondary schools and/or upgrading upper primary schools to secondary schools through buffering the catchment areas and assessing the potential enrolment in the catchment area of proposed secondary schools/sections. The fourth step involves rationalisation of core facilities and teachers across secondary schools by identifying schools lacking such facilities and teachers on the school map. School maps thus generated help design alternative interventions like establishing standalone hostels, residential schools, and transport facilities to cover the un-served habitations in the block.

Figure 13: Screen shot of Tamataka school on the School Geographic Information System (SIS) of Tumkur district, Karnataka hosted by the NIC at www.schoolgis,nic.in
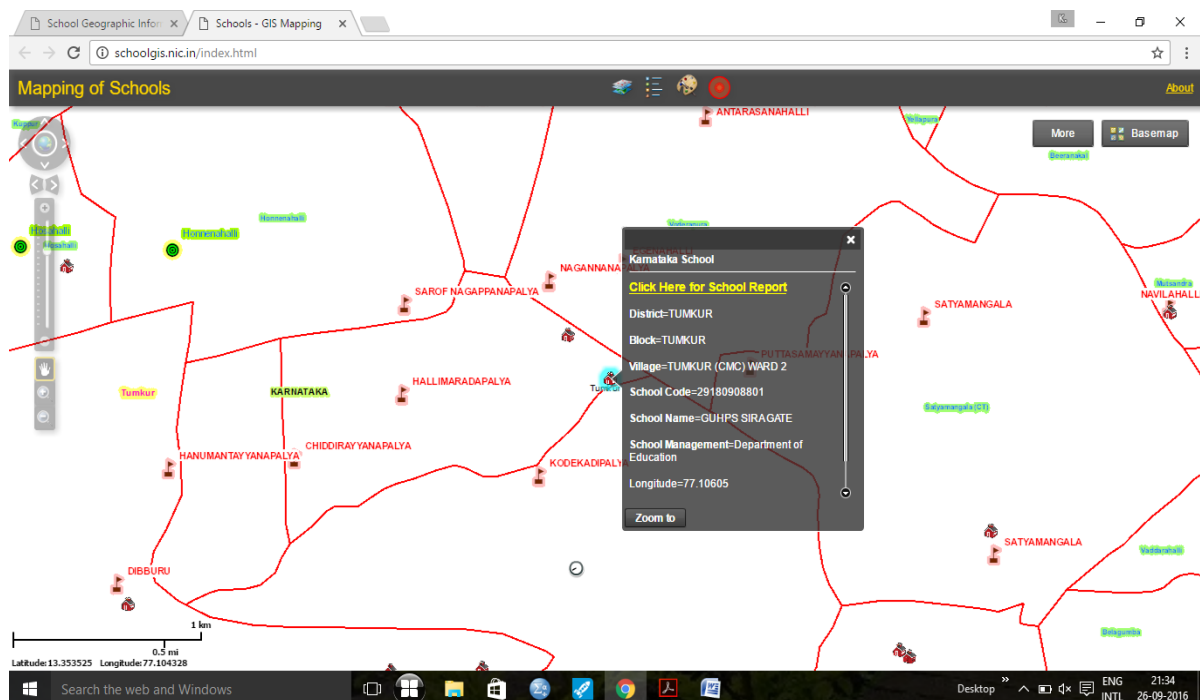
9. Status of Civil Works

Construction of new schools

9.1   Till August 2016, MHRD has sanctioned construction of 12,394 new secondary schools under RMSA (*Figure 13*)[3]. Of the sanctioned schools, civil works have been completed for 6,150 schools (49.6 per cent); works are in progress for another 2,669 schools (21.5 per cent); and civil works for the remaining 3,575 schools (28.8 per cent) have not yet started. A total of 10,397 schools have been made functional although civil works have been completed only for 6,150 schools. This means that 4,247 schools are functioning without their own buildings[4].

Figure 14: Progress in construction of new secondary schools
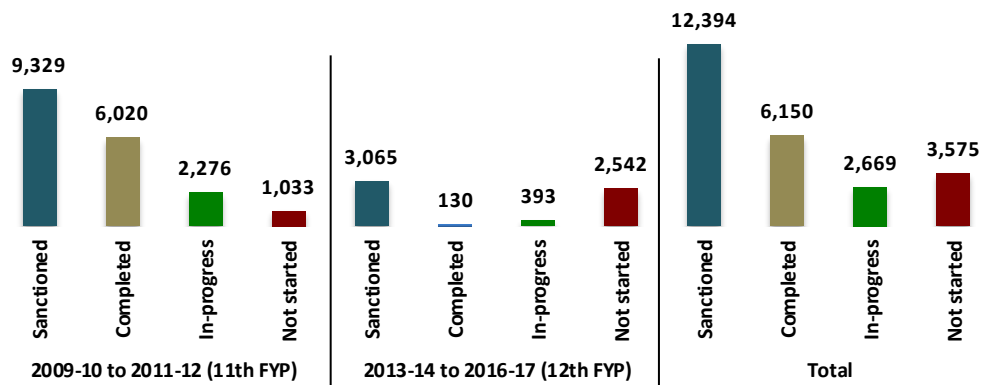
Figure 15: State-wise distribution of civil works not started since the 11th FYP
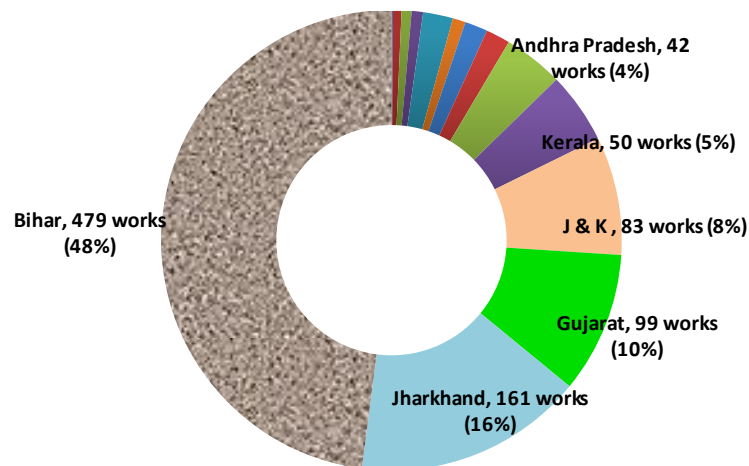
9.2   Of the sanctioned construction of 9,329 schools during the 11th Five Year Plan (FYP) period, civil works for 1,033 schools (11 per cent) have not started till date. Bihar has the highest share in

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[3] In 2012-13, no approval was given for construct of new schools.

[4] For instance, Gujarat has not constructed 99 schools approved during the 11th FYP, but those schools have been functioning from the premises of primary schools through double shift.

these pending works, followed by Jharkhand, Gujarat, J&K, and Kerala (*Figure 8.2*). As mentioned in the previous JRM report, many states/UTs could not take up construction of new schools since schedule of rates (SORs) were not revised to adjusted for price escalation. MHRD therefore advised those states to surrender the pending civil works and seek fresh approval from PAB at revised SORs. So far only seven states (Andhra Pradesh, Chhattisgarh, Haryana, J&K, Karnataka, Tripura, and Uttarakhand) have requested fresh approval for a total of 278 schools out of which MHRD has sanctioned civil works for 143 schools at revised SORs of the states.

9.3   It is further noted that the constructions of 2,276 schools started during the 11th FYP period are still in progress. The states with higher number of civil works pending completion are the following: Tamil Nadu (870), Odhisa (253), Jharkhand (225), Chhattisgarh (221), Karnataka (157), and J&K (149). The JRM could not obtain further details regarding status of work-in-progress of these states. It is understood that the states do not regularly update status of work-in-progress in the Project Monitoring System.

Civil construction for strengthening of schools

9.4   As on August 2016, 52,083 additional classrooms (ACRs) have been approved of which works for 28,982 schools (55.6 per cent) has been completed, works for 8,438 schools (16.2 per cent) is in progress, and works for 14,663 schools (28.2 per cent) have not yet started (*Table 8.2*).

Table 4: Status of civil works for strengthening schools (2009-10 to 2016-17)

Infrastructure/ facilities	Sanctioned	Completed		In-progress		Not started	
		Nos.	%	Nos.	%	Nos.	%
ACR	52,083	28,982	55.6	8,438	16.2	14,663	28.2
Science lab	25,865	15,313	59.2	4,647	18.0	5,905	22.8
Computer room	20,625	11,035	53.5	3,594	17.4	5,996	29.1
Library room	25,964	15,034	57.9	4,202	16.2	6,728	25.9
Art/craft/culture room	29,960	16,855	56.3	4,565	15.2	8,540	28.5
Toilet block	20,022	13,233	66.1	487	2.4	6,302	31.5
Drinking water	11,848	8,129	68.6	762	6.4	2,957	25.0
Source: MHRD data provided to the JRM							

9.5   Similarly, against the sanctioned numbers, civil works have been completed for 15,313 science labs, 11,035 computer rooms, 15,034 library rooms, and 16,855 art/craft/culture rooms (*Table 8.2*). Construction for 15 to 18 per cent of the aforesaid facilities are still in progress, while civil works have not been taken up for 5,905 science labs, 5,996 computer rooms, 6,728 library rooms, and 8,540 art/craft/culture rooms. In addition, 13,233 toilet blocks and 11,848 drinking water facilities have been completed against the sanctioned numbers. But, works have not been taken up for 6,302 toilet blocks and 2,957 drinking water facilities.

Figure 16: Age-wise analysis of strengthening works not yet started

	2009-10 to 2011-12 (11th FYP)	2013-14 to 2016-17 (12th FYP)
Drinking water	80	20
Toilet block	71	29
ACR	66	34
Computer room	59	41
Library	49	51
Art/craft/culture room	48	52
Science lab	44	56
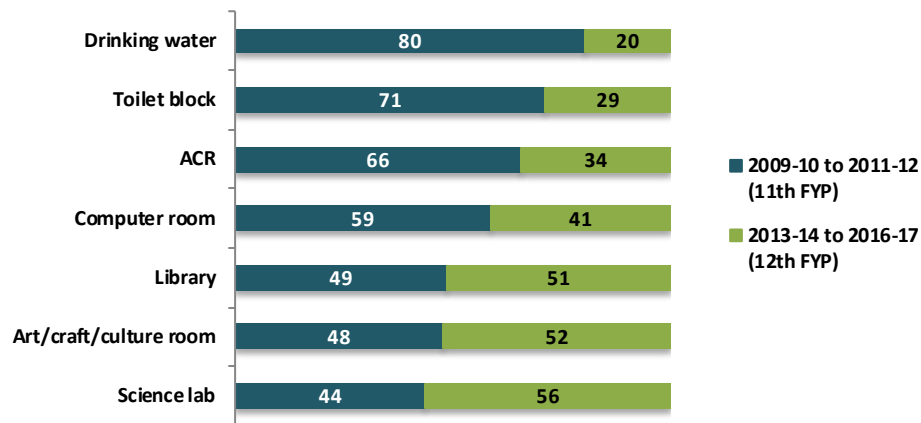
9.6   A larger proportion of the strengthening works sanctioned during the 11th FYP have not yet started (*Figure 8.3*). These works include 5,345 ACRs, 2,581 science labs, 3,516 computer rooms, 3,268 library rooms, 4,079 art/craft/culture rooms, 4,490 toilet blocks, and 2,375 drinking water facilities. JRM has also noticed that the states like Bihar and Kerala have not started any construction of ACRs till date.

Construction of girls' hostels

9.7   Under RMSA, hostels are provided for girls belonging to SC/ST/OBC and BPL families. Each educationally backward block (EBB) should have one girls' hostel. At present, there are 3,453 EBBs in the country against which 2,483 girls hostels (72 per cent) have been sanctioned. Of the sanctioned number, constructions of 1,043 hostels (42 per cent) have been completed, works for 728 hostels (29 per cent) are in progress, and civil works for the remaining 712 sanctioned hostels (29 per cent) have not been undertaken. The major delays in civil works have occurred in Maharashtra, West Bengal, J&K, Uttar Pradesh, Odisha, and Meghalaya.

9.8   The last Mission noted that all the newly constructed girls' hostels had not become functional due to inadequate recurrent budget, and recommended a review of the RMSA norms. It is understood that MHRD is currently reviewing the norms.

9.9   At present, there are 952 functional girls' hostels with an enrolment of 77,168 girls, representing about 80 per cent of the intake capacity. The states like Assam, Gujarat, Karnataka, Punjab, Rajasthan, Uttar Pradesh, and Uttarakhand are required to increase enrolment in the hostels.

Recommendations

12. MHRD is required to review the status of the pending civil works approved during the 11th FYP period and take appropriate actions, including cancellation of sanctioned works wherever necessary. The Ministry may present a detailed action taken report to the next JRM.

13. In order to ensure minimal level of infrastructure and facilities in a school, MHRD may consider developing standard designs (including provisions for solar light and water pumping systems, by also taking advantage of schemes of Ministry of Drinking Water and Ministry of New and Renewable Energy) in consultation with the states and issue appropriate guidelines.

10. Program Management

(A) Financial Management

Financial Allocation, Releases and Progress:

10.1   RMSA, a Centrally Sponsored Program, was launched in the year 2009. From 2012-2017, the Program was also co-financed by the World Bank Group's International Development Association (IDA) and United Kingdom's – Department for International Development (DfID) to the extent of USD 500 Million and £ 80 million respectively. In addition, an agreement has been signed with the European Union for financial assistance of €25 million for the RMSA program which is being disbursed in the current Financial Year.

Table 5: RMSA Funding – 2009-19 to 2016-17 (*In INR Crores*)

Year	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	Total
BE	1354	1700	2424	3124	3983	5000	3565	3700	24850
RE	550	1500	2513	3172	3123	3480	3565		17903
Releases by GoI	549	1482	2499	3172	3046	3398	3561	2288*[5]	17707
Releases by the State Govt.	238	353	1092	1057	1414	1039	1559	536*	6752
Expenditure	81	901	1678	2403	5104	6311	7572	1292*	24050

Source: Data furnished by MHRD

10.2   The data presented in the table above relates to the RMSA Program till FY 2013-14. From FY 2014-15 onwards, 4 other Centrally Sponsored Schemes viz ICT at schools (ICT), Girls' Hostel (GH), Inclusive Education for Disabled at Secondary Stage (IEDSS) and Vocational Education (VE) were subsumed in RMSA. Therefore, FY 14-15 onwards, the data presented in the table pertains to the Integrated RMSA Program which includes the other four schemes.

10.3   The Mission observed inconsistencies in the financial figures relating to State-wise Annual Program expenditures reported as per various reports furnished by MHRD to the Mission. For example expenditure figures pertaining to FY 15-16 according to the Interim Unaudited Financial Reports (IUFRs) dated August 1, 2016 based on which claims have made from European Union and expenditure figures as per the financial statements reported to the Mission vary. Similarly, expenditures pertaining to even financial years 2013-14, 2014-15 reported during the last Mission is not consistent with the figures for these financial years reported in the current Mission. Timelines should be set for freezing of state-wise annual expenditure figures based on audited figures in the Project Management System (PMS) which should be no later than March 31 of the next financial year.

10.4   To promote accountability and transparency, MHRD should consider putting up on its portal state-wise and year-wise data on fund releases (Centre & State), utilization, and the balance of funds

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[5] Figures marked with asterisks are up to August 2016.

lying with states. Similar practices have benefitted other flagship Centrally Sponsored Schemes like NREGA.

10.5 Till FY 16-17, funds against different components of the Integrated Program have been earmarked while making allocation and releases by GoI. Based on the Annual Financial Statements furnished by MHRD for FY 14-15, 15-16 & 16-17, the GoI releases earmarked against the different components of the Integrated Program are as follows:

Table 6: Component-wise percentage of releases vis-à-vis total release for the Integrated Program

Financial Years	RMSA	ICT	IEDSS	Vocational Education	Girl's Hostel	Total
2014-15	65%	15%	5%	4%	11%	100%
2015-16	71%	12%	3%	4%	10%	100%
2016-17 (upto August 2016)	81%	6%	2%	7%	4%	100%

10.6 The Mission recommends release of a combined package for the integrated program without such earmarking of funds against individual components in FY 17-18 onwards. This will allow flexibility to the States to expend according to their priorities. A single Bank Account at the level of the SIS for the Integrated Program is recommended instead of separate bank accounts for the individual components. Accounting, financial reporting, and auditing of these components should also be integrated to reduce transaction costs. Separate account heads could allow tracking of expenditures under each of these components.

10.7 PMS is the information system in which financial data is being captured. Since data on program expenditure incurred by States captured in PMS for FY 15-16 and FY 16-17 is being validated, it was agreed that analysis on fund position and utilization by State Implementation Societies will be taken up as a theme to focus on in the next JRM.

10.8 The JRM is of the view that the Maintenance of Accounts in Commercial Banks may be withdrawn and the Program operated through the treasuries by preferring expenditure bills after appropriate allocation is done by the appropriate authorities. Given that funds are being routed through State Treasuries and that most State Treasuries have been modernized to facilitate quick payments through RTGS/NEFT, this could be considered for the second phase of the Program post March 2017.

10.9 An analysis of data on Fund Releases by the State Governments in FY 14-15 & FY 15-16 shows that States with consistent shortages in State contribution are Maharashtra, Kerala, Uttar Pradesh, Punjab, Nagaland and Manipur. Expenditure analysis of FY 14-15 and FY 15-16[6] reveals that Civil Works and Salary of teachers and non-teaching staff in schools comprise about 85% of the Program cost leaving little room for activities like quality interventions, training of teachers and SMDC, equity interventions, Guidance and Counselling etc.

Timeliness in release of Funds by GoI:

10.10 According to data furnished by MHRD, the Mission was happy to note that almost 62% of the Budget Estimate (BE) for the Integrated Program for FY 16-17 has been released by GoI to the

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[6] The analysis is based on activity-wise expenditure break-up shared with the last JRM. No such break-up was available during the current JRM.

States. There is a significant improvement over the timeliness in release of funds by MHRD in the earlier financial years.

Quality of Audit Reports of State Implementation Societies:

10.11   As required by the Financing Agreement between the GoI and the Development Partners participating in the Program, Annual Audit Reports of State Implementing Societies are to be submitted to the Development Partners by December 31 every year. Audit Reports of all States and Union Territories, for the Financial Year 2014-15 have been shared with the Development Partners, albeit with substantial delays. Initially Audit Reports of about 11 States did not meet acceptable standards as the financial statements were either incomplete or prima facie appeared to be incorrect. However, after a few iterations, most of these reports were found of acceptable standards except for Manipur, which had several inconsistencies in the financial figures. Discussions have been held with the SIS and auditors and the shortcomings are being addressed.

10.12   Audit Reports of 24 SISs are qualified.   The Audit Reports have been reviewed and a detailed communication has been sent to MHRD with regard to the audit reports reviewed.

10.13   Overall, the quality of audited financial Statements and Audit Reports call for considerable improvements. The review shows that in many cases, Audited Financial Statements are perhaps not scrutinized by the Implementing Agencies before submission, as substantiated by inconsistencies between previous year's closing and current year's opening balances, inconsistencies between the financial Statements and Utilization Certificates (UCs); missing UCs, Procurement Certificates, Management Letters, etc. A number of auditors have reported that previous year's audit observations have not been addressed which is a matter of serious concern. Some of the key issues that have been noted during the review of audit reports are as follows:

- Large number of schools not turning up for audit for last few years. This situation remains unchanged in Jammu Kashmir though this has been reported by successive audit reports. Similar problems persist in Uttarakhand and Uttar Pradesh.

- There is absolute lack of uniformity in treatment of advances to construction agencies for capital asset construction to. Huge balances are lying with Construction agencies in some of the States with no details for year-wise movement of such advances or age analysis. In some cases these are treated as expenditure and reflected in the Income & Expenditure Accounts (for. e.g. Puducherry), in some States these are shown as Utilization in the UCs for non-recurring expenditure (e.g. Chandigarh, Chhattisgarh, Tamil Nadu, Karnataka & Meghalaya).

- Transfers have been treated as expenditures in many States like, Tamil Nadu, Uttar Pradesh, Uttarakhand, Puducherry, Nagaland etc.

- Advance schedules showing movement of advances during the year was found missing in many financial statements

- Instances of cash payments or payments by bearer cheques have been reported by the auditors in several States e.g. Tripura, Chhattisgarh, Meghalaya, Uttar Pradesh

10.14   Two Regional Audit Workshops were held by MHRD in Odisha and Delhi in partnership with the World Bank in May and June 2016. The workshops was attended by the Finance officials of the State SIS together with their Auditors. The Workshops elaborated on the roles and responsibilities of the State Implementation Societies towards preparation of financial statements and expectations of the stakeholders based on the Audit Terms of Reference developed for the audit

of the State Implementation Societies. Qualitative shortcomings of the financial statements and audit reports and their mitigation were also discussed. The workshop also emphasized on the requirements of the Financial Management and Procurement Manual (FM&P Manual) developed for the Program. Periodic training workshops by MHRD could go a long way in improving financial management of the Program.

10.15   Overall the JRM is concerned about the accountability issues reported in the audit reports of SIS and lack of evidence that these are being addressed in a timely manner. As mentioned in several earlier JRM Reports, a system of reporting actions taken on audit observations each year needs to be put in place and monitored on a regular basis. A special drive to address significant audit issues should be undertaken by each State and Action Taken Report submitted to MHRD by March 31, 2017. Periodic structured internal reviews by MHRD is urgently required to improve the state of affairs.

Financial Review of the Program

10.16   Based on the recommendation made by the 5th and 6th JRMs, MHRD had agreed in the 7th JRM to undertake a Financial Review of the Program. It was agreed that this review will be completed by December 31, 2016. The Mission noted that the review has not been started as yet. The JRM was informed that the selection of the institution for carrying out the review is under process.. This task needs to be expedited as this JRM has also noted some serious issues in financial management as presented above (from the documents shared with the JRM) that need to be resolved on a high priority basis. The JRM is of the view that the financial review of the Program will provide valuable input and is essential for improving financial management of the program.

10.17   Internal Audit: Although the FMP Manual requires periodic internal audit of the SIS operations, very few States have an internal audit system in place. An effective internal audit system in SISs, particularly those having large expenditures, could bring about significant improvements in financial management of the Program.

10.18   Strengthening TSG: The financial management function of the TSG needs substantial strengthening to provide adequate oversight, technical guidance and support, to a Program of this magnitude.

10.19   Revision of the FMP Manual: The Manual is being revised by a team in MHRD to reflect some of the mid-course changes in the program and to incorporate necessary changes based on implementation experience so far. The revised Manual is expected to be finalized by the Ministry by 31 December 2016.

Recommendations

For MHRD

14. Complete Financial Review of the Program by March 2017 by independent domain experts from the area of government finance and accounting systems (continues from 7th JRM Rec.# 27). This

task is critical as successive JRMs have noted serious issues in financial management (from the documents shared with the JRM) that need to be resolved on a high priority basis.

15. Considering the significant gaps between the outlays approved by PAB and actual releases, and almost static financial envelope for the Program over the last three years, the JRM strongly recommends that a special drive should be undertaken to analyse unspent balances lying with SIS/Construction agencies, link these with commitments/ongoing works and expedite utilization of these funds for program activities.

16. Strengthen TSG to provide guidance and training on financial management to the SIS and improve program oversight. A team of at least two full-time finance personnel is required to manage a Program of this magnitude and spread.

For States

17. Conduct a special drive to address significant audit issues raised by the Auditors since FY 13-14 and submit Action Taken Report to MHRD by March 31, 2017. Going forward, set up an appropriate mechanism to ensure that audit observations are addressed in a timely manner and reported to all the stakeholders including development partners. Set up a program audit committee at the level of SIS chaired by the State Project Director. States should provide management comments on the audit reports before submitting to MHRD.

18. Put an Internal Audit System in place.(particularly states having expenditures of INR 25 crores and above)

(B)   Procurement

Status and Achievements

10.20   RMSA is a national program, implemented across the whole of India and procurement is done by various agencies at national, state, district and school level. In order to have uniformity and

consistency in procurement, MHRD has issued a Manual on Financial Management and Procurement (FM&P manual) dated 24th January 2012 which is applicable for all procurement done on and after 1st April 2012 by implementing agencies. All States are required to follow this Manual for their procurement of works, goods and consultancy activities. After change in fund flow last year, there was a need for modifying the manual, which is processed by MHRD and **revised version of manual is expected to be lunched shortly.**

10.21   JRM noted that in first three years of the program (FY 09-10 to 11-12), the civil works constitute the major procurement activity in States (approximately 60 percent) and afterwards the focus shifted from physical infra-structure building to soft components like teacher recruitment, their training, quality of education etc.

10.22   JRM noted that in almost all States, civil works are being executed by either PWD or by various State public sector undertakings and in few States by SMDCs.

10.23   JRM is pleased to note that in most of the states, e-tendering process is followed for all major procurements above INR 50 lakh as per agreement with MHRD.

10.24   As per the recommendation of earlier JRMs, MHRD has already released INR 922. 25 crore on non-recurring head to states as on 15th Sept 2016, which is commendable.

10.25   The design of RMSA envisages Post Procurement Review (PPR) by both the Bank and MHRD independently on sample basis. In last three FY 13-14, 14-15 and 15-16; three rounds of post procurement review were conducted by World Bank in four States in first two rounds, viz., Uttarakhand, Andhra Pradesh, Mizoram and Maharashtra in first round, Tamil Nadu, Karnataka, Kerala and Madhya Pradesh in second round and Orissa in third round. The major findings were shared with the MHRD. The general findings in variance with FM&P Manual conditions are as follows: No procurement Plan; Less bidding time; Not advertised in widely circulated national newspaper; Contract awarded after expiry of bid validity period; Providing a clause for lower and/ or higher limit for bids in the bid document. MHRD has shared the complete PPR reports with respective States for their comments if any and necessary follow up actions. The comments and ATRs from different states are received and shared with World Bank.

10.26   From the PPR findings, it is observed that the State implementing agencies are not aware of the conditions indicated in the FM&P manual. Otherwise the implementing agencies could very well comply with these simple avoidable nonconformities. Therefore there is an urgent need for imparting training to implementing agencies on procurement conditions in FM&P manual across States. For this there is an urgent need for hiring support staff for procurement at National level, who may coordinate and arrange imparting training on use of FM&P manual in regional workshops.

10.27   Regarding independent PPR by MHRD of sample contracts equivalent to 20% value of total contract per each state; MHRD has already selected the agency, who will take up the Post Procurement Review shortly in different states.

Issues and Challenges

10.28   As envisaged in the FM&P Manual, the first step in the procurement activity is preparation of a realistic procurement plan with clear time lines for contract award and execution, based on AWP & B. Once the procurement plan is agreed with the executing agencies, the implementing agencies are to monitor and take action so that the activities are completed in time. JRM noted that **many States have not prepared a procurement plan at State level and those who have prepared the same, have done so to comply with the requirements as per manual** and not using it as base document for review and monitoring the civil works activities.

10.29   As many states have not prepared the procurement plan, it is requested that MHRD may follow up with the states for early preparation of procurement plans and putting them in their website. It is pertinent to mention that the procurement plan is an important base document for monitoring the procurement activities which in turn track the project progress in each State. Procurement plan being a live document, the same can be updated on quarterly basis and if there is any slippage in planned activity, corrective action can be taken to plug it

10.30   JRM noted that there is considerable delay in execution of civil works contracts in the States though some works are sanctioned more than six years back in the FY 2009-10, those are yet to be completed. As on 31st Aug 2016 (31st July 2015), 50 percent new schools (36%) are completed out of 12394 schools sanctioned, 26 percent (26%) schools are at various stages of completion and for balance 24 percent (38%) schools, the work is not yet started. Out of 52083 additional class rooms sanctioned, 56 percent (39%) of class rooms are completed, 15 percent (32%) in various stages of completion and balance 29 percent (29%), the work is yet to start. The figures in the bracket are position as of last year, which indicates that there is 14% increase in completion of new school and 17% in additional class rooms compared to last year. However for additional class rooms, the percentage of class rooms not yet started, continued to be same 29% for the past one year; indicates that there is some major issue involved, which is to be investigated by MHRD and corrective actions taken as deemed fit.

10.31   Therefore, there is an urgent need for closer monitoring and supervision of civil works by the District offices as well as SISs for faster & timely execution and better quality works.

10.32   Funds are now released to State Government directly through treasury. It is noted that this process further delay the receipt of fund at the RMSA state society. Consequently, the State Government have more responsibility and they have to stream line the system to ensure that funds are released on time to State societies so that they are able to use the releases for efficient and effective procurement.

10.33   It has been observed in earlier mission that the concept of a systematic and scientific procurement planning for goods and services have not been adopted by many states. In the absence of full-scale e procurement (e tendering to entire value chain up to e contract), the transparency and monitoring of workflow is not possible. Therefore a robust procurement planning and monitoring unit at state level may be a good support system for procurement activity and programme management.

10.34   On inventory management front, there is a need for maintaining material register and issue register at school level for proper accountability.

Recommendations

For MHRD:

19. Priority should be accorded for hiring support staff for procurement at national level to coordinate dissemination of the provisions of FM&P manual for wider compliance in the states. Besides it is recommended that MHRD write to states regarding the importance of procurement plans and ask them to prepare realistic procurement plans in consultation with executing agencies and work on them for efficient and timely procurement (continues from Rec #32 of 7th JRM).

For States:

20. It is recommended that states, who have not yet prepared a monitoring framework, prepare a detailed monitoring framework (preferably on line tracking system) with procurement plan as the base document and follows the same meticulously both at school and district level for efficient execution & completion of civil works(continues from Rec. # 31 of 7th JRM).

Annexes

1. Annex 1: Terms of Reference and Agenda

2. Annex 2: List of Eighth JRM Members

3. Annex 3: Results Framework Document

4. Annex 4: Review of ATR

Annex 1 - Terms of Reference (ToR) for the 8th RMSA JRM (September 20-30, 2016)

1. Introduction

1.1 Rashtriya Madhyamik Shiksha Abhiyan (RMSA) is a Programme of the Government of India, implemented in partnership with the State Governments with the main objective to make secondary education of good quality available, accessible and affordable to all young persons. The scheme seeks to enhance enrolment in classes IX and X by providing a secondary school within a reasonable distance of every habitation, to improve quality of education imparted at secondary level by ensuring all secondary schools conform to prescribed/ standard norms, to remove gender, socio-economic and disability barriers and to achieve universal access to secondary level education by 2017, i.e. by the end of the 12th Five Year Plan.

1.2 RMSA was launched in 2009, funded through national resources (central government + state government) and now has tied up for external funding by Development Partners (DP) – World Bank's International Development Association (IDA), United Kingdom's – Department of International Development (DFID) and European Union (EU). As part of the agreement for external aid from the DPs which came into effect in November, 2012, the Joint Review Mission (JRM) is to be conducted every six months in the months of January and July/August each year. The January Mission undertakes States visits, while the July/August mission is a desk review.

1.3 The Eighth Joint Review Mission (JRM) of Rashtriya Madhyamik Shiksha Abhiyan is scheduled to be held from *September 20th, 2016*. The Mission will be a Desk Review Mission to review programme implementation, and it will be led by Government of India (GoI).

2. Mission Plan

2.1 The RMSA Mission will comprise of 12 members, including two specialist members on financial management and procurement. Members would be chosen in such a way that expertise would be available for all the major functional areas.

2.2 The agency wise composition of the Mission will be as follows:
- Government of India (MHRD) – 6 members including Mission Leader and Finance and Procurement Team
- World Bank and EU - 6 members (including Finance and Procurement team)

3. Mission Objectives and Guiding Principles

3.1 The main objective of the JRM is to review the status of progress and to also consider issues related to programme planning, implementation, monitoring and evaluation, including financial management/procurement, capacity of States with respect to programme objectives.

3.2 The guiding principle will be one of a Learning Mission from the experiences so far; identify gaps and to collaboratively explore and work out options for bridging those gaps. RMSA has been under implementation since 2009-10 and is still evolving its processes and systems. The JRM therefore will include reviewing overall strategies being adopted in the planning and implementation of the programme with reference to its basic objective.

4. Terms of Reference (ToR) for the Mission

4.1 The Mission will:
- follow up on issues identified during the 7th JRM (April, 2016)
- examine issues related to programme implementation in the following areas:
  o Progress against Sanctioned Annual Work Plans
  o Challenges in physical access and strategies for ensuring education to the children of un-served habitations
  o Status of quality interventions – in-service teacher training arrangements and strategies, nature of on-site academic support structures, availability of required number of subject teachers and classrooms, progress in teacher recruitment production and distribution of textbooks, release and utilization of school grants.
  o Progress of civil works particularly new schools, upgradations, additional classrooms, toilets and drinking water facilities.
  o Review of the Financial Management and Procurement (FMP) procedures will also be carried out as part of the JRM. The Mission would review the extent to which States are complying with the provisions and processes laid down in the FMP Manual of RMSA.
  o Review Monitoring Institution reports and other third party evaluation and studies
  o Identify innovative/ best practices – specific interventions that have been successful and can be replicated;
  o Identify areas needing interventions (administrative, HR, financial, capacity building) and areas for further qualitative research/ case studies;

4.2 The Mission will also put a special focus in their work on the following aspects of the programme:

   i. Quality interventions:
      1. Discussion on learning outcomes - NAS class 10 National and 2 State reports
      2. Secondary school readiness/ remediation programs
      3. Subject Teacher deployment for equitable distribution of subject teachers across schools
      4. Teacher recruitment and deployment systems - WB presentation

   ii. Equity interventions:
      1. Policies and programs to enhance gender and social inclusion:
         a. Initiatives that have enhanced participation of girls (including through girls' hostels, incentive schemes) and challenges in achieving gender parity
         b. Efforts that have enhanced participation of students with special needs (IEDSS - including curriculum adaptation and pedagogical approaches, incentive schemes) and challenges
         c. Initiatives that have improved participation of students from disadvantaged social groups (ST and SC- including policies in practice, incentive schemes) and challenges

   iii. Vocational Education:
      1. Curriculum development and certification for Vocational Education in Secondary Education
      2. States' experience with curriculum transaction and certification process

   iv. Access interventions and gaps:
      1. Habitations yet to be covered for secondary education - overview of GIS mapping of schools
      2. Use of GIS for school site planning while optimizing facilities of existing schools

4.3 The Mission may also look at the preparatory work in the identified research areas during the exercise.

4.4 The organization of meetings and deliberations in Delhi for the JRM will be the responsibility of the MHRD. MHRD will also be responsible for inviting states and national institutions.

5. Time Frame

5.1 The JRM will take place between 20-30th September, 2016 and the schedule / time-frame is as follows:

Date	Venue	Activity
20 September 2016 (Tue)	Bhabha Chamber, Core No. 8, SCOPE Complex, Lodhi Road, New Delhi - 110003	o 9.45-10.00am : Opening remarks by GOI and introductions o 10.00-11.30am: Progress against goals of RMSA and updated Results Framework Document by NUEPA o 11.30-11.45am: Tea Break o 11.45 – 1.30pm: RMSA Programme briefing by Government of India o 1.30- 2.30pm: Lunch break o 2.30 – 4.30pm: Action Taken Report from recommendations of 7th JRM o 4.30-4.45pm: Tea break o 4.45-6.00pm: JRM internal discussion on distribution of tasks and writing responsibilities among mission members
21 September (Wed)		Quality Interventions and challenges:- o 9.30 – 11.15am: Discussion on learning outcomes- Presentation by NCERT on National report of NAS class 10 and the way forward for the next cycle. o 11.15-11.30am : Tea Break o 11.30-1.00pm: Presentation on NAS class 10 state reports by State of Karnataka and Delhi o 1.00-2.00pm : Lunch Break o 2.00-3.00pm : Presentation on secondary school readiness/ remediation programs by Assam and Chhattisgarh o 3.00 – 4.00pm: Subject Teacher deployment for equitable distribution of subject teachers across schools- presentation by Himachal Pradesh and Jharkhand o 4.00- 5.30pm: Teacher recruitment and transfer systems presentation by World Bank o 5.30-6.00pm- JRM internal discussion
22 September (Thu)		Equity interventions and challenges:- o 9.30- 11.30am: Initiatives that have enhanced participation of girls (including through girls' hostels, incentive schemes) and challenges in achieving gender parity- presentation by Odisha, Rajasthan o 11.30-11.45am : Tea Break o 11.45-1.30pm: Efforts that have enhanced participation of students with special needs (IEDSS - including curriculum adaptation and pedagogical approach, incentive schemes) and challenges- presentation by Punjab and Andhra Pradesh o 1.30-2.30pm : Lunch Break

		o 2.30- 4.30pm : Initiatives that have improved participation of students from disadvantaged social groups (ST and SC) and challenges- presentation by Bihar and Madhya Pradesh o 4.30-5.30pm: JRM internal discussion
23 September (Fri)		Access Interventions and Gaps :- o 9.30 – 11.00am - Habitations yet to be covered for secondary education- overview of GIS mapping of schools by NIC o 11.00 – 11.15am: Tea Break o 11.15- 1.30pm: Use of GIS for school site planning while optimizing facilities of existing schools – Presentation by Bihar and Gujarat Vocational Education :- o 2.30-4.00pm : Curriculum development and certification for Vocational Education in Secondary Education- Presentations by PSSCIVE, Bhopal and NSDA/NSDC o 4.00-5.00pm : Presentation by Haryana and Karnataka on use of the curriculum and certification process o 4.30- 4.45pm : Tea Break o 4.45-5.30pm : JRM internal discussion
24 September (Sat)		o Internal Discussion of JRM Members
25 September (Sunday)		o Rest Day
26 - 27 September (Mon-Tue)		o Report Writing
28 September (Wed)	New Delhi (venue to be confirmed)	o JRM members - Compilation of the Aide Memoire
29 September (Thu)	New Delhi (venue to be confirmed)	o Pre- wrap meeting with MHRD
30 September (Fri)	New Delhi	o Wrap- Up Meeting through Video Conferencing

6. Documents and information
6.1 The following documents will be shared with the Mission members:-
 a) GOI budget allocation, releases and expenditure for RMSA for 2013-14/ 2014-15/2015-16/2016-17, broken down by sub-programme and by state
 b) Financial Management Reports
 c) Audit Reports from States/UTs, Amount under National Component for the period 2014-15
 d) Updated Results Framework Document
 e) Overall annual programme implementation reports on States and UTs
 f) Appraisal notes of all States and UTs and RMSA PAB minutes 2015-16
 g) Reports of the Monitoring Institutions for all the states
 h) Action Taken Report from 7th JRM Recommendations

Annex 2 – List of Eighth JRM members

<u>GoI Representatives:</u>

S.No.	Name
1.	Shri Brahm Dutt, Former Secretary, Road Transport & Highways, GoI and Former Pr. Secretary, School Education, Karnataka - Mission Leader
2.	Sh. M. Deena Dayalan, Retd. DG (CAG), former member, CERC (in Secretary rank), also worked as JS&FA, MoF
3.	Shri. Dinesh Kumar Goyal, IAS (Retd.), former ACS, Govt. of Rajasthan
4.	Dr. Kadayapreth Ramachandran, Advisor, IAIEPA Project, NUEPA
5.	Smt. Sharad Sinha, Professor, RMSA Project Cell, NCERT
6.	Dr. K. Biswal, Professor, NUEPA

<u>Development Partners Representatives:</u>

S. No	Name
1.	Ms. Sangeeta Dey, Sr. Education Specialist, World Bank
2.	Ms. Papia Bhatachaarji, Sr. Financial Management Specialist, World Bank
3.	Ms. Namrata Raman Tognatta, Education Specialist, World Bank
4.	Mr. Satyanarayan Panda, Procurement Specialist, World Bank
5.	Mr. Roger Cunningham, Sector Specialist, European Union
6.	Dr S K Chaudhuri, FM& P Specialist, European Union

Annex 3 – Results Framework Document

Project Development Objective (PDO): To assess the outcomes of RMSA in making secondary education available, affordable and relevant, and accordingly, plan for achieving the target of 90% GER by the end of 12th Five-Year Plan (i.e. 2016/17)

Sl. No.	PDO Level Results Indicators*	Core	Unit of Measurement	Baseline 2009/10 (Actual)	Cumulative Target Values[7] (Actual and Projected)							Reporting Frequency	Data Source[8]	Responsibility for Data Collection (at the national level)	Description (indicator definition, target setting/ projection method, other remarks, etc.)[9]
					2010-11 (Actual)	2011/12 (Actual)	2012/13 (Actual)	2013/14 (Actual)	2014/15 (Actual)	2015/16 (Actual)	2016/17 (Projected)				
	Key Performance Indicators/ (PDO Level Results)														
1.	Total enrolment in Secondary Education (Grades IX & X)	☒	Number (in Millions)	28.3	31.6	33.2	34.6	37.3	38.3	39.2	**40.1**	Yearly	SEMIS and UDISE	NUEPA	Includes schools in all management with enrolment in grades IX-X and IX (in secondary schools established/u pgraded in a

[7] In this RFD, the figures reported against various indicators are actual for 2009/10, 2010/11, 2011/12, 2012/13, 2013/14, 2014/15 and 2015/16, and for the year 2016-17, the cumulative target value is the projected figure. The cumulative target for the year 2016/17 has been set on the basis of the trends in the past three years.

[8] The major sources of data on secondary education used in this RFD are SEMIS for 2009/10, 2010/11 and 2011/12, and thereafter, DISE/UDISE and Census of India/MHRD/NUEPA (for population data). Further, it may be noted that the coverage of SEMIS, DISE and U-DISE has improved in every successive year primarily because of two reasons: one, due to establishment of new schools/institutions; and two, because of improved response of the private un-aided sector. Coverage of schools/institutions in government and private aided sectors in SEMIS, DISE and U-DISE is almost universal every year beginning from the base year, i.e. 2009/10. Enrolment in open schools and institutions offering distance education are not included in the database used to estimate various indicators in the RFD.

[9] For details, see the Technical Note given in Annex 1.

															given year having enrolment only in grade IX). Does not include enrolment in NIOS and state open schools. <u>Projection/target setting method:</u> Projection of target value for the year 2016/17 is based on the past trend (Linear/on the basis of average annual growth of enrolment from 2013/14 to 2015/16, the most comparable data under the U-DISE)

2.	Gross Enrolment Ratio (GER) for M+F in Secondary Education (Grades IX & X)	☒	**%**	58.5	60.6	65.0	68.3	74.2	76.9	79.3	**82.0**	Yearly	SEMIS and UDISE and Census of India (CoI)/ MHRD	NUEPA	All schools Projection/target setting method: Linear; taking past trends from 2013/14 Estimated using actual and projected enrolment and the projected child population (14-15 age group) by the MHRD
3.	Gender Parity Index (GPI) of GER in secondary education[10]	☒	Ratio	0.95	0.98	0.98	0.99	1.00	1.01	1.02	**1.03**	Yearly	SEMIS and UDISE and CoI	NUEPA	Estimated based on actual and projected GER values of boys and girls.
4.	Gender Equity Index (GEI) in Secondary Education[11]	☒	Ratio	0.97	0.99	0.99	1.00	1.00	1.01	1.01	**1.01**	Yearly	SEMIS and	NUEPA	Estimated based on actual and

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[10] GPI of GER at secondary level in year t = (GER of girls, Grades IX-X in year t / GER of boys, Grades IX-X in year t).

[11] Gender Equity Index at Secondary Level in Year t = Share of girls in enrolment to total enrolment in grades IX-X in year t/ Share of girls in the age group 14-15 in the total 14-15 age group population in year t.

#	Indicator		Type									Frequency	Source	Agency	Description
													UDISE and CoI		projected enrolment and girls' share in the total 14-15 age group population
5.	Social Equity Index (SEI) in Secondary Education (SC)[12]	☒	Ratio	0.9	0.9	1.0	1.0	1.1	1.1	1.1	**1.1**	Yearly	SEMIS and UDISE and CoI	NUEPA	Estimated based on actual and projected SC enrolment and SCs' share in total 14-15 age group population
6.	Social Equity Index (SEI) in Secondary Education (ST)[13]	☒	Ratio	0.9	0.9	0.9	0.9	0.9	1.3	1.3	**1.3**	Yearly	SEMIS and UDISE and CoI	NUEPA	Estimated based on actual and projected ST enrolment and STs' share in total 14-15 age group population

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[12] Social Equity Index at Secondary Level (SC) in year t= Share of SC enrolment in the total enrolment in grades IX-X in year t / Share of SC population (age group 14-15) in the total 14-15 age group population in year t.

[13] Social Equity Index at Secondary Level (ST) in year t = Share of ST enrolment in the total enrolment in grades IX-X in year t / Share of ST population (age group 14-15) in the total 14-15 age group population in year t..

7.	Secondary education graduation rate (those who enrolled in grade IX in year t appearing for the Board exams in grade X in year t+1)	☒	Target % (Gross Graduation Rate)										Yearly	SE MIS & UDI SE	NUE PA	Target values not projected because of erratic trends in the secondary education graduation rate .
			State/UT Government Funded					77.3	73.6	68.3	**68.0**					
			Pvt. Aided					87.5	76.6	78.9	**78.0**					**Management -wise Grade X Pass out Rates in 2015/16 are as follows:** Govt. Managed =74.8%; Pvt. Aided = 82.9%; Pvt. Unaided = 85.9%; Central Government Managed = 97.5%; and All Management = 80.4%.
			Pvt. Unaided					88.6	76.9	69.3	**69.0**					
			Central Govt/PS Us Funded					48.8	88.1	78.3	**80.0**					
			Total (All Management)					81.0	75.2	71.1	**72.0**					
Intermediate Results																
A. **Access and Equity**																

1.	Enrolment in Secondary Education (Grades IX and X) by management (in Millions)	☒	State/UT Government Funded	13.8	12.1	12.9	18.2	16.3	16.6	17.0	**17.4**	Year ly	SE MIS and UDI SE	NUE PA, NIOS	All schools <u>Projection/target setting method</u> Projection for 2016-17 is based on past trend (Linear) in the growth of enrolment from 2013-14 to 2015-16
			Pvt. Aided	6.9	8.8	10.5	7.9	8.7	8.7	8.6	**8.6**				
			Pvt Unaided	7.3	10.5	9.6	8.2	11.9	12.7	13.1	**13.8**				
			Central Govt/PSUs Funded	0.3	0.2	0.2	0.4	0.3	0.3	0.4	**0.4**				
			Total /All Mgt (In Millions)	28.3	31.6	33.2	34.6	37.3	38.3	39.2	**40.1**				
2.	Transition Rate from Grade VIII to Grade IX (Enrolment in grade IX in the year t+1 minus repeaters in grade IX in the year t + 1 as % of the Enrolment in grade VIII in the year t)	☒	**%**									Year ly	SE MIS and UDI SE	NUE PA	All schools The target value of the transition rate from grade VIII to grade IX is based on the past trend and the RMSA objective of universal
			Boys	90.6	92.5	93.4	94.9	94.1	93.8	92.5	**93.0**				
			Girls	92.1	92.0	92.4	90.2	89.7	89.3	88.7	**91.0**				
			Total	91.3	92.2	92.5	92.6	91.9	91.6	90.6	**92.0**				

No.	Indicator		Management									Frequency	Source	Agency	Notes
															enrolment by 2016/17.
3.	Share of SC in Secondary enrolment (%)	☒	State/UT govt.	20.6	19.8	20.5	21.5	22.3	22.5	22.7	**22.9**	Yearly	SEMIS and UDISE	NUEPA	All schools
															Projection/target setting method:
			Pvt. Aided	16.0	17.7	18.5	16.6	16.3	16.9	16.9	**17.3**				Projected values from 2015/16 onwards are based on the linear trend from 2013-14 to 2015-16.
			Pvt. Un-aided	14.6	16.7	15.1	14.1	14.6	14.9	14.8	**15.0**				
			Central govt./PSU funded	17.1	15.4	15.6	15.3	16.5	15.2	15.1	**14.2**				According to MHRD projections, the share of SCs in the total child population in the age group 14-15 is 17.5% in 2015
			Total/All management	19.9	18.2	18.3	18.2	18.4	18.7	18.7	**18.9**				
4.	Number of SC girls per 100 SC boys enrolled in IX-X	☒	State/UT govt.	89	91	95	95	97	99	100	**100**	Yearly	SEMIS and UDISE	NUEPA	All schools

Projection/target setting method |
| | | | Pvt. Aided | 84 | 91 | 90 | 88 | 88 | 88 | 87 | **87** | | | | |

#	Indicator		Management									Periodicity	Source	Agency	Notes
			Pvt. Un-aided	71	80	76	78	79	79	79	**79**				Projected values from 2015/16 onwards are based on the linear trend from 2013-14 to 2016-17.
			Central govt./PSU funded	79	66	66	72	65	66	66	**67**				
			Total/All management	84	87	88	89	90	91	91	**92**				
5.	Share of ST in secondary enrolment (%)	☒	State/UT govt.	9.3	10.9	11.3	10.9	11.8	11.7	11.6	**11.6**	Yearly	SEMIS and UDISE	NUEPA	All schools Projection/target setting method: Projected value for 2016-17 is based on the linear trend from 2013-14 to 2015-16. According to MHRD projections, the share of STs in the total child population in the age group 14-15 is 9.1% in 2015
			Pvt. Aided	7.5	8.2	7.0	7.5	8.1	8.1	8.5	**8.6**				
			Pvt. Un-aided	5.3	4.4	5.5	4.9	4.6	4.6	4.4	**4.4**				
			Central govt./PSU funded	8.1	10.1	10.3	7.0	9.0	7.9	7.7	**7.7**				
			Total/All management	7.8	8.0	8.3	8.4	8.6	8.5	8.5	**8.6**				

6.	Number of ST girls per 100 ST boys in grades IX-X	☒	State/UT govt.	86	91	97	97	101	103	104	**104**	Yearly	SEMIS and UDISE	NUEPA	All schools Projection/target setting method Projected value for 2016-17 is based on the linear trend from 2013-14 to 2016-16.
			Pvt. Aided	84	87	87	92	88	88	88	**88**				
			Pvt. Un-aided	72	74	75	74	75	76	76	**76**				
			Central govt./PSU funded	75	79	76	81	69	71	74	**74**				
			Total /All management	82	87	89	92	93	94	94	**95**				
7.	Enrolment of CWSN in Secondary (Grade IX and X) by management	☒	State/UT govt.	85990	98160	NA	374340	118821	120989	120392	**121638**		SEMIS and UDISE	NUEPA	Erratic trend in participation of CWSN children in secondary education???
			Pvt. Aided	88008	100306	NA	61741	74582	68787	69315	**65628**				
			Pvt. Un-aided	92479	116038	NA	28028	31148	29033	28000	**26246**				
			Central govt./PSU	933	1302	NA	4743	805	762	746	**712**				

			Funded											
			Total /All manage ment	2674 10	31580 6	NA	46885 2	22535 6	21957 1	2184 53	**2142 24**			
(B)	**Quality Input Indicators (Infrastructure, Teachers & TLM Provisions)**													
1.	Proportion of secondary schools/sections with all the basic/core infrastructure and teaching-learning facilities[14]	☒	% Core facilities (all 10 items)									Year ly	SE MIS and UDI SE	Data inconsistency in reporting certain variables. A possible explanation is the way the existing UPSs are upgraded to become secondary schools???
			Adequat e Pucca Classroo ms	**42.6**	55.3	56. 9	41.5	45.5	48.2	49.6	**51.9**			
			Urinals (04 or more)	**82.5**	34.9	38. 6	39.9	46.4	50.1	53.3	**56.9**			Target value for 2016-17
			Drinking water	**93.1**	92.3	91. 4	97.4	98.2	98.6	98.9	**99.3**			

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[14] Pucca classrooms (at least two classrooms for grades IX-X up to the total enrolment of 80 and thereafter, one classroom for every 40 additional enrolment in grades IX and X); at least 04 toilets (one toilet block – two toilets each for boys and girls) in usable condition; drinking water facility; one headmaster/principal's room; one office/administrative staff room; one girls activity room; art and craft room; a functional library with minimum number of prescribed textbooks and reference books; an integrated science laboratory with necessary equipments and material; one computer laboratory with adequate number of usable computers and required IT accessories/equipments.

	75.8	76.6	71.9	67.1	72.7	74.6	75.6	77.2				
Separate Headmaster's Room	**75.8**	76.6	71.9	67.1	72.7	74.6	75.6	**77.2**				has been projected on the basis of the past trends from 2013-14 to 2015-16.
Office room/ Staffroom	**73.9**	69.4	65	57.3	63.0	63.9	67.1	**68.8**				
Girls' Activity room	**20.3**	28	25.5	19.5	23.6	24.6	26.5	**27.9**				
Art and Crafts (Activity) Room	**16**	24	21.9	19.3	25.4	26.9	28.6	**30.2**				
Library	**71.3**	54.5	50.9	80.1	47.4	48.3	52.0	**53.9**				
Integrated Sc. Lab	**41.6**	49.9	47.6	36.3	42.1	41.3	46.2	**47.3**				
Computer Lab	**35.3**	29.9	27	49.1	53.3	55.6	56.5	**58.4**				
Core facilities in:												
State/UT Govt. Schools	0.3	0.1	0.2	0.5	0.6	0.5	0.5	**0.5**				
Pvt. Aided	1.2	0.8	0.8	0.8	1.3	1.5	1.8	**2.0**				

			Pvt. Un-aided	4.3	2.6	3.3	5.2	7.4	7.8	8.7	**9.5**			
			Central govt/PSU funded	5.5	3.3	5.1	4.6	11.4	14.9	17.3	**19.5**			
			Total/All management	1.3	1.2	1.6	2.3	3.4	3.7	4.2	**5.0**			
2.	Proportion of secondary schools/sections with at least the minimum number of teachers in position[15] as on 30th September	☒	State/UT Govt. Schools	62.2	66.4	64.4	72.2	83.7	86.3	87.7	**89.9**	Yearly	SE MIS and UDISE	Projection/target setting method: Linear

Target value for 2016-17 has been projected on the basis of the past trends from 2013-14 to 2015-16. |
			Pvt. Aided	62.7	74.0	92.2	82.7	81.3	81.2	80.4	**80.1**			
			Pvt. Un-aided	71.2	77.9	71.9	75.9	79.0	80.5	80.9	**82.0**			
			Central govt/PSU funded	82.0	89.0	83.3	83.8	85.6	93.7	94.0	**99.5**			
			Total/All management	65.4	72.7	73.8	77.1	81.4	83.2	83.8	**85.1**			

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[15] This includes 05 subject teachers plus the headmaster/principal, where ever they are in position. In other cases, 06 teachers in position have been taken into consideration.

3.	Proportion of secondary schools/sections with at least the core subject teachers in position[16] as on 30th September	☒	State/UT Govt. Schools	22.5	0.1	0.3	13.8	24.3	23.5	21.0	**22.0**	Year ly	SE MIS and UDI SE		Projection/tar get setting method: Linear
			Pvt. Aided	37.7	0.3	1.1	8.9	13.5	14.1	14.3	**14.7**				Target value for 2016-17 has been projected on the basis of the past trends from 2013-14 to 2015-16.
			Pvt. Un-aided	47.5	0.3	0.5	5.9	11.7	12.7	11.6	**12.0**				
			Central govt/PS U funded	50.3	0.5	0.6	5.1	18.2	22.0	22.4	**25.1**				
			Total/All manage ment	34.0	0.3	0.6	10.0	17.4	17.5	16.1	**17.0**				
(C)	**Quality Process Indicators[17]**														
1.	Proportion of Government + aided teachers received in-service training (Cumulative for past 3 years)	☐													
2	Curriculum analysis and handholding of curriculum developers , Teacher														

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[16] This includes teachers for Mathematics (01), Science (01), Social Studies (01); Languages (02).

*, **, ***, **** Explained in Annexure-I

[17] The set of indicators reported in this section need to be finalized and updated by the NCERT.

	support packages and capacity building programme														
3.	National Assessment of Students' Achievement[18]	☐													

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[18] This indicator is meant to track the processes involved in using a robust national student achievement assessment system and its results for quality improvement policies. The targets and outcomes here takes different processes completed, such as (a) methodology for a national assessment system with standard items id entified agreed; pilot testing and validation of assessment tools; sampling of schools/ students; training for conducting the tests etc; (b) Carrying out the actual assessment and data entry and analysis; (c) analysis and results published and disseminated; and (d) A Plan of Action to improve Quality (especially learning outcomes) is formulated and activities related to the Plan of Action included in the AWP&B of the next year. *Annexure -I

**Test and questionnaires of Baseline Cycle will be used in subsequent phase.

Annexure to RFD: Technical Notes on the Estimation of Indicators in the RFD

Technical Notes on the Estimation of Indicators in the RFD

The RFD has been revised in the light of the discussions held with DPs (Colin Bangay from DFID; Toby Linden, Sangeeta Dey and Rudraksh Mitra from the World Bank and Prof. S.M.I.A. Zaidi, Prof. Arun C. Mehta, Prof. K. Biswal, Dr. N.K. Mohanty and Shri Naveen Bhatia from NUEPA). As discussed and decided in the meeting, the following two types of changes/additions have been made to the earlier RFD.

(i)   Since 2010-11, 2011-12, 2012-13, 2013-14, 2014-15, and 2015-16 U-DISE data are now available. The revised RFD contains latest data on all indicators for which 2009-10 SEMIS data are given. Hence, the target values of all these indicators have been set based on their past trends (of the last 3 years, i.e., from 2013/14. Targets have been set for 20156/17 with the assumption that the future trends of the values of these indicators would change because of RMSA interventions.

(ii)   The values of some of these indicators (Key Performance Indicator No.7, Access Equity Indicators Nos. 1, 3, 4, 5, 6, 7 and Quality Input Indicators Nos. 1, 2 and 3) have been reported by various sources of funding (i.e., state/local govt. funded, private aided, private unaided, central govt. funded and the total/all sources of funding) instead of providing data only for government managed and the total as given in the earlier RFD. This has been done to provide a holistic picture of the development of secondary education and to avoid technical problems associated with computation of some of the key indicators.

Indicators Reported in the RFD: Methods of Computation and Target Setting

I.   PDO Level Results/Key Performance Indicators

1.   Total Enrolment in Secondary Education (Grades IX-X)

Data Source: SEMIS and UDISE

Methodology of Target Setting:

Enrolment targets in Classes IX-X set based on the linear trend in the growth of enrolment from with an increasing trend in future years due to RMSA interventions.

2.   Gross Enrolment Ratio (Grades IX-X)

Data Source: SEMIS/UDISE, Census of India and population projection by MHRD, GOI..

Method of Estimation:

Gross Enrolment Ratio (GER) = (Total Enrolment in grades IX and X in a year t / Population of 14-15 years in the same year t)*100

Methodology of Target Setting:

GER target values estimated on the basis of past trends, from the year 2013/14.

3. Gender Parity Index (GPI) of GER in Secondary Education

Data Source: SEMIS/UDISE, Census of India and population projection by MHRD, GOI..

Method of Estimation:

GPI of GER at secondary level = (GER of girls for Grades IX-X in year t) / (GER of boys for Grades IX-X in year t)

Methodology of Target Setting:

The projected value of GPI is based on the past trend (Linear) in GPI from 2013/14. Once the gender parity in GER in secondary education is achieved, the target should be to maintain the gender parity index value of 1.0.

4. Gender Equity Index

Data Source: SEMIS/UDISE, Census of India and population projection by MHRD, GOI..

Method of Estimation:

Gender Equity Index at Secondary Level = Share of girls in total enrolment in grades IX-X in year t/ Share of girls in total relevant age group population (Age group 14-15) in year t

Methodology of Target Setting:

The projected value of GEI for 2016/17 has been set based on the past trend (Linear) in GEI from 2013/14. Once the gender equity in participation in secondary education is achieved, the target should be to maintain the gender parity index value of 1.0.

5. Social Equity Index (Scheduled Caste)

Data Source: SEMIS/UDISE, Census of India and population projection by MHRD, GOI.

Method of Estimation:

Social Equity Index at Secondary Level (SC) = Share of SC enrolment in the total enrolment in grades IX-X in year t / Share of SC population (age group 14-15) in the total population of age group 14-15 in year t.

Methodology of Target Setting:

As the social equity (SC) has achieved its maximum value of 1.07 in 2015/16, the target for 2016/17 should be to maintain the social equity index value of around 1.0.

6. Social Equity Index (Scheduled Tribe)

Data Source: SEMIS/UDISE, Census of India and population projection by MHRD, GOI.

Method of Estimation:

Social Equity Index at secondary level (ST) = Share of ST enrolment in the total enrolment in grades IX-X in year t / Share of ST population (age group 14-15) in the total population of age group 14-15 in year t.

Methodology of Target Setting:

As the social equity (ST) has achieved its maximum value of 1.26 in 2016/17, the target from 2016-17 should maintain its value around 1.0.

7. Secondary Education Graduation Rate

Data Source: SEMIS/UDISE, Census of India and population projection by MHRD, GOI.

Method of Estimation:

Secondary Education Graduation Rate = (Number of Students Appeared in Grade X Board Examination in year t+1/ Number of Students Enrolled in Grade IX in year t) * 100

Methodology of Target Setting:

The target values for 2016/17 are assumed on the basis of past trends since 2013/14.

II.   Intermediate Results (Core Indicators)

A.   Access and Equity (7 indicators)

The following data sources, method of estimations and target setting remains same for all 7 indicators of access and equity.

Data Source: SEMIS/UDISE, Census of India and population projection by MHRD, GOI, New Delhi.

Methods of Estimation:

1.   Transition Rate from Grade VIII to Grade IX in year t = Enrolment in grade IX in the year t+1 as % of the Enrolment in grade VIII in the year t after adjusting for repeaters in   grade IX of year t+1)

2.   Share of SC in Secondary Enrolment = (Total number of SC enrolled in IX-X in year t   /Total enrolment in IX-X in year t) *   100

3.   Number of SC girls per 100 SC boys enrolled in IX-X in year t = (Total number of SC   girls enrolled in IX-X in year t / Total number of SC boys enrolled in IX-X in year t) *   100

4.   Share of ST in Secondary Enrolment = (Total number of ST enrolled in IX-X in year t   /Total enrolment in IX-X in year t) *   100
5.   Number of ST girls per 100 ST boys enrolled in IX-X in year t = (Total number of ST   girls enrolled in IX-X in year t / Total number of ST boys enrolled in IX-X in year t) *   100

Methodology of Target Setting:

The projected values of the indicators at Sl. Nos. 2, 3, 4, 5 and 6 for 2016/17 are based on the linear trend from 2013/14.

B.   Quality Input Indicators (Infrastructure, Teachers & TLM Provisions)

(3 indicators)

The following data sources, methods of estimation and target setting remain same for all the three quality input indicators.

Data Source: SEMIS/UDISE.

Method of Estimation: Percentages and proportions.

Methodology of Target Setting:

Projected value for 2016/17 is based on the linear trend from 2013/14.

Annex 4: Review of ATR

8th JRM responses to Action Taken Report on the Aide Memoire of 7th Joint Review Mission for RMSA.

Sl. No.	Recommendation	ATR	8th JRM responses
1.	Allocate adequate financial and human resources to national UDISE team to implement planned new initiatives including collecting individual child level data for improving quality and timeliness of data;	Child tracking under UDISE has been approved and further it has been decided by the PAB that both SSA and RMSA will provide funds @ Rs. 1/- per child to the States/UTs for collecting child-wise data.	Recommendation has been addressed partially on the financial resources. The additional human resources for this massive effort will still be required.
2.	Enhance the capacity of sub national officials at the state, block and school levels regularly to calculate, interpret and use education data and indicators for their planning and monitoring exercise by allocating earmarked resources;	NUEPA has informed that variety of training programmes are being conducted on use of indicators for planning school education. However, training at schools level has not been possible and NUEPA is proposing to engage other institutions working at the State, district and block level as well as at the National level.	The action is underway and the JRM will revisit this in future
3.	5% UDISE data validation provision should be continued with standardized collecting and reporting formats and ensuring that the UDISE reported data is verified on the basis of spot checks in the schools and school records, and not just the UDISE Data capture Formats.	NUEPA has informed that the States are not doing the 5 percent random sample checking of U-DISE data at present due to lack of funds. The reports received from States can be seen at www.dise.in. and that as per the guidelines, States have been advised to verify the filled DCF format on the basis of spot checks in the schools and school records.	This remains a continuing issue. On the 5% sample validation, responses from the states are awaited on their action. The JRM will revisit this in future.
4.	MHRD may prioritize investment in an effective NAS institutional	The second cycle of NAS for Class X is to be conducted by NCERT and the same has been approved by the PAB. Rs. 1003.8 lakh has been	It is appreciated that substantial funding has been

Sl. No.	Recommendation	ATR	8th JRM responses
	arrangement using the current 3-year cycle, and the use of the NAS results rather than pursue annual census based SLAs.	approved in-principle for the entire cycle of the second NAS for class X including an amount of Rs. 187.75 lakh for 2016-17. NCERT has already initiated action for conducting NAS second cycle for class X.	provided for the second round of NAS. The ATR does not address whether an effective institutional arrangement has been made.
5.	On the release of each NAS, MHRD may require every State to prepare a response and remediation strategy which address key issues identified as an integral part of the AWP&B process.	The salient points of the NAS report of 2015 have been shared with the States/UTs with emphasis on the need to formulate strategies and measures to bring about significant improvement in learning achievement of students. NCERT has also prepared detailed State Report Cards for 34 States/UTs which has been sent to the respective State/UT for designing State/UT specific strategies.	The summary state report cards are a good step forward from the National report card. More analyses can be done from the data, for which NCERT will need to engage. There is inability/ limited capacity in the states to engage and analyse the state level data. The 8th JRM has made further recommendation on this.
6.	Systematic plan to enhance the capacity of nodal institutions in the State (SCERTs, RIEs, IASEs, DIETs) need to be addressed on a priority basis.	To enhance capacity of nodal institutions in the State/UT following steps have been taken: • **Filling up vacancies: Chhattisgarh, Nagaland, Jammu and Kashmir and Haryana** have prioritized filling up of vacancies in the nodal institutions. **Chandigarh** has also moved a proposal to DHE to notify posts for SCERT. **Arunachal Pradesh** proposes to request Director, NCERT to prepare systematic plan to enhance the manpower and capability of the present staff in phased manner. Restructuring of the SCERT and DIETs compliant with MHRD guidelines in underway in **Goa**. • The States of **Jharkhand and Haryana** have formed **separate cadre for teacher educators** whereas **Karnataka** is in the process. • **Support to nodal institutions:**	Efforts underway are appreciated. This a continuing activity. The JRM is expected to revisit this in the future

Sl. No.	Recommendation	ATR	8th JRM responses
		Punjab has reported regarding strengthening of teacher training institutions by providing physical and human infrastructure. In **Karnataka,** DIETs have been supported with establishment of educational resource centres and DSERT faculty team also undertakes regular visits to DIETs to understand the status of programme implementation. **Jammu and Kashmir** has prioritized a systematic plan to upgrade the infrastructural facilities and professional competencies of the faculty members in these institutions. **Tamil Nadu** has identified higher education institutions in each district to help the nodal agencies capacity building of teachers (DIET, IASE coordinated by SCERT) **RMSA Gujarat** has made convergence with the prime Nodal Educational Institutes of the state viz. SCERT (GCERT in Gujarat), RIEs, IASEs, DIETs and STTI for all the programme of training, monitoring, research, module development etc. **Odisha** has requested the S & ME Department to strengthen the nodal institutions. Sikkim has also submitted proposal to strengthen the nodal institutions. • **Incorporation with Sustainable Development Goals: Assam** State Govt. has taken up the issue of capacity building of nodal institutions under Sustainable Development Goals (SDGs). • U.T. Administration of **Daman & Diu and DNH** have reported that they do not have SCERTs, RIEs, IASEs, DIETs institutions.	
7.	Streamlining teacher recruitment processes to forestall legal tangles: Transparent teacher recruitment policies and systems (for example in Karnataka) is important to not only ensure timely recruitment but also enable the government to	• **Transparent Recruitment Policy States/UTs: Arunachal Pradesh, A&N, Daman & Diu, DNH, Assam, Madhya Pradesh, Tamil Nadu, Lakshadweep, Puducherry, Karnataka, Odisha, Nagaland, Maharashtra, Mizoram, Jharkhand, Manipur, Uttarakhand and Rajasthan** have specific recruitment policy for teachers working at different stages. Eligibility of teachers is assessed through TET. **In Uttarakhand,** teachers are being recruited through Uttarakhand Board of Technical Education to	This is a continuing activity and efforts made by states is noted. The 8th JRM has made further specific recommendation on this recorded in the Aide Memoire.

Sl. No.	Recommendation	ATR	8th JRM responses
	forestall legal problems and corresponding delays.	ensure transparency. **Andhra Pradesh** has a separate recruitment cell in School Education Department. • **Online System: Kerala, Punjab, Gujarat, Madhya Pradesh, Andhra Pradesh** have online system for recruitment of teachers including online submission of applications, counseling and transfer. **Haryana** has initiated online rationalization as well as transfer of teachers' process. • **Punjab** has informed that they are formulating a transfer policy for teachers. **Jammu and Kashmir** is under the process of ensuring subject specific recruitment.	
8.	States, as part of the AWP&B process, may wish to prepare plans to address the shortage of Mathematics and Science teachers identifying the main constraints in their context.	• **Chandigarh, A&N, Goa, Tamil Nadu, Andhra Pradesh and Kerala** have reported that there is no shortage of subject specific teachers in their States/UTs • **M.P. & Uttarakhand** have reported that to address the shortage of Mathematics and Science teachers, they have hired local teachers as guest teachers. • **Digital Methods:** The state of **Chhattisgarh** has introduced Audio Video classes, Active Learning Methodology for addressing the shortage of Science and Mathematics teachers • **Rationalisation of Teachers:** Rationalization of specific subject teachers was carried out in **Puducherry, Manipur, Chandigarh and Rajasthan** to avoid any dearth of subject teachers. An expert committee has been constituted to analyse such issues in **Meghalaya**. Training need analysis is being undertaken in **Karnataka** to strengthen teachers' capacity. • **Assam, Uttar Pradesh, Odisha, Lakshadweep, Manipur and Arunachal Pradesh** have stated that they will try to address the issue through proposal for additional teachers in AWP&B.	Information shared is appreciated. This recommendation is also for the states' plans for the next AWP&B process. It is expected that the JRM will revisit this in the future.

Sl. No.	Recommendation	ATR	8th JRM responses
		• **Maharashtra** has reported that 94% secondary schools are run by Govt. aided private institutes and recruitment of subject teachers is done by these institutes.	

9.	Conduct a study of classroom teaching practice so as to see link between the type of teaching used by teachers and the learning outcomes of children in science and mathematics, so as to be able to document and disseminate good teaching practice.	• The following four studies are in pipeline including impact of teacher training which would inter alia involve classroom teaching practices:
		  i. Study on impact of Teacher training on quality of teaching in secondary education.
		  ii. Study on the drop out factors in secondary education
		  iii. Impact of self defence training in schools.
		  iv. Study on the impact of Vocational Education under RMSA.
		• TORs have been prepared and are under examination in MHRD.
		• World Bank has carried out a Time on Task study in **Tamil Nadu** and **Madhya Pradesh.**
			Information shared is appreciated. The timeline for conducting these studies may be shared. The JRM will revisit this in future.

10.	The MHRD must ask States to submit a State specific ICT strategy (vision, execution, methodology, effectiveness measurement, etc.) as part of their AWP&B submission. The MHRD should provide States flexibility in terms of how they want to spend their ICT budgets.	Under the ICT scheme, financial assistance (non-recurring and recurring) is provided to States / UTs, but there is in-built flexibility in the Scheme. The State Governments have the option to incur expenditure on the items indicated in the scheme or any other items depending upon their needs and resources, subject to an overall maximum limit of Rs. 6.40 lakh for non-recurring and recurring grant of Rs. 2.70 lakh per annum for 5 years. An ICT workshop was conducted on 08 September 2016 to review the status of implementation of ICT in School Scheme with States / UTs. With regard to States / UTs submitting State specific ICT strategy as part of their AWP&B Plan, the same will be asked from the States / UTs from the next financial year – 2017-18.	This recommendation has been addressed and is concluded. The next step is for states to develop their plans for their ICT strategy.

Sl. No.	Recommendation	ATR	8th JRM responses
11.	Set up a team of specialist teachers and commission research on high quality software that helps children learn fundamental concepts in Language, Maths & Science.	• **Tamil Nadu, Assam, Goa and Gujarat** have created a pool of specialized teachers and repository of remedial content talent, exam content, in-service content, innovative teaching aids and methodology. **Assam** seeks to introduce ICT based teaching in collaboration with IIT, Guwahati. **Sikkim** has requested SCERT to identify teachers and constituted a team accordingly. • **Digital initiatives: Odisha and Manipur** have initiated development of high quality software to assess the learning levels of students in Language, Mathematics and Science. **Kerala** has developed virtual text books for High School students in collaboration with IT@School and SCERT. **Punjab** has piloted various interventions like flip class room, TEFES program in collaboration with AIFT, Intel. The U.T. of **Daman & Diu** is going to adopt SMART CLASS with a team of Specialist Teachers. **Lakshadweep** has also reported to have used ICT based teaching learning methods. In **Karnataka** a comprehensive technology assisted learning programme is reported to have been designed to provide for subject related content creation teachers training and delivery mechanism. **Rajasthan** is developing a portal (E-Gyan) for the purpose. The state of **Andhra Pradesh** has a state level subject forum (www.apekx.in) for wider dissemination of services to the teachers and students. • **Language specific projects: Uttarakhand** has implemented Unnati Project to enhance the competencies in functional English of students of class IX and X. Chhattisgarh has also piloted a Language specific project in Kanker district. **Jharkhand** has informed that it is in the process to introduce e-content for all the subjects including Maths, Science and Language through series of Workshops and Teachers Training. • **Formation of Resource Group**: **Uttar Pradesh** has constituted a State Resource Group and District Resource Groups and specialist teachers have been associated in these groups.	This recommendation was to set up a team of specialist teachers and commission research. It is a continuing activity.

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12.	Each state is required to scrutinize all the pending civil works in-progress pertaining to the period 2009-10 to 2011-12 and develop a detailed physical and financial proposal. A task force may be set up for technical and financial appraisal of the proposal before submission it to PAB. The Ministry may finance state specific proposal following the present basis of GoI-state sharing of costs.	• **Government Agencies**: States/UTs **Chandigarh, Assam, Himachal Pradesh, Manipur, Puducherry and Chhattisgarh** have reported that detailed physical and financial progress of civil works is undertaken by the Government agencies (PWD) in. **Madhya Pradesh and Sikkim** have reported that 90 to 98 percent of the civil works of 2009-10 to 2011-12 have been completed whereas there is no pending civil works in the state of Punjab. • **Monitoring Committee under RMSA**: In **Kerala**, the governing body of RMSA reviews the progress of civil works frequently. RMSA **Arunachal Pradesh** has also constituted monitoring committees with at least one technical expert at all levels—School, District and State. These committees monitor physical and financial progress of all components under civil works. • **Additional funds from State Government**: **Kerala and Gujarat** have asked for additional funds from State Government for completion of pending civil works. • **Pending civil works:** These are also being monitored through PMS at the MHRD level and the technical and financial appraisals are being done by consultants in TSG.	Not much progress has been made following the recommendations. Of the sanctioned schools during the 11th FYP, constructions of 1,033 schools have not yet started. The 8th JRM has made further recommendation on this issue.
13.	An on-line tracking system may be developed to monitor physical and financial progress of civil works. Specific measures would also be required to (i) ensure completion of civil works within the timeline specified in the MoU with the construction agency; (ii) site inspection of construction materials and (ii) collection of completion certificate at the time on handing over of the school building by the construction	• **Online tracking system**: **Tamil Nadu, Assam, Himachal Pradesh, Chhattisgarh, Uttar Pradesh, Madhya Pradesh, Manipur, Rajasthan, Jammu and Kashmir and Punjab** have reported that an online tracking system has already been developed to monitor civil works activities. Whereas the development of an online system is under process in States of Sikkim and Goa. Punjab is also developing a mobile application for the same purpose. • **Tracking through RMSA-PMS**: The state of **Karnataka, Odisha and Jharkhand** is using RMSA-PMS (on-line tracking system) to monitor physical and financial progress of civil works. • **Involvement of third party**: **Maharashtra** has appointed Project management consultancy to monitor physical and financial	The process is underway in some states. This is a continuing activity.

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	agency. Besides, the states may collect regular feedback from schools regarding the quality of construction.	progress of civil works ensuring completion of civil works within the timeline. • **Haryana and Andhra Pradesh** have reported that the states have its own mechanism to monitor the progress of civil work at all levels, however online systems are yet to be developed in the states. • UTs have reported that monitoring of civil works is not an issue as amount of approved civil work is less and can be monitored physically.	
14.	MHRD may like to revisit the RMSA provisions on recurring budget for running the girls' hostels and make suitable amendments in consultation with the State/UTs	The proposal for revision of certain norms of Girls Hostel component of RMSA including positioning of Matron and some other recurring interventions are under consideration of the Department.	This recommendation has been responded to, the activity is a continuing one. The JRM will revisit this in future
15.	In 22 States the scheme (VE) has been rolled out and in 2 States the scheme has already been running for 4 years. Time is now right for a small study which examines the problems encountered in implementation and even more importantly if students graduating are getting jobs or engaging in self-employment. A quick evaluation within 6 months should be conducted in the States where the programme has been running for a few years so that other States can benefit from their experience.	Terms of Reference for the evaluation study have been formalised and submitted for necessary approval of Secretary SE&L.	Information shared is appreciated. The time line for conducting this study may be shared. The 8th JRM has made further recommendation on this and will revisit this in future.

Sl. No.	Recommendation	ATR	8th JRM responses
16.	Secondly, the study could also examine how much it is costing to set up different courses at secondary level, so that an appropriate costing is available for MHRD, which will enable it to make appropriate allocations in future for vocational education. Also, a funding model could be evolved. The Government of India needs to arrive at an appropriate financing model for vocational education/training across ministries, and the financing model proposed in the 12th Plan chapter on Skill Development should be examined carefully for this purpose.	Suggestions regarding the funding pattern have been received from Haryana. MHRD has further sought suggestions regarding modifications in the current funding model of vocational education from the states/UTs. These suggestions would be taken into account at the time of revision of the scheme.	This is a continuing activity. The JRM will revisit this issue in future.
17.	MHRD through the State Government must ensure that five kinds of industry participation is enabled: instructors; internships; curriculum design; assessment; and placement counseling. Sector Skill Councils (reporting to the Ministry of Skill Development and Entrepreneurship) should be required to arrange through local industry for teachers. Currently, teachers are being arranged by SSCs but as the number of schools and States offering vocational	• The scheme has in built provisions for greater involvement of industry in design, delivery and assessment of skills sets of the students. The Sector Skill Councils are being involved in the design and development of curricula and courseware. Industry coordinators at the State level seek to facilitate sourcing experts and Resource Persons from the industry and for arranging hands on training for students in industrial set up. The industry is also being involved in assessment of skill sets of the students in conjunction with State Board of Education by way of provision of assessors. • The pedagogical training is conducted by PSSCIVE for the states. • Assessments in the respective sectors are being carried out by NSDC empanelled assessing bodies of Sector Skill councils	Efforts made to integrate the role of the industry is appreciated. JRM will revisit upon completion of the evaluation study.

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	courses increases the shortage of teachers will be felt very quickly. a. Pedagogical training should be provided to such trainers sourced from industry. b. SSCs should train and orient the assessors for assessing vocational courses; training should be provided as per curriculum of vocational trade. c. MSDE has been discussing the possibility of using retired Personnel from the defence forces who have skills of a Vocational type as instructors. The State governments should consider drawing upon retiring personnel of public sector enterprises (e.g. RITES, SAIL, NTPC, etc) as instructors/resource persons. The scheme provides flexible funds or engaging such resource persons.	• The scheme provides flexible funds for engaging resource persons and retired defence/police personnel are already being invited as guest lectures for security sector.	
18.	The experience of PSSCIVE is that though under the curriculum design framework there is a	MoSDE is being requested to orient SSCs on school system. It will not be advisable for MHRD to directly engage with industry associations	Orientation to SSCs on vocational education in schools and the school

Sl. No.	Recommendation	ATR	8th JRM responses
	prominent role of industry but the response from industry is not very encouraging. MHRD may need to engage with SSCs at senior level in order to ensure that curriculum design support for PSSCIVE is taken more seriously by SSCs; MSDE in collaboration with MHRD may need to orient SSCs on school system and their MoU may need revision specially on feedback for curriculum design. With the expansion of vocational education/training envisaged, it may be difficult for SSCs alone to cope; it may mean that industry associations for specific sectors could be directly engaged by MHRD, RMSA for the purpose.	for curriculum development at SSCs are the representative industry bodies.	system will help strengthen foundations upon which industry partnerships can be built. But this might not be sufficient for reliable and sustainable linkages with industry. This JRM has reiterated the need for industry partnerships beyond those that would serve the purpose of curriculum development.
19.	Internships for vocational students may be arranged by SSCs. This need to be written into the MoU with SSCs, in consultation with MSDE, SSCs should encouraged industry to offer internships. In addition, placement support and counseling should be written into revised MoUs with SSCs, as children graduate from levels 2 and 4 in school.	The state/UTs have assured that Internships for vocational students will be arranged by SSCs and same will be incorporated in MOU.	The update is appreciated. Results from the evaluation study could further shed light on how this is being operationalized.

Sl. No.	Recommendation	ATR	8th JRM responses
20.	Aided schools account for significant share of total secondary enrolment in the country. There is growing demand for vocational courses across the school systems, regardless of management. Since RMSA and the new scheme will be able to finance only a small share of all Government schools it will be necessary to allow aided schools to offer vocational education if the growing demand is to be met. All that is required on the part of MHRD is that vocational courses are recognized for purposes of certification in those schools. The demand for such courses is such in many states that there is no need for state funding to incentivize aided schools to initiate vocational education.	Aided schools may offer vocational education and the recognition of vocational subject is addressed by the State Board of Secondary Education by notifying vocational education at secondary and higher secondary level.	No further clarification is required on this and it can be considered closed.
21.	Funding constraints will prevent all schools to roll out vocational education. The phasing of scale-up is critical, and one criterion would be to focus on urban and semi-urban locations, where school size may be larger, for introducing vocational courses. In addition, there needs to be a strategic approach in deciding which schools should be prioritized. The	Under the scheme the selection of courses by the States/UTs is based on assessment of skill needs conducted nationally and locally; availability of required resources e.g. industry/business set-up for linkages, skill /trainers, necessary raw material, electricity, water supply, and the prevailing and emerging employment opportunities , aspiration and interest of students etc. The school wise trades are proposed by the State/UT as per their requirement for consideration and approval.	The response adequately covers the process adopted for selection of sectors for VE implementation identifying reasons for deviation from recommended proximity to economic centres.

Sl. No.	Recommendation	ATR	8th JRM responses
	country has 6000 clusters of modern and traditional manufacturing activities. In consultation with the Ministry of Micro, Small and Medium Enterprises(MSME), the Ministry for Heavy Industries (which have clusters of ancillaries), Textiles Ministry, and Department of Electronics, as well as other vocational education in and near such clusters. Micro and small enterprises account for most of the jobs in manufacturing. They are also in the unorganized sector and need trained workers but have difficulty in accessing them. Ensuring synergy between the cluster approach of MSDE's focus on vocational education and training on the other hand, will be win-win for all. Ensuring entrepreneurial training will ensure children are prepared for self-employment, Responsiveness to local labour markets will be ensured if a cluster-driven approach is adopted.		
22.	A multi-skill foundation course is offered in the State of Maharashtra. This course provides an opportunity to students to get	Maharashtra is one of the 04 states selected for the evaluation study. The study would also analyze the aspect of Multi skilling.	The JRM will revisit in the future upon completion of the evaluation study.

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	orientation to nearly 4 skills in 2 years (at level 1, but covering both classes 9 and 10). Such course may surely provide orientation to the students towards various sectors initially, but students need to specialize in class 11 and 12 in one of the four, or other vocations to get certified from various SSCs. Therefore, the evaluation of Vocational Education (recommended in item 1 above) should include a rigorous analysis of this programme before offering, the multi-skill foundation course in more schools under RMSA.		
23.	With the introduction of vocational subject in class 9, states have to decide which subject among the existing six must be dropped by a child, so that the burden does not increase on the child. The matter is being addressed differently in states. The RMSA Guidelines may wish to address this issue while keeping the spirit of cooperative federalism in mind.	• The scheme already outlines the said requirement –"At the secondary level i.e. class 9th and 10th, vocational modules should be offered as an additional or compulsory subject. At the higher secondary level i.e. Class 11th and 12th, vocational modules should be offered to the academic stream students as a compulsory (elective) subject. In no case vocational modules shall be offered as an additional subject at the higher secondary level. The grades/marks obtained by the student in the vocational subject shall be necessarily factored in the final mark sheet and obtaining at least the minimum marks/grades specified." • States are to adhere to these guidelines while notifying the vocational subject. • As on date, 23 states have notified vocational education as an additional/ elective subject at secondary level. Depending upon the state policy vocational education is being taught as sixth or seventh	This information is helpful.

Sl. No.	Recommendation	ATR	8th JRM responses
		additional subject. Remaining states are in the process of finalizing the notification **(Annex I)**.	
24.	With a shrinking financial envelope RMSA needs to prioritize and focus on fewer activities for any visible impact on the ground. It needs to be ensured that complementary with State Government Schemes are leveraged to ensure that important areas like Quality, Equity, Training etc. are not left unattended to.	• **Student Friendly State Government schemes:** The state governments of **Tamil Nadu, Assam and Kerala** have implemented student friendly schemes to enable equity among students. • **Training and School Grant:** States of **Bihar, Uttarakhand, Rajasthan, Andhra Pradesh and Chhattisgarh** have identified training and school grant as priority areas for fund allocation. • **Convergence with other institutions:** RMSA **Gujarat** has converged programmes with GCERT, STTI, DIETs to bring leverage in the area of Quality, Equity, Training etc. • Other States/UTs—**Sikkim, A&N, Manipur, Jharkhand, Daman and Diu, Uttar Pradesh, Arunachal Pradesh, Puducherry** have reported that due efforts have been made to ensure that complementarities with State Government Schemes are leveraged to ensure that important areas like Quality, Equality, Training etc., are not left unattended to.	This is a continuing activity and the JRM will revisit this in future.
25.	MHRD should release the first installment of funds in the first quarter and eliminate avoidable delays in release of funds.	Out of Rs. 3,700 (BE) for 2016-17, MHRD released Rs. 961.72 Cr (26%) during the first quarter of 2016-17 and releases have increased to Rs. 2285.75 Cr (62%) as on 15th Sept. 2016. Till first quarter during 2016-17, Rs 961.72 Cr.(26%) GoI fund has been released to 32 States and increased to Rs. 2285.75 Cr (62%) as on 15th September 2016 out of Rs 3700 Cr approved for the year.	This recommendation has been responded to and the activity may considered as completed if this trend of fund release continues. The JRM will revisit this in future.
26.	Encourage States to link allocation of Annual School Grants to number of enrollments in classes IX and X	School grants are fixed as per RMSA guidelines. Matter will be taken up at the time of revision of the guidelines along with extension of RMSA scheme.	The JRM will revisit this in future.
27.	Complete Financial review of the Programme by December 2016 by independent domain experts from	The selection of the Institution for carrying out the Review is under process.	This delay is going to affect the time line that was committed at the 7th JRM.

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	the area of government finance and accounting systems.		The 8th JRM recommends that this process be accelerated on high priority.
28.	The processes for release of funds at the State level needs to be stream-lined to eliminate avoidable delays and ensure that availability of funds does not become a bottleneck for implementation.	• **No delay in fund release:** States of **Uttarakhand, Karnataka, A&N, Rajasthan and Gujarat** have reported that there is no delay in release of funds. **Puducherry** has also streamlined the process of fund disbursal to avoid delay. In **Maharashtra**, to avoid the delay, grant distribution system is operated from State Level. The state of Jharkhand has ensured that funds (recurring as well as non-recurring) are made available to the respective districts/ schools in time. • **Through PFMS**: **Tamil Nadu** has streamlined the release of funds at the State level to eliminate avoidable delays through Public Financial Management System • **Online Fund Disbursement system**: **Punjab** has developed an online system through which all sanctions are released and accordingly bills are also submitted to the treasury which rereleases funds to the society through RTGS. Same process is followed for fund disbursement to districts. • However, remaining states have reported to have taken initiatives to address the delay of funds through the treasury.	The information shared is appreciated. The JRM noted delays in release of State share in case of some States namely Maharashtra, Kerala, Uttar Pradesh, Punjab, Nagaland and Manipur. Timeliness in release of funds is expected to be covered as part of the Financial Review.
29.	Inspection of Schools should also include inspection of financial books and records.	• **District and school level auditors/representative: Tamil Nadu, Arunachal Pradesh, Odisha, Daman & Diu, Uttarakhand, Goa, Karnataka, Lakshadweep, Bihar, Maharashtra, Gujarat, Jharkhand, Manipur, Haryana, Andhra Pradesh and Sikkim** undertakes inspection of financial books and records through district level officials during school inspection. School inspection is undertaken by the auditors, accounts officers available at the station and deputed by the department. Any discrepancy found at the school level can be communicated to the State Head Office online in **Punjab. Chhattisgarh** has deputed a special district	On-going efforts are appreciated. MHRD may consider identifying some of these good practices and sharing it with other States. This area is also expected to be covered as part of the Financial Review.

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		level team under the district collector for inspection of Schools including inspection of financial books and records. • **Special Monitoring System:** The state of **Assam** has introduced a monitoring mechanism– DRISTI for monitoring of financial records of the schools on regular basis.	
30.	It is recommended that state prepares a detailed monitoring framework (preferably on line tracking system) and follows the same meticulously both at school and district level for efficient execution & completion of civil works	• Due to small approval of civil works in UTs, an on-line tracking system is not required to monitor the progress. • Since the construction work is carried out by the Govt. Agencies, work of monitoring/tracking is done by the engineers/accounts officers in **Gujarat, Chandigarh** • **Tamil Nadu, Rajasthan and Uttar Pradesh** have reported that a detailed monitoring framework for efficient execution & completion of civil works already exists in the state • **Online System: Assam, Maharashtra, Haryana and Chhattisgarh** (through state RMSA website) have developed an online tracking system to monitor physical and financial progress of civil works. The state of **Manipur** is using mobile network monitoring system. **Himachal Pradesh** has linked the monitoring tool with MIS of Education Department. An online tracking system is under process in **Gujarat, Meghalaya, Goa and Kerala**. **Jammu and Kashmir** has implemented an Android based application developed by NIC – JK PULSE, for online tracking and monitoring progress of civil works through geo and time stamping. • **Uttarakhand** has appointed Executive Engineer and Asst. Engineer on outsource basis to monitor construction works regularly. Third Party Evaluation is in practice. A hierarchy from State to District level is established to monitor the progress and quality of works. District Magistrates/ Chairman of DPC also monitor the construction works. The Director General of School Education has appointed mentors from State level officers to	Appreciable progress has been made in this direction. The JRM will revisit in future.

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		monitor various academic and construction works. Surprise monitoring is in practice to monitor. • **Tracking through PMS:** The States/UTs (**Jharkhand, Karnataka, Odisha**) have adopted RMSA-PMS to monitor the civil work progress. Monitoring of Civil works is also being done through PMS at MHRD.	
31.	States may have proper procurement unit established at RMSA state level with regular financial & procurement expert.	• **In house procurement unit:** Many States **Tamil Nadu, Himachal Pradesh, Assam, Madhya Pradesh, Punjab, Goa, Uttar Pradesh, Haryana, Rajasthan, Andhra Pradesh and Nagaland** have procurement units established at state level under state officials/committee. The State of Nagaland strengthened the Accounts unit with officials from the Finance & Accounts Department. • In **Chandigarh** procurement is made by the heads of the schools at cluster level and Bihar has established BSEIDC to conduct procurement process • In **Gujarat**, RMSA Scheme is being implemented by Gujarat Council of Secondary Education (GCSE). The council has established proper procurement, finance and accounts departments having well qualified staff. • The **U.T. of Daman & Diu, Manipur** and **Jharkhand** follows the Guidelines of FMP (Financial Management Procurement) Manual.	Progress in procurement is good in states where procurement units at state level are functional. There is a need for opening procurement units in all states RMSA SIS. This is a continuing activity and the JRM will revisit this in future.
32.	MHRD may write to states regarding importance of Procurement Plan and request them to prepare a realistic Procurement Plan and work on it for efficient procurement.	MHRD has recently appointed a consultant for Post Procurement Review in various States to understand the importance of Procurement Plan. States have been accordingly asked to prepare an annual procurement plan for the approvals given.	The consultancy firm appointed is for post procurement review. However, there is need for conducting workshop to ensure the importance of procurement plan and its use. The is a continuing activity and the JRM will revisit this in future.

Sl. No.	Recommendation	ATR	8th JRM responses
33.	MHRD may consider early release of balance fund for non-recurring expenditure like civil works, procurement of goods and services to the state so that the fund is not constraints for contract execution and the states can take up the construction activities in the current FY and complete the same.	Release of non-recurring funds depends on progress of civil works and submission of previous year UCs. All States are being reminded to submit the documents in time. Further, during 2016-17, Rs 922.25 Cr non-recurring grant has already been released by GoI as on 15th September 2016.	Early release of funds by MHRD this year is commendable and will go a long way in efficient execution of civil works.