EVALUATION OF CENTRALLY SPONSORED SCHEME ON TEACHER EDUCATION IN STATES/UTs

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Tata Institute of Social Sciences

TATA INSTITUTE OF SOCIAL SCIENCES

V N Purav Marg, Deonar, Mumbai

EVALUATION OF CENTRALLY SPONSORED SCHEME ON TEACHER EDUCATION IN STATES and UTs

Report

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Abbreviations

AS	Assam
AWP	Annual work plan
BITE	Block Institute of Teacher Education
BH	Bihar
BRC	Block resource centre
BTC	Basic training centre
CG	Chhattisgarh
CPD	Continuous professional development
CRC	Cluster resource centre
CSSTE	Centrally Sponsored Scheme on Teacher Education
CTE	College of Teacher Education
DIET	District Institute of Education and Training
DL	Delhi
DPEP	District Primary Education Programme
DRC	District resource centre
DSERT	Department of State Educational Research and Training
HP	Himachal Pradesh
IASE	Institute of Advanced Studies in Education
ICT	Information and communication technology
ISTE	In-Service Teacher Education
JRM	Joint Review Mission
KN	Karnataka
MH	Maharashtra
MIS	Management information systems
MOOC	Massive open online courses
MP	Madhya Pradesh
MZ	Mizoram
NCERT	National Council of Educational Research and Training
NCF	National Curriculum Framework
NCFTE	National Curriculum Framework for Teacher Education
NCTE	National Council of Teacher Education
NET	National Eligibility Test
NGO	Non-government organisation
NPE	National Policy on Education
NUEPA	National University of Educational Planning and Administration

ODL	Open and distance learning
OERs	Open educational resources
PAB	Plan Approval Board
PAC	Programme Advisory Committee
PPT	PowerPoint presentation
PSTE	Pre-Service Teacher Education
PD	Puducherry
RJ	Rajasthan
RMSA	Rashtriya Madhyamaik Shiksha Abhiyan
SCERT	State Council of Educational Research and Training
SM	Social media
SMC	School management committee
SSA	Sarva Shiksha Abhiyan
TE	Teacher Educator
TESS	Teacher education through school-based support
TEIs	Teacher education institutions
TET	Teacher Eligibility Test
TLMs	Teaching learning materials
TS	Telangana
UP	Uttar Pradesh
UPS	Uninterrupted power supply

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Preface

In July 2017, the Ministry of Human Resource Development (MHRD) initiated an evaluation study of the Centrally Sponsored Scheme for Teacher Education (CSSTE) of Government of India. This scheme is currently implemented by the Department of School Education and Literacy in 33 States and Union Territories on a fund sharing pattern between the centre and the states. With growing concern over the quality of education in schools, it is imperative to prepare teachers adequately to respond to students' educational and emotional needs in an effective and timely manner. The CSSTE forges a centre-state partnership to promote the training of teachers of elementary and secondary schools at different stages in their careers. The CSSTE, which was launched in the 7th five-year plan, has seen modifications in the 8th, 9th, 10th and 11th five-year plans. Following the last revision in 2012 with an approved outlay of ₹ 6,308 crore for the next five-year period, and with the scheme due to end in 2017, the MHRD sought to gauge the efficacy of the teacher education institutions (TEIs) that are supported by it. The Tata Institute of Social Sciences (TISS), Mumbai, took up the study of the scheme as a third-party evaluator.

The objectives and terms of reference (MHRD, 2017) shared by the MHRD, outlining the role of TISS as the third-party evaluator of the scheme, were:

Objectives:

(i) Assess the extent to which the Centrally Sponsored Scheme on Teacher Education (CSSTE) has been able to achieve its objective and the factors determining the same.

(ii) Identify the constraints in the implementation of the scheme in the 12th five-year plan.

(iii) Suggest revisions in the provisions of the scheme in order to meet the exceptional challenges of the States/UTs and for the effective implementation in the next plan period.

(iv) Analyse the fund flow mechanism and recommend procedures for timely and effective utilisation of funds.

(v) Analyse the need to continue the scheme in the existing form or changes required in the norm,s both programmatic and financial for effective implementation of the scheme.

(vi) Examine the effectiveness of Teacher Education Institutions (TEIs) in terms of its *(sic)* envisioned role and function.

(vii) Study whether Teacher Education Institutions are functioning as per the norms and standards of the NCTE Regulations 2014.

(viii) Analyse whether Teacher Education Institutions are playing a complementary and coordinated roles *[sic]* with other institutions at the state and district levels for improving the quality of education and teacher education.

(ix) Any other improvements or additions to the scheme that can make it more effective and meet its objectives in today's society and education system.

Terms of Reference:

(i) To analyse extent of the improvement in the quality of teacher education since the reorganisation and restructuring of the Centrally Sponsored Scheme on Teacher Education in 2012 [*sic*].

(ii) Identify the constraints in the implementation of the scheme in the 12th five-year plan.

(iii) To analyse adequacy and timeliness of fund flow and delivery mechanisms.

(iv) To analyse scope of operational guidelines including cost norms and recommend modification if any.

(v) To assess extent of coverage and linkages with other institutions at the state and district levels.

(vi) To analyse effectiveness of teacher education institutions in terms of their envisioned role and functions.

(vii) To justify or recommend continuation of the scheme or otherwise.

(viii) To suggest measures for improvement of implementation and monitoring mechanism for the scheme.

(Note: Approval of competent authority should be obtained for framing ToR and all orders or instructions issued from time to time in respect of ToR may be complied with.)

(i) A National field sample survey of minimum 13 States and UTs, choosing from all regions of the country viz. North, North-Eastern Region and Himalayan States, South, East and West Zones, etc., shall be conducted. During the visit, the team shall interact with officials at state and also make visits to SCERT and at least 4 DIETs, 2 CTEs, 1 IASEs and 1 BITE (wherever functional) in the State/UT.

(ii) Information shall be collected to test the various parameters inherent in the objectives. The sampling frame shall include various teacher education institutions (TEIs) like SCERTs, DIETs, BITEs, IASEs and CTEs at state, district and block levels. The study shall be able to collect and analyse the data related to capacity and performance of TEIs.

(iii) It shall also brought [*sic*] out the impact and effectiveness of teacher education provided through this scheme. The study shall also look into the Joint Review Missionreports, 45 Teacher Education Appraisal Board (TEAB) meeting minutes, NCTE Regulations and Initiatives, Prashikshak Portal (a portal on DIETs) and other research reports, etc.

(iv) Review of the various data sources on teacher education to assess the progress over the years and review of quality indicators and financial fund flow for optimal utilisation of financial resources shall also be conducted.

Expected tasks to be performed by the selected agency included:

(i) Develop the instruments as agreed in consultation with the Department.

(ii) Develop protocols for data collection, entry and cleaning.

(iii) Develop the field implementation plan.

(iv) Conduct orientation/training for field survey team.

(v) Pilot test instruments.

(vi) Revise or refine instruments based on learning from pilot.

(vii) Prepare progress report on pilot.

(viii) Conduct the main survey.

(ix) Clean and prepare the data for analysis (in specified formats) along with developing a detailed codebook for data analysis.

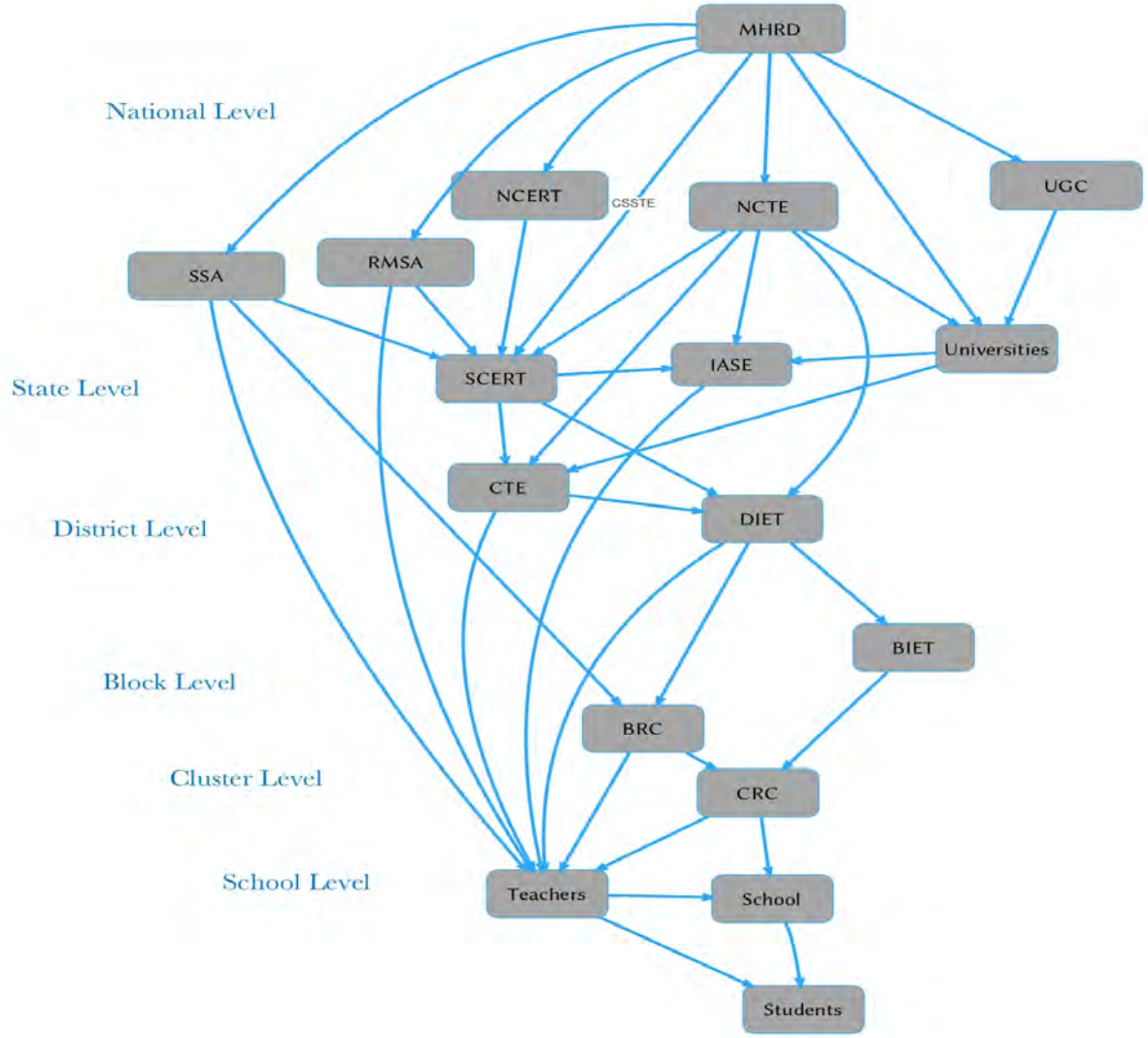
(x) Prepare and submit technical report highlighting all stages from planning and preparation to completion of data collection.

(From the *Request for Proposal for Evaluation of Centrally Sponsored Scheme on Teacher Education*, (MHRD, 2017): 42–45)

The present report is an outcome of following these requirements and presents the findings from the study that was conducted by Centre for Education, Innovation & Action Research, TISS, in August and September 2017 as mandated in the time schedule.

The CSSTE, as outlined in the Government of India Guidelines for Implementation of CSSTE (MHRD, 2012), was conceived as a scheme that would support different institutions and academic bodies across the country in improving the quality of teacher education. The figure below indicates the web of relations between the institutions that are the beneficiaries of the CSSTE scheme.

Figure 1 Teacher Education Organogram



Most of the institutions supported by the CSSTE — namely, the SCERTs, the IASEs, the CTEs, the DIETs and the BITEs — occupy liminal positions as nodes that connect blocks and clusters to districts, districts to states, and states to national governing bodies. Relationships between the different bodies, further, are dialogic and multidirectional. Equally complex are the functions of each of these bodies. On the one hand, they are envisioned as institutes that intervene directly in improving the quality of school education. On the other hand, they function as higher education and professional training institutes within the field of education. Mediation of administration, governance, fund flow and academic responsibility are some challenges the CSSTE encounters in its disbursement of funds for the activities related to teacher education in the country.

The programmes supported by the scheme include pre- and in-service teacher training and capacity-building and professional development opportunities for school teachers as well as the faculty at the institutions. Other responsibilities include support in research and needs analysis that can guide the development of appropriate training programmes and domain-specific research by the faculty of these institutes as part of enhancing subject knowledge.

This study uses the Government of India *Guidelines* (MHRD, 2012) and the 'Terms of Reference' stated above as the framework for its analysis. The TISS team visited and interacted with officials, key informants, faculty, administrative staff and students in over 90 institutions across 11 states and 2 union territories in August and September 2017. A variety of tools — ranging from observation checklists of institutional infrastructure and classroom practices to interview schedules for key informants, senior officials, faculty and students — were developed, piloted and finalised in the two-month period of study to gauge the functionality of the institutions. Also analysed were documentary evidence of fund flow, vacancies, TEAB minutes, JRM reports of states, syllabi, textbooks and curricular materials gathered from the sampled institutions to understand the different ways in which and the extent to which CSSTE has intervened in the dynamic teacher education system in the country.

This report seeks to present a realistic picture of teacher education as the team encountered it in the states and UTs sampled, its reflections on the prevalent conditions and current practices, the gaps and best practices observed and recommendations based on these findings. It is hoped that these recommendations will enable the Ministry to take an informed decision about the future prospects of the scheme in meeting its goals.

Sd. as under

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10 October 2017

Evaluation of Centrally Sponsored Scheme on Teacher Education (CSSTE) 2017

Executive Summary

The Centrally Sponsored Scheme on Teacher Education (CSSTE) is a unique contribution of the 7th Plan (1985-92) of the Government of India, following the National Policy on Education 1986. The scheme aims to strengthen and upgrade teacher education through the development of Teacher Education Institutions (TEIs) and to enhance quality of teacher education at all levels for pre and inservice. The present evaluation study of the CSSTE was funded by the Ministry of Human Resource Development, Government of India, and was carried out by Tata Institute of Social Sciences (TISS) between August and September 2017, across 11 States and 2 Union Territories. Field visits were made to 12 State Councils of Educational Research and Training (SCERTs), 13 Institutes of Advanced Studies in Education (IASEs), 19 Colleges of Teacher Education (CTEs), 50 District Institutes of Education and Training (DIETs) and 2 Block Institutes of Teacher Education (BITEs). Interactions were held with eight Education Secretaries, Two State Project Directors s, 71 heads of TEIs, 91 faculty and 82 students[1]. Reports of the Joint Review Missions conducted between 2013 and 2017 were studied.

SCERTs have all been declare as the academic authority of the state under Right to Education (RtE). There were found to have little influence on State education policy. All SCERTs had overseen the revision of school curricula and textbooks in the light of NCF 2005. Curricular revision of Diploma in Teacher Education (Elementary TE) in the light of NCFTE 2009 had been carried by all states and UTs, BEd revision had been carried out in only four. Prashikshak is not found to be uniformly updated for all institutions and states.

Infrastructure: Overall, all the TEIs had adequate basic infrastructural facilities like working office spaces, principals' room, staff rooms and classrooms, which met the MHRD guidelines. Libraries were found in TEIs (with exception of CTEs) however, the stocks were not up to date and access to recent policy documents and electronic journals was poor. Most SCERTs had websites which provided varying amounts of detail and information on the organization. Chhattisgarh, Delhi, Karnataka and Telangana were found to have functional, updated and informative websites. A few DIETs had effectively working resource centres. 75% TEIs had computer labs of which 74% were found to be functional and 70% had working internet connectivity on the day of the visit. Faculty were not provided with individual computers and a few used the computer labs.

Staff: Shortage of academic staff in general and staff with relevant academic and professional qualifications was noted in all institutions as a pervasive problem. In many states, education administration officers were also deputed to these institutions and academic cadre was not found in any of the states visited with the exception of Delhi (JRMs report academic cadres in Tamil Nadu, Kerala and Gujarat). In SCERTs, on an average of 58% of academic positions and 63% of non-academic positions were filled (Academic Positions: Chhattisgarh, Himachal Pradesh, Karnataka, Uttar Pradesh (92-97% and Assam 16%, Bihar 27%; Non Academic: Bihar 100%, Telangana 37%). In IASEs, on an average 64% of the academic and 72% of the non-academic were filled (Academic Karnataka 100%, UP 32%; non-academic: Karnataka 100%, Maharashtra 0%). In CTEs 32% had academic staffing of 50% or less (1CTE in Bihar

[1] All data, percentages and figures cited are based on the data gathered from the selected sample teacher education institutions in the 11 States and 2 Union Territories covered in the field survey.

100%, and <25% Assam and Karnataka, 1 CTE each). 47% had non-academic staffing of 50% or less (<25% 1 CTE in Karnataka). 64% of DIETs were found to have academic staffing of 50% or less. (100% filled in 1 DIET in Himachal Pradesh and 2 in Madhya Pradesh; <25% in 4 DIETs of Telangana and 1 DIET in Assam). 42% of DIETs were found to have non-academic staffing of 50% or less (110% in 4 DIETs of Assam, 1 in Bihar and 1in Mizoram, and 25% found 1 DIET in Chhattisgarh).

Capacity Building: In general, faculty capacity building opportunities and exposure visits were limited and unstructured. The USAID supported fellowship was found to be enriching, but faculty reported limited opportunities to use this learning after they returned. Capacity building provided by the TSG was found to be useful. A lack of programmes aimed at these institutions from the NCERT and NUEPA was also noted. 74% of institutions reported that their faculty had received training in the use of ICT.

Research and Development: Most faculty in TEIs were carrying on small research studies. These were not being reviewed for quality and rigour and the findings were not being shared or used. In a few cases development and adaptation of curriculum to local contexts was being carried out by DIET faculty; these efforts were isolated from each other, did not receive attention and quality whetting was not in place.

Collaboration and Networking: All the SCERTs were found to have strong connections with the SSA and RMSA particularly for training. SCERTs were generally well connected with DIETs particularly for in-service training and various studies. However, CTEs and IASEs were generally less networked into the state training systems, and lacked connections with SCERTs, RMSA and SSA. Collaborations with NGOs with a pan India presence included TESS-India, Eklavya and Azim Premji Foundation; Institutional specific institutional collaborations included Humana People to People, RVEC. These collaborations were not being systematically tracked or monitored or their systemic contribution and sustainability planned for and ensured.

Funding and Governance: Over the years, an improvement in timelines of budget approval and release was observed. Locally, however, fund allocations were less satisfactory leaving short windows for training. Managing activities was constrained as financial norms had not been revised to take care of inflation. Furthermore centrally prepared norms were found to constrain state specific requirements. TEIs reported lack of clarity on norms and reporting which seemed to lead to delays as required accounting documentation could not be completed in a timely manner.

Decentralisation, visualized by the scheme was not found operational to any significant degree with planning being centralized. Annual work plan was also prepared by a small team in the institution and not reviewed within the institution on a regular basis. Intra institutional meetings were not a regular feature, and took place when there were specific events to be planned for. Smaller teams interacted regularly informally. Most SCERTs had Programme Advisory Committees but only two reported regular meetings.

Teacher Professional Development: In-service teacher professional development was largely largely centralized, norm-driven and seemed to be undertaken to fulfill budget requirements. Few states reported planned based on needs assessment. Scheduling was centrally driven. Linkages were BRCs and CRCs were weak, and school based follow up after training was irregular and not documented effectively. Feedback on quality of training was not maintained. Training Management System was being used only in Mizoram.

Preservice training quality in DIETs was perceived positively by students. However, shortage of staff adversely impacted the quality of functioning.

Private institutions were not regarded highly by the students, faculty and heads of institutions, who cited problems of non-conduct of classes, high fee and poor quality. Monitoring of quality by the CSSTE TEIs was also not effective as private institutions had mushroomed.

Use of Technology: ICT was being used for administrative matters. Email usage, satellite communication, social media platforms, monitoring within campus, institutional websites and ICT labs were found in the teacher education institutions. Most of the faculty had received some training in the use of ICT. Use of ICT in classrooms and for academic teaching was restricted to power-points. Students actively used social media. Karnataka, Bihar, Chhattisgarh States were using technology to administer their academic programmes. A few states such Rajasthan, Maharashtra and Madhya Pradesh were found to be using technology platforms to manage schools and teachers, but the institutions of the CSSTE scheme were not well integrated into these.

Best Practices: In the area of pre-service teacher education, IASE Aizwal has innovated and developed a multimode BEd programme. DIET Bhopal faculty who were a part of the ASU faculty developed strengthened their student internship, and DIET Puducherry developed study learning materials for student teachers. SCERT, Himachal Pradesh had developed and introduced a dynamic monitoring system for students' and teachers' activities through a software-based system (SCERT, Himachal Pradesh). Several TEIs in Madhya Pradesh and Bihar regularly conducted morning assembly. DIET Serchhip was found to be maintaining a functioning Training Management System. Research and innovation included DIET Bilaspur (Rural)'s botanical garden, faculty support for innovation at DIET Nalanda, the development of curriculum for research for school teachers (IASE Delhi) and working with SDMCs (DIET Bangalore (Rural) and development of local language dictionary (DIET, Ujjain). CTE Dharamshala had digitised their library making it accessible to other institutions as well, DIET Chamarajanagar had a well- functioning resource centre, and DIET Indore had developed the science lab.

Key Recommendations

It is important to continue CSSTE to meet the constitutional mandate of the RTE Act 2009 for quality education through quality teachers and teaching. Visioning and planning for the sector of teacher education, by the states is necessary in order to benefit from the scheme effectively. Funds should reach institutions at the start of the session and be released in a timely manner so that activities can be conducted in a timely and rational manner. There is a need for greater flexibility with regard to norms.

Administrative and academic staff vacancies need to be filled in a timely manner, and creating an academic cadre would support their ability to contribute substantively and with quality. This would also benefit from developing career pathways for such academic cadres and enable deputations and fresh recruitment into these institutions. It is essential to provide faculty development opportunities through courses, fellowships, deputations, collaborative teaching and research, as well as opportunities to use this knowledge in work. Training and orientation of key officers and strengthening of the TSG is needed for regular support and capacity building of states.

SCERTs need to be nurtured as independent academic bodies with appropriate funding provision and enabled to play a more effective role in state policy. On the whole it will be desirable to develop mechanisms of working between school and higher education for teacher professional development. IASEs and CTEs need to be restructured and it may be desirable to dovetail with higher education for these institutions. DIETs need to continue to provide pre-service teacher education--they are of a better quality and attract good students as compared to private TEIs in the Districts. DIETs could play a role in supporting TEIs of the District and offer model programmes of PSTE.

All institutions need to develop more capacity to provide quality INSET with variety to meet various needs of teachers, and to use training management systems. DIETs should play a role in monitoring quality of PSTE in private TEIs of the district. Constituting a core committee to address Teachers Professional Development to analyse gaps and requirements in the context of Curriculum, Content, National Teachers Platform (NTP), DIKSHA and to ensure essential common standards for designing basic modules for TE is desirable.

Technology can be used more extensively and intensively in academic programmes coordination and management, and to coordinate across institutions to offer a range of opportunities to teachers. Well resourced Libraries and Resource Centres and ICT labs need to be developed and maintained in all institutions. Structural linkages and work integration between DIETs, BRCs and CRCs need to be developed to ensure coordinated and collaborative work within the sector.

Regular monitoring of the scheme and institutions under CSSTE is essential and should form a feature of both state monthly reviews and central quarterly reviews. Monitoring data of the portal Prashikshak needs to updated regularly, and yearly analytics based on selected parameters made available in the public domain

CHAPTER 1

Introduction

DIET, Chamrajnagar, Karnataka.

Chapter 1: Introduction

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Introduction

There is a growing demand for quality elementary and secondary education in the country. The Right to Education (RTE) is a constitutional guarantee of quality education as the foundation of human life with dignity. Teachers are central to fulfilling this promise. A strong teacher education programme is a prerequisite for building a system that can deliver on the promise of quality education for all.

The Centrally Sponsored Scheme on Teacher Education (CSSTE) was a unique contribution of the 7th plan (1985–92) (GoI, 1985), following the National Policy on Education 1986 (MHRD, 1986). The plan and the scheme envisaged extensive development and strengthening of the institutions of teacher education and reform of the sector in both pre- and in-service teacher training as well as elementary and secondary education. The scheme led to the creation of institutions for teacher education at the district level — the District Institutes of Education and Training as well as strengthening colleges of teacher education and university departments for research and faculty development. The scheme was reviewed and revised in 2012 (MHRD, 2012). It has been implemented by the Department of School Education and Literacy (DSEL), MHRD, GoI in states and UTs on a fund sharing pattern between the centre and the states.

The main objective of the revised scheme is to strengthen and upgrade teacher education through the development of institutions (TEIs) and through programmes of pre- and in-service teacher education, faculty development and research, innovation and field action to bring about localisation and decentralisation, to strengthen academic resources and support to the district level, leading to the enhancement of quality of teacher education at all levels.

The proposed study evaluates the implementation of the CSSTE and its various components and activities across the country on a sample basis. This is a report of the study carried out between July and September 2017. The objectives of the study are:

- To presents a comprehensive picture of CSSTE implementation across the country
- To understand the extent to which the stated objectives and targets of the scheme have been met
- To highlight the factors that have helped achieve the objectives and the challenges and constraints that have affected the intended course of implementation

The study also inquires into the governance of the programme, such as coordination between stakeholders and institutions, convergence, financial allocations, operational guidelines, data management, monitoring and planning processes and achieving the objectives and vision of teacher education under the scheme.

Field visits were carried out in 11 states and 2 UTs, which included visits to institutions, interviews with respondents in these institutions as well as with key respondents in the states and observations and data provided by them. Reports, minutes of meetings and MIS data of the programme, budgets, annual work plans were examined and drawn upon. Reports and observations of monitoring visits and monitoring and review visits by MHRD during 2012–17 were utilised.

The MHRD carried out monitoring and review visits to the states between 2012 and 2017, and these reports and observations were utilised, as well as the monitoring visit reports by teams from the MHRD between 2012 and 2017. The primary source of data is field data gathered from

sampled State Councils of Educational Research and Training (SCERTs), District Institutes of Education and Training (DIETs), Institutes of Advanced Study in Education (IASEs), Colleges of Teacher Education (CTEs) and key informants in the 11 states and 2 UTs. The study provides recommendations about areas that need to be revised and strengthened under CSSTE, which will serve as an important ingredient for evidence-based policy formulation and reform.

1.1 Policy Background

The National Policy on Education (MHRD, 1986), which recommended an overhaul of the teacher education system in India, led to the launch of a centrally sponsored scheme of teacher education, incorporating the establishment of DIETs, CTEs and IASEs.

The CSSTE received its first allocation in the Seventh Plan (1985–90, 1990–92) (GoI, 1985). This scheme constituted the most important, and to date the only, major institutional development in teacher education. The Seventh Plan emphasised the significance of and need for a decentralised system for the professional development of teachers. It was in this context that DIETs, CTEs and IASEs were established (Akai and Sarangapani, 2017).

> 10.22 The Seventh Plan provides for reorientation of the education system so as to prepare the country to meet the challenges of the next century. The main thrust areas in the Seventh Plan would be . . . (v) provision of facilities for education of high quality and excellence in every district of the country.
>
> 10.28 The role of the teacher is most crucial in achieving universal elementary education, especially in the motivation of children as well as their parents. They can play a leading role in improving the quality of primary education, bringing in environment and health education and value orientation. In-service training of teachers thus becomes a programme of high priority. The training of teachers will include, apart from pedagogy, the use of mass media, science and technology, planning and curriculum design for local environment-based courses, mobilisation and use of community resources and other relevant subjects. There will also be special emphasis on teaching methods and other measures particularly required for first generation learners and for reducing the number of dropouts. Teacher training institutions will be developed and strengthened accordingly.
>
> 10.29 Facilities will have to be created for the training of additional teachers required during the Seventh Plan period. There is as yet no infrastructure in the country for training of teachers in non-formal and early childhood education. Training of such teachers would have to be organised by suitably strengthening the existing teacher training centres.
>
> (Source: http://planningcommission.nic.in/plans/planrel/fiveyr/index7.html accessed on 10 June 2016).

In its review of the NPE 1986, the Acharya Ramamurti Committee (Ramamurti, 1990), while arguing for the adoption of an internship model for teacher training, observed that 'the internship model is firmly based on the primary value of actual field experience in a realistic situation, on the development of teaching skills by practice over a period of time'. The Yashpal Committee Report Learning without Burden (GoI, 1993), while advising on ways and means to

reduce the load on school students at all levels, also recommended that the content of teacher preparation programmes should be restructured to ensure its relevance to the changing needs of school education.

Two major initiatives for quality improvement that took place between 1990 and 2010, namely, the District Primary Education Programmes (DPEP) and the Sarva Siksha Abhiyan (SSA), infused a focus on in-service teacher education as a modality for strengthening school quality and thereby created sub-district institutions and functionaries (Block Resource Centres, or BRCs, and Cluster Resource Centres, or CRCs) to strengthen training and school-based follow-up for teachers and cluster-based teacher meetings. The National Curriculum Framework for Teacher Education (NCFTE, 2009) necessitated an alternative framework for teacher education that would be consistent with the changed philosophy of the school curriculum as recommended in the National Curriculum Framework (NCF, 2005) and to achieve the aims of quality education for all as promised by the Right to Education (RTE, 2009).

Following the Twelfth Plan of the Planning Commission and the need growing out of RTE Act 2009, the CSSTE guideline was reviewed in 2012 (MHRD, 2012). As per this review, the TE curriculum was revised to address the demands of RTE Act 2009 and quality of school education.

1.2 CSSTE

The CSSTE and the functioning of its various institutions have been evaluated by independent bodies at various times. The National University of Educational Planning and Administration (NUEPA) evaluated DIETs in 1997, and the NCERT conducted a study on the DIET, CTEs and IASEs in 1999–2000. MHRD asked the Teacher Education Resource Group under the NCTE to undertake a mid-term review of the Scheme during the 10th Plan, and the Group submitted its report in 2007. The scheme was last evaluated in 2008–09 by the NCERT, and its findings were reported in 2009. NIAS (2007) conducted a workshop titled 'DIETs: Potential and Possibilities', drawing together several issues that were experienced by states in implementing the scheme. In the 12th plan, the scheme was revised to revitalise it and enable teacher education to respond to new challenges and developments in Indian education.

Under CSSTE, the SCERTs are visualised as the lead academic institutions at the state level in matters of quality of school education and teacher education. They are expected to provide leadership and support to the CTEs with a focus on secondary school teachers and to DIETs with a focus on elementary school teachers. In the 12th plan, new institutions called Block Institutes of Teacher Education (BITE) were added in blocks with higher proportions of scheduled caste and tribal communities in the population to increase these communities' access to teacher education. The IASEs were provided to university departments of education to increase opportunities for masters in education, research and in-service teacher education.

SCERTs were envisaged as functioning along the lines of NCERT at the state level, providing advice to state governments on policy issues, supporting implementation, appraising programmes and undertaking quality improvement programmes in school and teacher education. The RTE Act 2009 requires that every state identify one of its institutions as its nodal academic agency. In general, SCERTs are expected to play this role and be responsible for establishing coordination between and collaboration with various statutory bodies like the board of textbooks, the board of secondary education and the board of elementary education.

After 2012, the revised scheme required that the curriculum of teacher education be revised in the light of the NCFTE 2009, which was developed following the NCF 2005. Areas such as training for educational administrators, including head teachers, have also become important. The SSA and more recently the RMSA also require in-service to be designed by teacher education institutions of the state under the overall guidance of the SCERT.

1.3 Summary of CSSTE Evaluation 2009 and JRM Reports

In 2009, prior to the revision of the scheme in the 12th plan, the NCERT conducted a study of the scheme, Comprehensive Evaluation of Centrally Sponsored Scheme on Restructuring and Reorganization of Teacher Education (NCERT, 2009). After the revised scheme was launched in 2012, the MHRD instituted joint review missions (JRMs) to be conducted to review the status of the scheme. A total of 30 such reports covering 28 states and 1 UT (Delhi) are available on the TE website of the MHRD.

Table 1.1: Number of JRM Reports by Year and State

Year	No. of States	States
2013	16	Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Jammu and Kashmir, Jharkhand, Madhya Pradesh, Meghalaya, Mizoram, Odisha, Punjab, Tripura, Uttar Pradesh, Uttarakhand, West Bengal
2014–15	5	Andhra Pradesh, Karnataka, Kerala, Maharashtra, Tamil Nadu
2015–16	9	Rajasthan, Manipur, Sikkim, Telangana, Arunachal Pradesh, Delhi, Goa, Himachal Pradesh, Nagaland
2016–17	5	Assam, Chhattisgarh, Jharkhand, Madhya Pradesh, Uttar Pradesh

The following were noted as key achievements and areas of concern.

1.3.1 Infrastructure and Resources

The evaluation study (NCERT, 2009) and JRM reports suggest that the infrastructure and resource availability vary between states. Most SCERTs do not have adequate rooms for holding meetings, conferences and workshops. Computer laboratories are absent at some places or not fully functional where present. Many SCERTs lack basic facilities like science laboratories, auditoriums and even libraries. The libraries have abundant books but these are not up-to-date nor properly maintained. The posts of librarian are lying vacant in almost half of the SCERTs, and the libraries are being managed manually, rather than digitally, making it difficult for faculty to access any material. Infrastructure and physical facilities, such as hostels and toilets, are either not available or not enough for the need. Inadequate utilisation of available provisions, facilities and infrastructure, including land resources, are noted. Staff positions in SCERTs and SIEs vary across states. Many SCERTs are found to be inadequately staffed, and large numbers of sanctioned positions are lying vacant. A few SCERTs do not have a separate cadre, and faculty is drawn from other institutions or the state education service, some of whom are posted on an ad-hoc basis. Weak administrative support is noted while many administrative posts such as administrative officers, stenographers, clerks, accountants and other Group C and D post shave not been filled up. No uniform or concrete policy for faculty recruitment at the BITEs, DIETs and SCERTs is noticed. The DIET faculties' expertise does not always match the skills,

understanding and expertise shown by trainers drawn from other organisations. Over the years, academic work has become redundant and clerical work has increased for the faculty of SCERT and DIETs.

The JRMs also express concern over the absence of documents like NCF 2005 and NCFTE 2009 and children's literature in the libraries. There is a dearth of educational material in local languages throughout the states, even though SCERTs themselves develop modules for teacher educators in areas like CCE, special education, life skills and so on. In many cases, there is no access to the internet and so access to online journals is a major problem. Development of ICT resources remains non-existent in most of the states. A common problem observed by the JRMs is the lack of proper hostel and toilet facilities for DIET students, especially for women. These reports also suggest that the infrastructure and material of the IASEs be upgraded so that they can work at full capacity as envisioned by the CSSTE.

JRMs conducted between 2014–16 note that though overall CSSTE was found to have addressed the institutional infrastructural needs, in some states its quality needed attention.

1.3.2 Faculty and Faculty Development

Many faculty vacancies are noted in all institutions. Moreover, a large proportion of faculty appointed in teacher education institutions does not have the requisite NCTE qualifications. Encadrement of teacher educators has not been carried out in most states where the dominant practice is to move education officers into these positions and promote high school teachers into the faculty positions.

States do not have any systematic mechanism for the professional development of faculty in their teacher education institutes. A few SCERTs are found to conduct sporadic training for DIET faculty. DIET faculty are found to be the least exposed to any kind of professional development.

Lack of expertise in undertaking research or in the utilisation of available research data is also noticed in these institutions.

The JRMs conducted between 2014–16 indicate that SCERTs in some states have developed as nodal point for TEIs for management, fund provision and overall guidance. DIETs in some states have emerged as key institutions and focal points for teacher education at the district level, despite the absence of adequate resources.

1.3.3 Curriculum and Processes

In several states, the SCERTs are found to have initiated changes in the school curriculum and teacher education curriculum in the light of NCF 2005 and NCFTE 2009. However, teacher education institutions are found to be less in sync with these policy developments and changes.

JRM teams also note that teaching-learning processes and evaluation in teacher education have not been significantly changed nor is there much discussion of these. Pedagogy continues to be primarily in the lecture mode, students mainly use guidebooks and there are limited opportunities for interaction among teacher educators and students and for use of other resources. Preparation of models and charts continued to be the main TLM; libraries lacked good textbooks and also NCERT textbooks and resources. Lack of flexible and adaptive

physical infrastructure, inadequate resource material and unpreparedness of teacher educators to adapt to new ways of teaching are found to be the prominent reasons that restrict the use of constructivist approach in the teaching-learning process.

Some of the positives noted by the JRMs in 2014–16 (JRM 2014a, 2014b, 2014c, 2014d, 2016) include efforts in some states to design the curriculum and syllabus in local languages, attempts at inclusive education and increase in the number of trained teachers and teacher educators. It is noted that there is convergence with curriculum framework for teacher education and continuing lack of awareness of needs in this sector. An absence of adequate awareness of and orientation towards NCFTE 2009 and NCF 2005 are noticed. Lack of adequate human resource strength remains a challenge across TEIs.

It is observed that disbursement of funds, underutilisation of funds and complex processes were concerns related to aspects of funding under the scheme. In some states, it needs further empowerment to take decisions to enable SCERTs to provide academic leadership. Mismatch in demand and supply of teachers and underutilisation of TEI potential due to overall neglect are also areas of concern.

1.3.4 In-Service Teacher Training

The JRMs note that in all the states, TMS and/or a database of teachers in the state at the district level are not being used to plan for and depute teachers.

NCERT evaluation report of 2009 (NCERT, 2009) and NIAS 2007 (NIAS, 2007) observe that SCERTs and DIETs employ a limited convergence with other institutions and with organisations like BRCs, CRCs, RMSA/SSA, university departments of education and so on. Relationships with SSA and RMSA in teachers' training remains ad hoc in nature. Alignment of in-service trainings with identified needs is noted as an area of concern.

1.3.5 Collaboration and Innovative Practices

Innovative practices adopted by some states that the JRMs report include the use of social media, collaboration with NGOs, setting up of community radios, development of an online data management system, student feedback for curriculum and pedagogy, innovations in assessments, development of student absenteeism monitoring tools, girls' education, and so on. JRM reports of 2013 indicate that 6 out of 21 states have claimed nil or negligible collaboration of the state's TEIs with any NGOs. JRM reports of 2014–16 highlight that greater convergence between universities and TEIs is needed, along with inter-institution collaborations. Institution spread and provision is another area which need attention.

1.3.6 Summary of Recommendations

1. Sectoral Matters

a) There needs to be overall professionalisation of teacher education.
b) The interlinkage between elementary TEIs and the higher education system need to be strengthened.
c) DSERT, DIETs, and other such bodies should have, in addition to resources, the autonomy to function with capable and stable faculty and leadership.
d) Vacancies in institutions need to be filled up.
e) Technology use needs to be integrated into all aspects of teacher education.
f) There needs to be periodic academic monitoring of TEIs.
g) There needs to be overall convergence between various stakeholders of TEIs.
h) The curricula and syllabi of pre-service teacher education courses and programmes of TEIs should be aligned with the NCF-2005 and based on NCFTE 2009.
i) To attract good professionals to TEIs, pay scales of TEIs faculty should be revised upwards and UGC salary and pay scales could be followed along with mobility for career advancement. TEIs' posts should be encadred.
j) Faculty development opportunities need to be created.
k) ISTE programmes should be of longer duration and should take into account the identified needs of teachers.

2. Funding and Fund Sharing Pattern

a) Financial sharing pattern between Centre and States should be in the ratio 75:25 (90:10 for north-eastern states).
b) Local necessities should inform funding patterns and allow for regional variations.
c) The flow of funds should be: Centre --> state education secretaries --> SCERTs --> IASEs, CTEs, DIETs
d) The state's budget heads should maintain the state's share and central assistance.
e) Fund flow needs to be timely.

3. DIETs

a) Improvement of the existing institutional structure and extension of the mandate of in-service training to include secondary and senior secondary school teachers are recommended.
b) Improvements in infrastructure and organisational structure have been suggested.
c) DIETs should have linkages with universities, colleges and established private institutions.
d) In the coming years, around 10% of DIETs should be considered for upgradation to provide secondary level pre-service training.
e) A DIET should be established in 196 identified districts with minority or SC/ST concentration. In the remaining blocks, BITEs should be set up, with BRCs subsumed under BITEs.

4. CTEs and IASEs

a) Strengthening of existing institutions is recommended.
b) New bodies should be set up based on specific needs of the states.

5. SCERTs

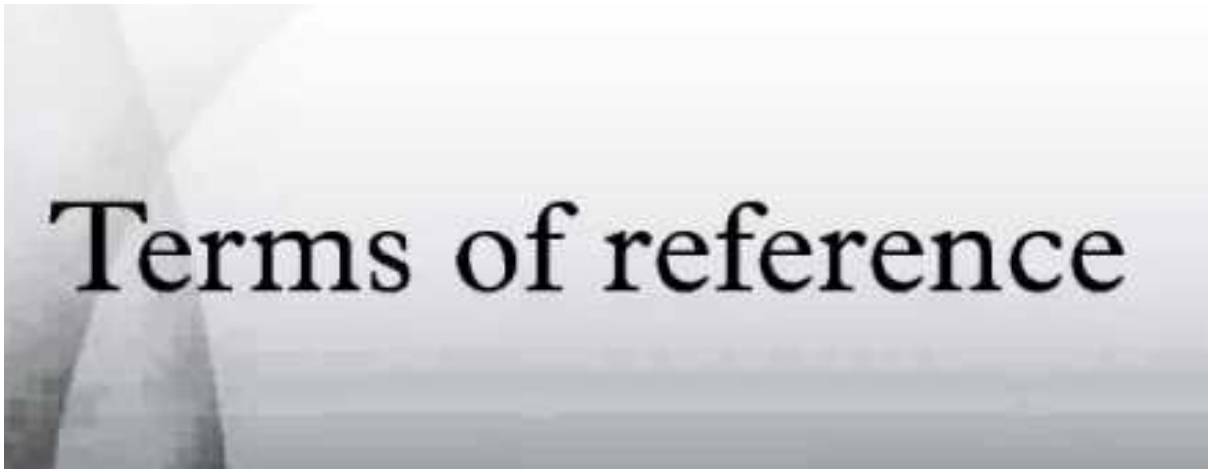
a) SCERTs should be re-vitalised.
b) They should be developed as lead state-level academic institutions.
c) They should develop links with universities.
d) All existing SIEs should be upgraded as SCERTs.

1.4 Structure of the Report

This first chapter has provided the background of CSSTE and key findings regarding the status of the scheme from earlier studies and review and monitoring reports. The next chapter describes the design of the present study and breaks down the overarching objective into research questions. The sample of the study, process of data gathering, processing and analysis are presented. Key limitations of the study are identified. Of the eight chapters of findings, five present institution-wise findings for SCERT, IASE, CTE, DIET and BITE and three synthesise findings on the major thematics of in-service and pre-service teacher education, use of technology and governance. The final chapter summarises key findings, answers the research questions, highlights best practices and makes recommendations.

CHAPTER 2

Operationalising the TOR: Key Questions and Methodology



DIET, Vaijapur, Maharashtra.

CHAPTER 2: Operationalising the TOR: Key Questions and Methodology

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Operationalising the TOR: Key Questions and Methodology

The present study was mainly guided by the CSSTE goals of enhancing the quality of and access to teachers' education and responding to the present-day challenges of quality education at all levels of schooling through capacity building of teachers. This chapter presents the key issues and questions that the study seeks answer. Based on the components of the scheme, the objectives and TOR of the study as outlined in the RFP, research questions are identified and relevant indicators suggested. The sampling and tools that used are presented, and the limitations of the study are summarised.

2.1 Components of the Scheme, Study Objectives and TOR

The design of the study is based on the following considerations:

A. Components of the scheme
B. Objectives of the study
C. Terms of reference of the study

Details of these considerations are as follows

A. The following nine components comprise the design of CSSTE (MHRD, 2012: 24–25).

I. Strengthening and upgradation of State Councils for Educational Research and Training/State Institutes of Education.
II. Strengthening of existing Institute of Advanced Studies in Education (IASEs) and up-grading of Department of Education of Universities into IASEs.
III. Strengthening of Colleges of Teacher Education (CTEs) and establishment of new CTEs.
IV. Strengthening of existing District Institutes of Education and Training (DIETs) and extending their mandate for training of teachers at the secondary level.
V. Establishment of Block Institutes of Teacher Education (BITEs) in 196 identified SC, ST, and/or minority concentration districts as elementary pre-service teacher education institutes.
VI. Identification of 50 lead institutions, including Department of Education in Universities, NUEPA, NCERT, Academic Staff Colleges and other Institutions in the non-Government sector to conduct refresher courses for teacher educators.
VII. Provide hardware support, namely, provisioning of satellite transmission facilities in DIETs and provisioning of software support for developing content for orientation of teacher educators and teachers.
VIII. Giving mandate to SCERTs and DIETs to involve not-for-profit organisations for conducting innovative field-based programmes related to teacher education, collaboration in in-service and pre-service teacher education, undertaking impact assessment studies and designing and developing locally relevant material for teachers and student-teachers of teacher education institutions.
IX. Developing and putting in place a comprehensive monitoring mechanism.

B. Additionally, the following nine points were delineated as the objectives of the study:

I. Assess the extent to which Centrally Sponsored Scheme on Teacher Education (CSSTE) has been able to achieve its objective and the factors determining the same.
II. Identify constraints in the implementation of the scheme in the 12th five-year plan.
III. Suggest revisions in the provisions of the scheme in order to meet the exceptional challenges of the State/UTs and for the effective implementation in the next plan period.
IV. Analyse the fund flow mechanism and recommend procedures for timely and effective utilisation of funds.
V. Analyse the need to continue the scheme in the existing form or changes required in the norms both programmatic and financial for effective implementation of the scheme.
VI. Examine the effectiveness of Teacher Education Institutions (TEIs) in terms of their envisioned role and function.
VII. Study whether Teacher Education Institutions are functioning as per the norms and standards of the NCTE Regulations 2014.
VIII. Analyse whether Teacher Education Institutions are playing a complementary and coordinated role with other institutions at the State and District levels for improving the quality of education and teacher education.
IX. [Suggest] any other improvements or additions to the scheme that can make it more effective and meet its objectives in today's society and education system.

C. The following eight components were listed as the terms of reference of the study:

I. To analyse extent of improvement in the quality of teacher education since the reorganisation and restructuring of the Centrally Sponsored Scheme on Teacher Education in 2012.
II. To analyse impact and effectiveness of teacher education provided through this scheme.
III. To analyse adequacy and timeliness of fund flow and delivery mechanisms.
IV. To analyse scope of operational guidelines including cost norms and recommend modification, if any.
V. To assess extent of coverage and linkages with other institutions at the State and district levels.
VI. To analyse effectiveness of Teacher Education Institutions in terms of their envisioned role and functions.
VII. To justify/recommend about the continuation of the scheme or otherwise.
VIII. To suggest measures for improvement of implementation and monitoring mechanism for the scheme.

On the basis of these considerations the inputs, outputs and outcomes were formulated as in Table 2.1.

Table 2.1: Inputs, Outputs and Outcomes of CSSTE

Inputs	Outputs	Outcomes
CSSTE financing for strengthening of SCERT, IASEs CTEs, DIETs, BITEs, and other support for capacity building of states.	Improvement in the accessibility of pre-service teacher education, strengthening of the structure of in-service teacher education, increment in the proportion of teachers trained, increased proportion of functional DIETs with trained faculty available, increased proportion of DIETs and CTEs with upgraded infrastructure (enabling factors), curricular reforms in teachers education, establishment of a robust system for monitoring teachers education process.	Increase in trained teachers in the system, establishment and strengthening of teacher resource support structures, improved quality teacher education programmes in the states

2.2 Evaluation Questions and Indicators

Based on these considerations, the following research questions were identified along with relevant indicators.

Table 2.2: Research Questions and Indicators

Research question	Indicators
1. Has there been an improvement in pre-service teacher education, and has it contributed towards the overall improvement of teacher professional development and school improvement?	- Quality of teacher education programmes - Curricular revision - Classroom transaction - Facility at pre-service training institution - Faculties and expertise
2. Has there been an improvement in in-service teacher education, and has it contributed towards the overall improvement of teacher professional development and school improvement?	- Quality training module - Quality of transection - Follow-up
3. Has there been development of professionalism and capacity of teacher educators?	- Number of teacher educators in the system - Activities to prepare teacher educators - Materials or module for teacher educators
4. Have strong interlinkages developed within the teacher education and training sector between the following: - Existing departments and institutions at the district level - Existing departments and institutions at the state level - Higher education institutions - Schools - Non-government organisations	- Number and nature of activities to ensure convergence among state-level bodies - Number and nature of activities to ensure convergence among district and sub-district levels bodies - Number and nature of activities to ensure convergence among state-level bodies - Number and nature of activities to ensure convergence among district and sub-district levels bodies

Research question	Indicators
5. Have institutions at all levels led to adequate supply and quality of trained teachers at elementary and secondary levels of education?	- Percentage of trained teachers in the system
6. Is processes, systems and structures in place across institutions to ensure planning, monitoring and tracking?	- Process of planning - Mechanism for monitoring
7. Has there been adherence to guidelines related to staffing?	- Vacancies - Staff qualifications
8. Has there been adherence to guidelines related to the infrastructure?	- Improved infrastructure
9. Has there been adherence to guidelines related to the flow of funds?	- Timely fund flow
10. Has there been use of ICT to enhance institutional, instructional and teaching quality across the institutions?	- Number and quality of teachers training for ICT - Number of programmes in ICT - Materials developed in ICT
11. To what extent has the academic profile of the institutions been strengthened through the following: - Research and publication - Education courses for faculty - Seminars - Workshops - Study tours	- Number and nature of publication - Number and quality of courses for faculty - Number and quality of seminar - Number and quality of study
12. Has there been one-time situation analysis and stocktaking by institutions where mandated? Has there been regular and frequent situation analysis by institutions and states where mandated?	- Situation analysis report/s - Evaluation study
13. Has the flow of funds affected the quality of implementation of the scheme?	- Fund flow mechanism - Expenditure per quarter
14. Has there been scope for operational autonomy for institutions under the scheme? Has there been scope for various actors and institutions to adapt the guidelines and requirements to meet local needs of quality and adequacy?	Innovative use of support available under CSSTE

2.3 Methodology: Sampling, Data Collection and Analysis

The methodology adopted for various aspects of the study is provided here: selection of institution, selection of beneficiaries, sampling method, source of data collection and data

documentation, analysis and interpretation, including the time period involved. The study was based on a mixed methods approach that included quantitative and qualitative data. The study tried to focus on inputs, outputs and outcomes at different levels of programme implementation, starting with the central and going on to state and institutional levels.

The study draws on secondary sources of data and information such as the minutes of Teacher Education Appraisal Board (TEAB) meetings; Plan Approval Board (PAB) reports, approvals and appraisal notes; previous Joint Review Mission (JRM) reports; details of TEIs sanctioned per year and details of funds allocated and utilised by the states and UTs. This secondary data was supplemented by various guidelines issued by central and state governments to the institutions covered by the scheme. The study tries to examine the impact of planning processes, resources allocation and provisions allotted under CSSTE and the fund flow mechanism through analysis of quarterly expenditure report.

2.3.1 Tools

Eight tools consisting of structured and unstructured items were used to generate primary data (see table 2.4). The tools were designed based on the research questions and indicators and additionally other tools used in related studies were also examined. The tools were pilot tested and revised for final use.

Table 2.3: Summary of Tools

Tool No	Tool Name	Respondent	Description
Tool 1	Interview Schedule for State Coordinators of TE	State-level TE functionaries	Contains all the basic information of the state's teacher education progress, fund flow, coordination of annual plan and monitoring of CSSTE for all years pertinent to the study.
Tool 2	Key Informant Interview Schedule	State education secretary, SCERT director	Gathers perceptions, views, insights, experience and specific conditions of the state.
Tool 3	Focus Group Discussion Guide	SCERT faculty	Gathers data on activities under CSSTE such as training, materials development, capacity building, research and their role in TE.
Tool 4	Interview Schedule for Head of Institution	Institution head	Records perception and views of the TE scenario in the state, specific role of the institution and the working of the CSSTE.
Tool 5	Institutional Factsheet	Principals of DIETs, BITEs, CTEs, IASE	Collects all the basic information on selected institutions and their functioning.
Tool 6 A	Faculty Interview Schedule (I)	DIET, BITE, CTE faculty (1 per institution)	Gathers perception, views, experiences, insights into role, challenges and recommendations.
Tool 6 B	Faculty Interview Schedule (II)	IASE faculty (1 per institution)	Gathers perception, views, experiences, insights into role, challenges and recommendations.
Tool 7	Student-Teacher Interview Schedule (I)	Student-teachers of DIET, BITE, CTE, IASE	Gathers perception, views, experiences, insights, challenges and recommendations.
Tool 8	Observation Protocol (I)	DIET, BITE, CTE, IASE	Captures the infrastructure, activities, processes and ethos of the institution.

2.3.2 Sampling

As required by the RFP a total of 11 states and 2 UTs were covered by the study.

Table 2.4: Sampling of Institutions

		Secretary of Education	SCERT	IASE	CTE	DIET	BITE
East Zone	Assam	1	1	1	2	4	1
	Bihar	1	1	NA	2	4	1
	Chhattisgarh	X	1	1	1	5	NA
	Mizoram	1	1	1	NA	4	NA
West Zone	Madhya Pradesh	1	1	2	2	4	NA
	Maharashtra	X	1	2	2	4	NA
	Rajasthan	1	1	1	2	4	NA
North Zone	Delhi	X	1	2	NA	4	NA
	Himachal Pradesh	1*	1	NA	1	4	NA
	Uttar Pradesh	1	1	1	2	4	NA
South Zone	Karnataka	1	1	1	2	4	NA
	Puducherry	1	NA	NA	1	1	NA
	Telangana	1*	1	1	2	4	NA
Total		10	12	13	19	50	2
Note: X- Institution not visited; NA-Institution not found in the state							

Table 2.5: Sampling of Respondents

		Secretary	CSSTE Incharge	SCERT Head	SCERT Faculty**	TEI*** Head	TEI Faculty	TEI Students - Teachers
East Zone	Bihar	1	1	1	1	7	6	7
	Assam	1	1	1	1	9	9	8
	Chhattisgarh	X	1	1	1	6	6	6
	Mizoram	1	1	1	1	5	7	9
West Zone	Madhya Pradesh	1	1	1	1	8	8	8
	Maharashtra	X	1	1	1	5	7	9
	Rajasthan	1	1	1	1	5	3	5
North Zone	Delhi	X	1	1	1	4	5	6
	Himachal Pradesh	1*	1	1	1	3	4	3
	Uttar Pradesh	1	1	1	1	3	9	1
South Zone	Karnataka	1	1	1	1	7	7	7
	Puducherry	1	1	X	X	2	8	13 (FGD)
	Telangana	1*	1	1	1	7	12	13
Total		10	13	12	12	71	91	82

Notes:
* Telangana and Himachal Pradesh State Project Director was interviewed.
** At SCERTs, focus group discussion (FGD) with faculty was conducted.
*** TEIs includes IASE, CTE, DIET and BITE.

States were selected on a number of considerations such as JRM reports, status of TE in the

state according to secondary literature and ease of access and availability of local teams. This final consideration was important given the tight timelines of the study. Broadly, the RFP sampling requirement was met. The sampling was also verified and approved by the MHRD.

Field visits were to include the following numbers of CSSTE supported institutions: SCERTs and at least 4 DIETs, 2 CTEs, 1 IASE and 1 BITE (wherever functional). Actual numbers of institutions covered was based on local considerations. Smaller units such as Puducherry had fewer DIETs. Initially, 49 DIETs, 19 CTEs, 13 IASE, 2 BITEs and 12 SCERTs were selected for the study. Institute selection was carried out in coordination with the nodal officer of the state. Nodal officers were requested to suggest institutions they considered to be working well and those having difficulties and to include both urban and rural institutions with consideration for geographical spread. Although visits were planned to BITEs in Bihar, they could not be visited on account of local conditions of floods so data was collected through online communication. Finally, the numbers covered were 50 DIETs, 19 CTEs, 13 IASE, 2 BITEs and 12 SCERTs.

Within institutions, faculty and students for interview were suggested by the head of the institution. A total of 8 education secretaries, 2 SPDs, 71 heads of TEIs, 91 faculty and 82 students were interviewed.

2.3.3 Data Collection, Processing and Analysis

Two to six trained education professionals comprised the teams that would undertake field visits and conduct observations and interviews to gather data. Orientation to the use of tools was carried out on 20–21 August 2017. Field visits were carried out in coordination with the state nodal officers who facilitated selection of the institutions and informed local personnel so that the visit could be carried out. Field visits lasted about 3 weeks between 23 August 2017 and 8 September 2017.

A facilitative and positive orientation to the interviews was adopted, encouraging respondents to reflect and share what works and what does not in their institutional context and inviting them to think about how the scheme could be made to work in their context.This methodology was considered desirable because of the largely beleaguered condition of these institutions and the stress experienced by their faculty. It was also felt that despite the appearance of dysfunctionality in these institutions, there are pockets of efforts to make things work and local innovations and efforts must be recognised. Finally, care was taken to communicate to the respondents that this study was not an evaluation of their work but of the scheme, so that they would express their positive and negative experiences, their reflections on how the scheme can be made to work better to address the local challenges of teacher education, as well as the needs they experience.

Data was written on paper or digitally typed and made available via email to the team responsible for organising data and coordinating data processing and analysis. Teams were also required to gather evidence in the form of reports and minutes of meetings, records in registers and so on. Some of the interviews were audio recorded with the permission of the respondents. Photographs were also taken of the institutes visited.

Analysis was carried out through categorisation and summarisation across tools and themes, and simple spreadsheets were used to compile responses and data for different items. These were then summarised and synthesised.

2.4 Limitations

This study is based on field work undertaken at selected sample institutions, the selection largely guided by convenience and accessibility with minimal considerations of representativeness and regional balance.This was on account of the tight timeline of the study and is an inherent limitation.

Again, given the timelines, data gathering was largely done on one-day long visits to institutes and hence relied on verbal accounts and basic observations.While attempts were made during interviews to triangulate and to seek corroboration, the study does rely on verbal reports and accounts of respondents and their perceptions.

Materials developed, programmes designed and research conducted were gathered. However, these could not be examined for their quality. Similarly, observations of classroom transaction and interviews with student teachers give only a limited view of the quality of the programmes they are undergoing. We were not able to sample and review any in-service teacher education programme.

The evaluation team had expected that certain critical data to verify indicators was available with state governments or institutions but eventually learnt that such data are not available in consolidated form. So we were not able to verify all the indicators listed in Table 2.2.

CHAPTER 3

State Council of Educational Research and Training

DSERT, Bangalore

CHAPTER 3: State Council of Educational Research and Training

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State Council of Educational Research and Training

3.1 The Context: Establishment and Current Scenario

The National Policy on Education 1986 (MHRD, 1986) and 1992 recommended the creation of a State Council of Educational Research and Training (SCERT) in each state as a means of providing each state with an academic authority responsible for all aspects of quality education, research and training. More specifically, SCERTs were to be strengthened, supported and in some cases created, under the CSSTE, to support and develop teachers and to provide coordination and leadership in teacher education, in both pre-service training in coordination with Universities and in-service training. After the enactment of the RTE 2009, all states with SCERTs were expected to declare this institution as the academic authority of the state under Section 29 of the RTE Act. (An exception to this rule observed during this study is Puducherry, which does not have an SCERT. The role of academic authority is, therefore, performed currently by the SCERTs of Kerala, Tamil Nadu and Andhra Pradesh.)

3.2 Role of SCERTs

As visualised in the Guidelines for Implementation of CSSTE (MHRD, 2012), the major role of the SCERTs was that of a key academic institute in the field of school education at the state level. Their functions include:

1. **Curricular reform:** Development of curriculum, instructional materials, textbooks, supplementary materials; and development of learner evaluation scheme
2. **Teachers' professional development:** Development of curriculum, syllabus and materials for pre-service teacher education, modules and framework for in-service teacher training; training of teacher educators to provide effective support to teachers.
3. **Research:** Research for school education such as baseline and state-level achievement surveys and evaluation of programme in education.
4. **Support to education department:** Support to the state education department in formulation of government order, policy and rule in the development of annual work plan and implementation of new programmes in schools.
5. **Network and coordination:** Link national-level organisation and states' institutions; coordinate with universities and centres of excellence in the field of school education; establish links with civil society and international NGOs.
6. **Information of teachers and teacher educators:** Establish MIS system for teacher education in the state as mentioned in the indicators of success in the 2012 guidelines.
7. **Academic authority:** Act as the key academic authority in the state in the field of education.

3.3 Functions of the SCERTs

During the team's observations and discussions with SCERT faculties, it appeared that these institutions covered all the significant aspects visualised in their roles according to their capacity, i.e., development of curricula, syllabi and textbooks, organisation of in-service education and extension programmes for all categories of educational personnel. It was seen that the SCERTs were also performing other roles of providing support to the government, for example, to carry

carry out the certification programme in teachers' education for untrained teachers in Assam, Uttar Pradesh, Bihar and Chhattisgarh.

It is important to note that the SCERTs in all states are doing most of the tasks visualised under CSSTE guidelines. The SCERTs covered under this study were performing their role as academic authority, were involved in curriculum and material development for teaching and learning, conducting in-service teachers training, developing annual work plans and perspective documents and conducting research. However, in terms of influencing policy, some SCERTs such as Delhi, Himachal Pradesh, Mizoram and Rajasthan were not able to create an impact as indicated by the directors of the respective SCERTs. Similarly, except Chhattisgarh, Maharashtra and Madhya Pradesh, SCERTs in other states do not have a system in place to ensure community and children outreach. The SCERTs of Bihar, Chhattisgarh, Karnataka, Madhya Pradesh, Mizoram, Telangana and Uttar Pradesh are involved in interdepartmental coordination for conducting teacher training, research and monitoring.

3.4 Human Resources

3.4.1 Leadership

All the SCERTs in this survey have directors. However, in some cases like Chhattisgarh, Madhya Pradesh, Rajasthan and Uttar Pradesh, the directors are in charge of other departments as well. Chhattisgarh, Delhi, Madhya Pradesh and Rajasthan have directors from all-India services whereas other states have directors from the education service of the state or educationists.

3.4.2 Positions and Vacancy

As proposed in the 2012 guidelines (MHRD, 2012), a model SCERT should have 45 technical faculty, 4 personnel as librarians, information and documentation staff, 5 technical staff for different departments, 6 project staff and 11 staff in the administrative section. However, it appears that the SCERTs are not adequately staffed. Table 3.1 shows the sanctioned and vacant positions at SCERTs by states.

Table 3.1: Positions and Vacancy Status in the SCERTs as on 20 September 2017

Institutes	Academics			Others		Total		
State	Sanctioned	Filled	% Filled	Sanctioned	Filled	Sanctioned	Filled	% Filled
Assam	103	16	16%	133	83	236	99	42%
Bihar	63	13	27%	14	14	63	27	43%
Chhattisgarh	31	30	97%	43	27	74	57	77%
Delhi	46	25	54%	148	93	194	119	61%
Himachal	19	18	95%	21	10	40	28	70%
Karnataka	21	20	95%	100	68	121	88	73%
Maharashtra	114	46	40%	96	48	210	94	45%
Mizoram	52	41	79%	126	94	178	135	76%
Madhya Pradesh	47	36	77%	55	42	105	78	74%
Puducherry*	Not applicable please see note(11) below							
Rajasthan	56	35	63%	91	59	147	94	64%
Telangana	25	21	84%	30	11	55	32	58%
UP	25	23	92%	38	22	63	45	71%
Total	539	311	58%	881	557	1423	869	61%
Note (1) Puducherry State Training Centre (STC) has a faculty of 3 members, a part of the Department of School Education, who manage coordination functions. Their salaries are met with funds from the CSSTE.								

In addition to the academic faculty and education officers and administration and accounts, a few SCERTs are also found to have additional experts and researchers from NGOs (as in the states of Bihar, Chhattisgarh) and consultants.

As can be seen from Table 3.1, overall status of faculty and other support staff appointments in the SCERT is low. An average of 58% of the academic positions, 63% of the non-academic support positions (total 61%) are filled. There is considerable variation between states in filling of positions both academic and total. Assam lags with only 16% of the academic positions and total 42% positions filled, followed by Maharashtra where only 40% of the academic positions and overall 45% positions are filled, and Delhi with 54% of the academic positions and 61% of the total positions are filled. The states of Chhattisgarh, Himachal, Karnataka and UP have over 90% of the faculty positions filled, with Telangana at 84%. However, these states have not filled their non-academic support positions so that the total positions filled are between 71% and 77%, with Telangana at 58%. This suggests a severe shortage of support staff, raising concern regarding the ability of these institutions to meet their stated goals, the administrative pressures on faculty and the likely dilution in their academic role on account of having to manage administration.In Assam, where recruitments are through the Assam Public Service Commission, 149 posts have been advertised and recruitment is underway. The reason cited by Assam and Maharashtra for non-recruitment of faculty is 'administrative delay'.

The PAB minutes of 2013 cite the problems of recruitment in Jharkhand (not a part of our sample). The SSA PAB sanctioned positions of consultants to be appointed or deputed to the SCERT as an intermediary measure. The SCERT was not able to discharge its academic responsibilities and decided to adopt NCERT textbooks as it did not have faculty to develop textbooks and for which the state had to pay large royalties to the NCERT.

The SCERT in Karnataka is a part of the directorate of education and is charged with additional administrative tasks over and above what other SCERTs are required to do.The MHRD guidelines on faculty size are indicative and were to be adapted and localised as per state requirements. States, however, had not undertaken any detailed exercise to determine the roles and functions of the SCERT and to map requisite faculty to the roles and functions.

3.4.3 Capacity Building

During 2012–17, there were a few opportunities and facilities available to SCERT staff for capacity building. These trainings were mostly conducted by NCERT, NUEPA and MHRD through the Technical Support Group (TSG) of Teacher Education. During focus group discussions (FGDs), most faculty could not cite many opportunities available to them for capacity building. Gap or need analysis or choice of courses to attend for development were limited, and those who attended mainly did so because they were nominated by their line managers. The norms for travel were found to be problematic, particularly for capacity building of functionaries from the north-eastern and from smaller states. Where there are direct recruitments to the SCERT, senior faculty felt that new recruits should have field exposure after which they can receive induction training.

There were a few programmes offered through international collaboration through Teacher Education through School based Support (TESS, India) in which the British Council and

UK Open University, USAID supported a large-scale fellowship programme to Arizona State University (2013–14) in which the faculty of SCERTs and DIETs participated. Faculty found the programme enriching and interesting, although a few faced some difficulties with English. The exposure was a good experience. Most faculty said that they did not have opportunities to use what they had learnt after returning. There seems to have been insufficient planning to utilise their enhanced knowledge and skills.

NUEPA has been providing training to selected key resource persons from SCERTs for capacity building in school leadership for head teachers. The uniformity of the training module across states, however, was a drawback. Chhattisgarh has tried to localise these training for their own specific needs. The work of the TSG (TE) was found to be useful in capacity building in states by planning focused programmes for teachers' education each year. The TSG orients and handholds states on the norms of the central government. It also identifies regular issues in planning and implementation and addresses them in collaboration with the states. This process seems educative in nature because it orients SCERT functionaries, particularly the new ones, in planning tasks as per government norms and policy.

3.5 Infrastructure and Use of Technology

Each SCERT has a library. While most of the libraries have a good number of titles, mostly textbooks and reference books, very few new titles have been added recently. Only in SCERT Chhattisgarh, faculty were seen to be using the library frequently. In other states, libraries were not spaces that were used much. None of the libraries have access to the internet or any online journal repository.

The SCERTs had provided laptops to select faculty and functionaries on a case-by-case basis. The provision is not available for all faculty. Faculty and functionaries, however, did not perceive this as a problem. All faculty seemed to have reasonable working conditions, including office work space.

Most SCERTs were found to have websites which provide varying amounts of detail and information on the organisation. Delhi, Chhattisgarh and Karnataka websites are rich and informative.

Table 3.2: Status of SCERT Websites as on September 2017

Sl. No	States	Status of Web site	Good	Aveage-poorly managed	Limited or absent
1.	Assam	Only information about D.Ed admission is available.		P	
2.	Bihar	Website is functional, but information is outdated and poorly managed.		P	
3.	Chhattisgarh	Rich website is adequately updated.	G		
4.	Delhi	Rich website is adequately managed.	G		
5.	Himachal Pradesh	Website is poorly managed.		P	
6.	Karnataka	Rich website has a lot of information, including textbooks and training modules.	G		
7.	Madhya Pradesh	Only teacher portal is available.			Teacher portal
8.	Maharashtra	There is only teacher learning portal under the MSCERT website.			Teacher portal
9.	Mizoram	Website was not accessible during study.			Not accessi-ble
10.	Puducherry	Not applicable			Not applica-ble
11.	Rajasthan	Website is functional but with very limited information.		Limited	
12.	Telangana	Website is functional and good, but information is limited.	G		
13.	Uttar Pradesh	Website is functional, but information is outdated.		P	
			4	5	3+1

3.6 Revision of Teacher Education Curriculum

All 13 states and UTs had undertaken TE curriculum revision for DElEd in the light of NCFTE 2009. Karnataka state had revised the curriculum with considerable input and coordination with state NGOs and had even produced a faculty handbook and resources to support the transaction. Chhattisgarh state had also developed a well worked out curriculum and resources for DElEd Bihar has developed the curriculum for D.El.Ed in 2009 and revised it in 2013 with the help of UNICEF, selected researchers and consultants. This exercise was followed by the selection and writing of course materials for D.El.Ed students and training of teachers educators from 33 DIETs. It is important to note that TESS India has also contributed a number of open education resources for teacher education through the respective state resource group of Bihar, Madhya Pradesh, Uttar Pradesh, Odisha, Karnataka, Assam and West Bengal.

Despite the remarkable work in the development of D.El.Ed curriculum, only 33% of the states and UTs were able to do this for BEd curriculum revision. The main reason cited was that BEd is a part of the higher education system and there is no systematic coordination between the

SCERT and collegiate education. Karnataka state was an exception in this. In Karnataka, the state nodal officer for TE, who is also a part of the SCERT, is a formal member of the collegiate education cell for teacher education and convenes that group. Difficulties in coordination between school and higher education is an area which requires structural attention and solution.

Table 3.3: Curricular Change as per NCFTE 2009

State	B.Ed.	D.Ed.
Assam	Yes	Yes
Bihar	No	Yes
Chhattisgarh	Yes	Yes
Delhi	No	Yes
Himachal	No	Yes
Karnataka	No	Yes
Maharashtra	No	Yes
Mizoram	Yes	Yes
Madhya Pradesh	No	Yes
Puducherry	NA	NA
Rajasthan	No	Yes
Telangana	Yes	Yes
UP	No	Yes
	66% no, 33% yes	

3.7 Revision of School Curricula and Textbooks

All states were found to have revised and reformed school education curriculum in the light of NCF 2005, and the SCERTs had played a significant role in curriculum and syllabus development and textbook as well as materials design. In the light of the mandate of the RTE, SCERTs had played an important role in the development of practices for assessment and evaluation.

Table 3.4: Revision According to NCF-2005 by SCERT

Sl. No.	State	Curricular revision	Status of curriculum renewal process with respect to NCF-2005
1.	Assam	Revised	Has revised syllabus and textbooks. NCERT textbooks for science and mathematics being adapted. Maths, Science, English, Hindi textbooks of NCERT are adapted to the local context.
2.	Bihar	Revised	SCF 2006 revised in 2007. Textbook renewal completed in 2013.
3.	Chhattisgarh	Revised	Curriculum, syllabus and textbooks revised.
4.	Delhi	NCERT	Follows NCERT textbooks.
5.	Himachal Pradesh	Revised at PS, UPS - NCERT	Revision of curriculum, syllabus and textbook in process. For PS, revision has been completed. At UPS level. NCERT textbooks are being utilised.

Sl. No.	State	Curricular revision	Status of curriculum renewal process with respect to NCF-2005
6.	Karnataka	Revised	Curriculum, syllabus and textbooks revised.
7.	Madhya Pradesh	Revised	Curriculum and syllabus document prepared by SCERT as per NCF 2005. Textbooks revised in accordance.
8.	Maharashtra	In process	Curriculum, syllabus and textbooks being revised.
9.	Mizoram	Revised	For the Mizo medium, Mizoram Board of School Education has adapted and revised the NCERT textbooks in 2007. For the English medium schools, the state mainly gets textbooks from private publishers and provides some NCERT textbooks.
10.	Puducherry	Tamil Nadu, Kerala and Andhra Pradesh	Pondicherry and Karaikal have adopted the curriculum and syllabus of the 'Samacheer Kalvi Thittam' followed in Tamil Nadu. Mahe and Yanam follow the textbooks prescribed by the state boards of Kerala and Andhra Pradesh, respectively.
11.	Rajasthan	Revised	Revised as per NCF 2005, some portion of NCERT textbook adopted.
12.	Telangana	Revised	State curriculum framework, syllabus and textbooks revised by SCERT.
13.	Uttar Pradesh	Revised	Curriculum, syllabus and textbooks revised.

Most of the textbook development was carried out by SCERT, drawing on external experts and a network of writers and illustrators. Timelines for textbook development are often very short leading to ad hoc and inadequately researched materials. Faculty also need to be introduced and exposed to textbook writing and resource development so that the process can be managed more effectively and with appropriate academic coordination provided.

3.8 Research

One of the mandates of the SCERTs is to promote educational research. However, when asked, few faculty responded to the question about support for research. Even in the cases of those who responded, research seemed low on their priority and agenda. Questions on the number of publications authored by SCERT faculty — conference or seminar presentations, reports, newspaper or journal articles, books and others — were not answered. This suggests that even the research that is being undertaken is perhaps not disseminated.

Some SCERTs said that they provide topics for action research to faculty of DIETs. Some were found to be coordinating with DIETs particularly for data collection. A few of the states conducted and implemented 'learning surveys' in the state to assess learning outcomes in schools. These states were Assam, Bihar and Chhattisgarh and Uttar Pradesh.

While SCERTs and various other CSSTE institutions reported carrying out research, there seemed to be no forum or mechanism for sharing this work formally or informally. Even within an institute, there were no mechanisms or databases to provide easy access to earlier researches done by the SCERTs or other institutes under SCERT like DIETs and IASEs. The SCERT library did not have a database or copies of all the research carried out. A mechanism for dissemination of the research work done by other institutes under CSSTE was currently present. Setting up a pre-print server to create an online repository for collating research from different areas for wider dissemination could be one solution to address this gap. In the absence of any access to e-journal repositories, it is a question how research was being conducted and what relevant literature review was possible.

Many institutes pointed to action research but could not give a detailed description of the nature of that research and its implications. The utility of these research studies in classroom transactions could not be gauged.

3.9 Planning Process for Teacher Education and TE

It seems that to a great extent, planning of teacher education is the responsibility of a few individuals at the SCERT. With the exception of Karnataka, which said that they had constituted an advisory board on teacher education, no other state sought such advisory guidance in planning for the sector. Though each SCERT has its own process and steps for planning and also demands input from district-level institutions, the process largely was found to take a centralised and norm-driven form rather than being geared for addressing the issues and needs of the state. District-level officials stated that they participate in the process but cannot do much with regard to the planning as the final decision lies with the SCERT. SCERT functionaries, in turn, were of the view that they cannot do much as things are directed and decided by norms and fund flow from MHRD. The planning process mentioned by each of the states is as shown in Table 3.5. By and large it is an exercise in fulfilling the budget requirements of the CSSTE rather than a way of converging various teacher education opportunities of the state and coordinating and leveraging sources of funds to achieve objectives for the sector as a whole.

Table 3.5: Planning Process of CSSTE

State	Planning Process	SCERT role
Assam	Coordinated by SCERT, the plan is prepared and the AWP and budget are approved in PAC before submission to TEAB.	Coordination
Bihar	The plan is prepared by the Directorate of Training, and faculty provide support.	Preparation
Chhattisgarh	The plan is prepared by SCERT.	Preparation
Delhi	The plan is prepared by SCERT, but restructuring is under process.	Preparation
Himachal	In SCERT, the faculty members submit their proposals, and the consolidated plan is submitted to the MHRD. In DIET, the consolidated plan of all the DIETs are prepared and sent to SCERT. In CTE, the principal makes the plan and submits it to the SCERT.	Consolidation
Karnataka	DIETs submit their proposed plans, and DSERT makes decisions after workshop discussions. IASEs are neither monitored nor supported by DSERT.	Consolidation
Maharashtra	The plan is prepared by SCERT.	Preparation
Mizoram	DIET and IASE prepare the plan and send it to SCERT. SCERT plans in workshop mode according to the format specified by MHRD.	Coordination
Madhya Pradesh	The SCERT plans are made as per MHRD guidelines. DIET plans are based on SSA guidelines, and they prepare their own annual plan. IASEs prepare their own plan with the help of DIETs.	Consolidation
Puducherry	The plan is prepared by DIET.	Consolidation
Rajasthan	The plan is prepared by SCERT.	Preparation
Telangana	For SCERTs, the education department prepares a consolidated proposal which is included in AWP and the budget for MHRD's approval. For DIETs, individual proposals are submitted to the director. For IASE, the proposal submitted is finalised by the IASE in the workshop with DIET and finally submitted to MHRD.	Consolidation
UP	The plan is prepared in workshop mode where representatives of selected DIETs and CTEs participate.	Coordination

In five of the states and UTs, the SCERT centrally prepared the plan. In another five states and UTs, the SCERT consolidated plans individually prepared by constituted institutions. This function seems to be one of aggregating and formatting rather than common visioning. Karnataka SCERT did not coordinate with the IASE at all. In three cases, there is evidence of greater role of the SCERT in coordinating between institutions and developing a holistic plan.

3.10 Collaboration and Network

All SCERTs were found to have strong connections with SSA and RMSA. Indeed, in most cases, they designed the teacher training programmes approved under and conducted by the SSA and RMSA. SCERTs developed a range of modules for training and also were responsible for the training of key resource persons. The SCERTs were also found to be designing and implementing a programme for quality education.

The SCERTs were seen to mobilise the service of experts and other agencies in these tasks. The SCERTs in Bihar and Chhattisgarh, for instance, have sought help from Eklavya and Vidya Bhawan Society to develop their textbooks. The SCERT in UP, similarly, has completed the achievement survey with the help of Education Initiatives. According to the Director, SCERT Telangana, "This sector is open for everyone – government, private and NGOs etc. The role we can play across the central, state, district and sub-district levels is a very healthy one. Yes, we are collaborating with many NGOs. Pratham, Save the Children, etc., are the NGOs who are working along with the government. They are involved mostly in research and bring back the reality and flavour directly from the field."

3.11 Scarcity of Funds

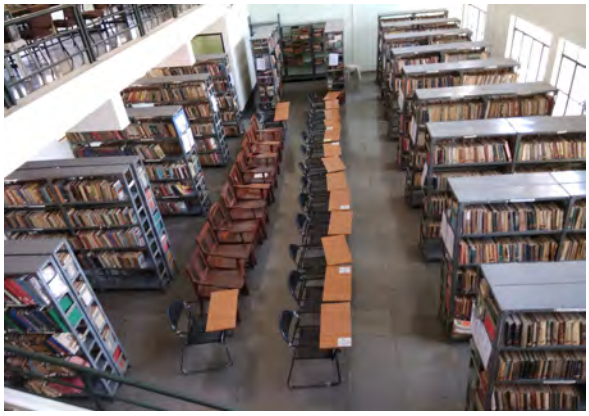
The evaluation report of NCERT (2009) indicated that "The provision of two crores as matching grant on 50:50 basis was made for strengthening SCERTs during the Tenth Five-Year Plan, which was not availed by many states and union territories due to their financial constraints" (p. 50). This continued into the eleventh five-year plan. States are not able to nurture SCERT as an academic authority and academic leader under the RTE Act to address the overall domain of school education. Senior officials indicate that funds are not sufficient and the pattern of the norms are unclear.

3.12 Concern for Quality

Most SCERTs have a bureaucratic vision to address quality. These reflect primarily in their management activities through enhanced monitoring mechanisms. However, it seems that some SCERTs are focusing on inclusive, decentralised planning, as indicated by the director in Chhattisgarh, while others feel that online monitoring systems will enhance quality. They are also beginning to realise that they "have leveraged ICT to great extent." The SCERT Director, Udaipur, for example, shared her views regarding the quality of teacher training. She felt that teacher training is now more activity-based and effective, with the focus shifting from content in textbooks to methodology of teaching. This method seems to have impacted trainings at the state level, but doesn't appear to have reached the district or block levels as yet. Taking anonymous feedback from teachers is also a new practice that SCERT, Rajasthan, has started. Taking biometric attendance at in-service trainings seems to have further enhanced attendance.

CHAPTER 4

Institutes of Advanced Studies in Education



RVTEC Karnataka

SNDT Maharashtra

IASE, Bilaspur, Chhattisgarh

IASE, Aizawl, Mizoram.

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Institutes of Advanced Studies in Education

4.1 The Context

Institutes of Advanced Studies in Education (IASE) were conceptualised to create an ecosystem for incubating excellence in the professional development of teacher educators. This vision emerged as a result of the concern which National Policy of Education 1986 (MHRD, 1986) raised about the quality of teacher education in India. It was therefore envisaged to develop IASEs into centres of excellence and research into innovations in teaching practice (MHRD, 2012). The NCERT evaluation (NCERT, 2009) of the Centrally Sponsored Scheme (CSS) on Restructuring and Reorganisation of Teacher Education envisaged a guiding role for IASEs as regional resource hubs providing academic support to CTEs, DIETs and BITEs, and establishing strong linkages with BRCs and CRCs.

Key components visualised in the functioning of IASEs are:

- Empowering TEIs in respective states to engage in research study and in improvement in educational methods and curricula
- Functioning as a regional resource centre for teacher education

Primary objectives and functions of IASEs

- Work and make an impact in the field of elementary and secondary teacher education in pre-service and in-service training.
- Bear responsibility for conducting M.Ed, M.Phil and Ph.D programmes for the development of teacher educators.
- Integrate teacher education at all levels of school education with overall education development in states.
- Conceptualise and develop innovative courses and materials for teacher educators and conduct sustained programmes.
- Leverage education technology for effective coordination and to generate quality research output.
- Create a forum for synergy between higher education institutes, DRT and SCERT, CTEs, DIETs and BITEs.

4.2 Institution Description

As described above, an important academic role has been envisaged for IASEs in the domain of teacher education (MHRD, 2012). The organogram of IASEs proposed in CSSTE Guidelines 2012 (MHRD, 2012) is for a minimum of 15 academic posts, and only Madhya Pradesh, Mizoram and Telangana fulfil this criterion (among the 13 states and UTs that the TISS team visited for this evaluation study). IASE in Delhi (which is a part of the Delhi University) also fulfils this norm, but it has staff from university cadre and no separate wing or cadre dedicated to IASE activities. IASE Aurangabad, which has been upgraded from a CTE, has not earmarked any academic or non-academic posts so far.

During this evaluation study, it was noticed that a few states like Arunachal Pradesh, Bihar, Himachal Pradesh, Jharkhand, Manipur, Nagaland and union territories like Puducherry

do not yet have an IASE. The CSSTE Guidelines 2012 envisaged establishment of IASEs by upgrading the departments of education of universities (MHRD, 2012, p. 24). There has been a recommendation (JRM, 2013, p. 6) to upgrade the Department of Education of Patna University into an IASE and to "provide all necessary support to at least four more universities of the state for creating and developing four full-fledged Departments of Education under capable academic leadership, even if this means making a search at an all-India level" (op.cit.). But an IASE has neither been sanctioned nor established so far.

There are not many IASEs which function as centres situated in a university. Many IASEs instead function as independent entities affiliated to a university. Some of the better performing IASEs in the country are of this kind. For example, IASE Aizawl was upgraded from a CTE (erstwhile Mizoram Institute of Education) in 2005 and was at first affiliated to North Eastern Hill University (NEHU), Shillong, and later to Mizoram University. IASE Jabalpur is the new avatar of one of the oldest teacher training institutes of India established in 1889. It is now affiliated to Rani Durgawati Vishwavidyalaya, Jabalpur. On the other hand, both the IASEs in Delhi are university departments of education (Delhi University and Jamia Milia Islamia University). Similarly, IASE Pune is a university department of education, (SNDT University). While approved, this IASE is not fully functional as yet.

Table 4.1 presents a picture of the sanctioned and functional IASEs in the 13 states and UTs that the TISS team visited during this study.

Table 4.1: IASE Sanctioned and Functional

Sr No.	State or UT	Number of IASEs sanctioned (as per CSSTE Guidelines, 2012)	Number of IASEs functional (observed by TISS team, Aug-Sept 2017)
1.	Assam	2	2
2.	Bihar	0	0
3.	Chhattisgarh	1	1
4.	Delhi	2	2
5.	Himachal Pradesh	0	0
6.	Karnataka	2	1
7.	Madhya Pradesh	3	2
8.	Maharashtra	2	2**
9.	Mizoram	1	1
10.	Puducherry	0	0
11.	Rajasthan	2	2
12.	Telangana	2*	1
13.	Uttar Pradesh	3	1
** One IASE not fully functional; student enrolment yet to start			
*for erstwhile Andhra Pradesh			

4.3 Staff and Vacancy

As conceptualised in the CSSTE Guidelines 2012 (MHRD, 2012), a minimum of 15 faculty positions were earmarked for the smooth functioning of IASEs (MHRD, 2012, p. 115, Annexure VI). A variation in staff recruitment was noticed in many IASEs. Transfer cases (e.g., IASE, Ajmer), and deputation are widely prevalent in many IASEs (e.g., IASE, Guwahati). Encadrement of teacher educators has not been achieved in most states that the TISS team visited. Table 2 presents data on vacant and filled academic and non-academic posts.

Table 4.2: Academic and non-academic Posts - Filled and Vacant

Sr No.	State or UT	Academic Posts		Non-academic Posts	
		Filled	Vacant	Filled	Vacant
1.	Assam	9	4	13	3
2.	Bihar	--	--	--	--
3.	Chhattisgarh	12	3	16	18
4.	Delhi	Merged with university cadre, 1 faculty works for IASE (CIE, DU); Data not provided (JMI)	N.A. Data not provided (JMI)	Merged with university cadre (CIE, DU) Data not provided (JMI)	Merged with university cadre (CIE, DU) Data not provided (JMI)
5.	Himachal Pradesh	--	--	--	--
6.	Karnataka	10	0	13	0
7.	Madhya Pradesh	19 (Bhopal) + 19 (Jabalpur)	12 (Bhopal)+ 4 (Jabalpur)	12 (Bhopal) + 27 (Jabalpur)	05 (Bhopal) + 09 (Jabalpur)
8.	Maharashtra	4 (Pune) + Not filled (Aurangabad)	1 (Pune) + Not filled (Aurangabad)	0 (Pune) + Not filled (Aurangabad)	2 (Pune, temporary, contractual) + Not filled (Aurangabad)
9.	Mizoram	19	9	17	4
10.	Puducherry	--	--	--	--
11.	Rajasthan	Data not supplied as on 20 Sept 2017	Data not supplied as on 20 Sept 2017	Data not supplied as on 20 Sept 2017	Data not supplied as on 20 Sept 2017
12.	Telangana	16	14	18	7
13.	Uttar Pradesh	9	18	32	11
	% vacancy across IASEs observed		35.7%		28.5%

4.4 IASEs in India: Survey of Trends

With respect to IASEs, the observations are summarised as under:

1. Not all states have established an IASE even though recommendations were made for their establishment, for example, Bihar, recommended in (JRM, 2013), p. 6).
2. A few states have more than one IASE (for example, Delhi, Madhya Pradesh, Karnataka, Rajasthan). A few IASEs are non-functional for paucity of funds despite being upgraded from CTEs (for example, Aurangabad IASE in Maharashtra). Similar observations were made in the NCERT evaluation study of CSSTE done in 2009 (NCERT, 2009).
3. Growing use of ICT was noticed in the functioning of all IASEs. However, internet connectivity was not good at all the places. A few IASEs like Aizawl and Bangalore make use of ICT in their in-service training programmes for teacher educators and for other innovative practices, but similar efforts were found to a lesser extent in other IASEs.

4.5 Faculty Development and Capacity Building

In the 12th Five-Year Plan, a select number of CTEs or GCTEs were upgraded to IASEs and new IASEs were established.

Table 4.3: Faculty Development and Capacity Building

States		Faculty Development Programmes	ICT compliance and use of laptops or computers	Exposure visits undertaken or conducted	Training for new curricula
Assam	IASE	Yes	Yes	Yes	No (one-day orientation)
Bihar	IASE	--	--	--	--
Chhattisgarh	IASE	Yes	Yes	Yes	Yes
Delhi	IASE 1 (CIE, DU)	Yes	Yes	Yes	No
	IASE 2 (JMI)	Yes	Yes	Yes	No
Himachal	IASE	--	--	--	--
Karnataka	IASE	Yes	Yes	Yes	No
Maharashtra	IASE 1 (SNDT, Pune)	Yes	Yes	Yes	No
	IASE 2 (Aurangabad)	No	No	No	No
Mizoram	IASE	Yes	Yes	Yes	Yes (also runs multi-mode programme in BEd)

States		Faculty Development Programmes	ICT compliance and use of laptops or computers	Exposure visits undertaken or conducted	Training for new curricula
Madhya Pradesh	IASE 1 (Jabalpur)	Yes	Yes	Yes	No
	IASE 2 (Bhopal)	Yes	Yes	Yes	No
Puducherry	--	--	--	--	--
Rajasthan	IASE	Data not provided as on 20 Sept 2017	Data not provided as on 20 Sept 2017	Data not provided as on 20 Sept 2017	Data not provided as on 20 Sept 2017
Telangana	IASE	Yes	Yes	Yes	No
Uttar Pradesh	IASE	No	No	IASE	No

All the IASEs are affiliated to some universities of their respective states and governed by the requirements of the respective universities, which include following the prescribed curricula and syllabi, examinations, and so on.

IASE Guwahati faculty members have undergone trainings conducted by IGNOU and workshop by SCERT on inclusive education. Some of these programmes were conducted through video conferencing. IASE Bilaspur faculty members talked about the workshop on research methodology which they attended at RIE Bhopal and at APF Bangalore. These events indicate the exchange of ideas and interactions, although these are only in the form of trainings and not collaborations. Similar responses came from the faculty members of IASE Hyderabad and IASE Aizawl who spoke about refresher courses on women studies and leadership training. There was, however, no similar evidence received from the IASEs in Madhya Pradesh, Karnataka and Uttar Pradesh.

4.6 IASE as a Regional Resource Centre

As envisaged in the CSSTE Guidelines 2012, IASEs are deemed to function as an academic resource centre in the area or region where they are located. Many IASEs, such as in Aizawl, Bilaspur and Jabalpur, are functioning as such centres. The following are the features noticed during the evaluation study:

4.6.1 Maintaining Database of TEIs and Teacher Educators

Variation was noticed in IASEs' interaction with other stakeholders in their areas. While the objective is to establish a coordinated system of academic interaction and support for the CTEs, DIETs, CRCs and BRCs in their respective areas, evidence of no such interaction emerged from IASE Bhopal. On the other hand, IASE Jabalpur has charted out detailed "organisational responsibilities to coordinate with the CTEs and DIETs for implementation of the Teacher-Education Programme" (IASE, 2017). IASE Aizawl and IASE Bilaspur showed similar interactions. A few other IASEs indicated a lot of dependency on SCERT. Though IASE Jabalpur has good interaction with CTEs, DIETs, CRCs and BRCs, they do not have academic autonomy. All the training requirements, schedules and venues are decided at the SCERT, usually not

in consultation with IASEs. IASEs follow instructions received from the top. This topdown approach is unidirectional and therefore a hindrance to the synergy that *CSSTE Guidelines 2012* (MHRD, 2012) and *NCFTE 2009* visualise for teacher education programmes.

4.6.2 Training Needs Analysis

Almost all IASEs reported that they do not conduct any needs analysis for teacher educators. Rather they are directed by the SCERT or DRT or both to schedule, plan and implement the training programmes.

4.6.3 Special Courses and Innovation for Teacher Educators

IASE Aizawl runs a two-year BEd multimode programme that it has developed on the recommendation of the Educational Reforms Commission Mizoram 2010 to clear the backlog of teachers without professional qualification or "untrained" in-service teachers. The intake capacity is 100 per study centre each at the IASE study centre and the CTE study centre. This course is the same as the regular B.Ed course offered by Mizoram University. The multimode BEd programme uses a contact period and an online period. The online period is heavily ICT-dependent. (Coincidentally, when the TISS team visited IASE Aizawl, their 30-day contact classes were on.)

4.6.4 Modules Created and Materials Developed for Teacher Educators

Most IASEs have recently procured books, many of which are written by local authors. A few IASEs did not have copies of NCF 2005 and NCFTE 2009. The catalogue in many IASEs is still maintained manually. A few journals are available (including NCERT journal) in the library. Most IASE libraries do not have textbooks of primary or middle grades since they believe the student-teachers were doing BEd or M.Ed. and therefore only needed high school textbooks. Most IASEs do not have access to electronic journals.

4.6.5 IASE Interaction with other Stakeholders

There is an evident lack of synergy between IASEs and other TEIs like SCERT, CTEs, DIETs, BITEs, CRCs and BRCs. Some IASEs like those at Aizawl and Jabalpur have strong connections with DIETS, BITEs, CRCs and BRCs. A few others like IASE Bhopal do not have meetings or connections with these. IASE Bilaspur takes part in the monthly meeting that SCERT conducts to assess the progress of individual institutions. However, there is a lack of a platform or forum for convergence of all the institutions and structures (including SSA and RMSA) of teacher education within states.

Reports from IASE Guwahati indicated that there is a coordination mechanism in place and the stakeholders meet in fora to discuss work at least four times a year. Many other IASEs showed synergy between CTEs, DIETs, CRCs and BRCs and not so much with SCERT, for example, IASE Pune, where the last meeting with the SCERT was held in 2012 when it was a CTE. The purpose then was to prepare a perspective plan for teacher education in the state as a whole. It has been reported to the TISS team that the DIETs were looked down upon as it was felt that they were concerned only with primary education and therefore CTE had no role or business there. IASE Bangalore reported that there were more meetings when the funding came from the state. Meetings then were called at DSERT. IASE Jabalpur reported that there was a lack of a platform for convergence, for example, one of the duties of IASE is to perform training

for RMSA, but this has not been given to IASE. Mizoram has two different directorates which could not create synergy between all the stakeholders or a platform or forum to bring all the stakeholders together. Other states like Telangana and Uttar Pradesh indicated similar states of affairs.

Table 4.5 maps the training programmes for pre-service and in-service untrained teachers and the continuous professional development (CPD) programmes conducted by different IASEs.

Table 4.4: Trainings and CPD

States	Institution	Pre-service for fresh graduates	In-service for untrained teachers	In-service CPD (SSA/RMSA/ CSSTE)
Assam	IASE	Yes	Yes	Yes
Bihar	IASE	--	--	--
Chhattisgarh	IASE	No	Yes	Yes
Delhi	IASE 1 (CIE, DU)	Yes	No	No
	IASE 2 (JMI)	Yes	No	No
Himachal	IASE	--	--	--
Karnataka	IASE	Yes	Yes	No
Maharashtra	IASE 1 (SNDT, Pune)	No	No	No
	IASE 2 (Aurangabad)	No	No	No
Mizoram	IASE	Yes	Yes	Yes (CSSTE)
Madhya Pradesh	IASE 1 (Jabalpur)	Yes	Yes	No
	IASE 2 (Bhopal)	Yes	Yes	No
Puducherry	IASE	--	--	--
Rajasthan	IASE	Data not provided as on 20 Sept 2017	Data not provided as on 20 Sept 2017	Data not provided as on 20 Sept 2017
Telangana	IASE	Yes	Yes	No
Uttar Pradesh	IASE	No	No	No

Table 4.5 presents training management system usage data and research activities and their outcomes.

Table 4.5: Training Management and Different Activities

States	Institution	Use of training management system	Research studies conducted (by student-teachers)	Research studies conducted (by faculty members)	Number of publication by faculty members*
Assam	IASE	No	Yes	Yes	4
Bihar	IASE	--	--	--	--
Chhattisgarh	IASE	No	Yes (only action research)	Yes (only action research)	6
Delhi	IASE 1 (CIE, DU)	No data	Yes	Yes	No data
	IASE 2 (JMI)	No data	Yes	Yes	No data
Himachal	IASE	--	--	--	--
Karnataka	IASE	No	No	Yes (only action research)	2
Maharashtra	IASE 1 (SNDT, Pune)	No	No	No	NA**
	IASE 2 (Aurangabad)	No	No	No	NA**
Mizoram	IASE	Yes	Yes (UGC-funded minor project)	Yes	20
Madhya Pradesh	IASE1 (Jabalpur)	No	Yes (only action research)	Yes (only action research)	3
	IASE 2 (Bhopal)	No	Yes (only action research)	Yes (only action research)	No data
Puducherry	IASE	--	--	--	--
Rajasthan	IASE	No data	No data	No data	No data
Telangana	IASE	No data	No data	No data	0
UP	IASE	No	No	No	0

* Publications include conference or seminar presentations, reports, newspaper or journal articles, books and others.
** Upgraded from CTE to IASE recently, publication not as IASE faculty so far

A few members on the faculty mentioned that they were not aware of what a training management system (TMS) was. The staff of IASE Pune was not clear either about TMS. The only TMS they have is the yearly update that they are expected to send to the UGC. This particular update requires teacher educators to fill in their qualifications and the details of the training programmes that they attended, the programmes that they conducted in the IASE, feedback from the students and feedback from the principal.

4.6.6 Most 'Talked About' Process Improvement in IASE

There have been several narratives about the initiatives that were made possible by CSSTE funds. Here are some narratives from a few states.

Assam: The number of trained teachers has increased. We have good expertise as we directly deal with teachers.

Chhattisgarh: Teachers' qualifications are seen as a boon among teachers. So teachers who want to pursue higher education are moving in that direction. A lot of change in quality of discussion regarding pedagogy and transaction has occurred.

Karnataka: RTE has been useful. Earlier, there were some problems which have now decreased. The public have started accepting it. Also, there were reports on the difference shown by the institute. The quality of education has improved because student activity is greater instead of teacher-dominant activity. This is observed in classrooms. Student teachers are very interactive compared to earlier years.

Madhya Pradesh: Curricula of DElEd, BEd MEd courses have been reformed. Textbooks at elementary and secondary level have been developed according to NCF 2005. Development of TMS has occurred.

Mizoram: The IASE is more structured, which is attributed to NCTE. Before 2012, there was nothing more than compliance. State plans have helped in establishing TE centres and DIETs.

Telangana: The IASE has digitised textbook content and coordinated presentation of lessons through satellite, to promulgate the RTE

There has however, been no feedback from secondary school teachers on the in-service training programmes nor any records of them.

4.6.7 Funds Flow

Fund flow under the CSSTE has been instrumental in the functioning of several TEIs, including IASEs. This was evident from the functioning and infrastructural facilities available at some of the IASEs that the TISS team visited. However, there are instances of hindrance due of lack of funds flow that emerged from the field. The box presents one such narrative.

> IASE Pune is situated in SNDT University, which is resource rich. This is evident in the infrastructure available to them and the middle class background of the teacher educators. Most notable, though, is the way the principal and teacher educators view the role of the IASE. IASE was upgraded from a BEd college which had been set up in 1962 and was converted into a university department of education in 2013. It established a CTE that offered both MEd and BEd courses. As per the government's recommendation, this CTE was upgraded into an IASE and funds were sanctioned. Funds were received only once under the IASE upgradation. After the fund flow stopped, the college doesn't see itself doing any of the IASE duties that it was mandated to do, namely, conducting in-service teacher training for secondary school teachers or senior secondary school teachers. Nor does it collaborate with CTEs in any capacity, though there are six CTEs under each IASE. It collaborated with the CTE and SCERT once, in 2012, when it was to prepare a perspective plan and a budget. This separation of IASE and the university department, due to lack of funds, was a major source of discomfort for the principal and the faculty in responding to questions related to CSSTE as they were not doing any activity related to the IASE.

4.6.8 Infrastructure and Facilities

Most IASEs visited by the TISS team meet the MHRD guidelines for infrastructural facilities. Most IASEs have their own buildings although a few of these need immediate renovation and

facelift, for example, IASE Hyderabad and Bhopal. Interestingly, this same observation was reported in the NCERT Evaluation Report of CSSTE in 2009, but evidently, not much has happened in this regard since then. There are examples of space crunch as was noticed in IASE Aizawl, in spite of which, it showcases features of a model IASE in the country.

Table 4.6: Infrastructure Availability at IASEs

Infrastructure	**Number of IASEs* with this facility** *(No data for IASE Pune, Lucknow and Ajmer)	**Comments** * *(No data from IASE Pune, Lucknow and Ajmer)
Room for head or principal	10	Yes
Staff room	10	Yes
Classrooms	10	Yes
Multipurpose hall	10	This is used as regular classrooms in many IASEs.
Library	10	Yes
Resource room	9	Most IASEs have resource rooms except for IASE Bangalore, Bhopal and Hyderabad. IASE Aurangabad has a resource room, but it is not functional.
Laboratories	9	Except for IASE Aurangabad, all other IASEs have laboratories.
Storerooms	9	Except for IASE Hyderabad, all other IASEs have storerooms.
Seminar Rooms	9	Except for IASE Hyderabad, all other IASEs have seminar rooms.
Auditorium (if separate from multipurpose hall)	4	No, only IASE Bilaspur, Bangalore, Bhopal, and Jabalpur have an auditorium.
ICT lab	10	Yes
Separate toilets for men and women (staff)	9	Except for IASE CIE Delhi, all have a separate toilet for men and women.
Separate toilets for men and women (students)	10	Yes
Auditorium	5	No, only IASE Bilaspur, Bangalore, Bhopal, Jamia Milia Islamia and Jabalpur have an auditorium.

Infrastructure	Number of IASEs* with this facility *(No data for IASE Pune, Lucknow and Ajmer)	Comments * *(No data from IASE Pune, Lucknow and Ajmer)
Hostels for men	10	Except for IASE Hyderabad, all others have hostels for men, but existing hostel facilities are poor. Hostels are not maintained, there is no drinking water, and other problems are noted. New construction is in progress.
Hostels for women	7	Except for IASE Aurangabad, Guwahati and Hyderabad, all others have hostel facilities for women. IASE Guwahati has a hostel, but it is not functional yet.
Drinking water facility	9	No, IASE Aurangabad does not have drinking water facility.
Staff quarters	5	No, IASE Bangalore, Bhopal, Aurangabad, Aizwal and Hyderabad has not staff quarters.
Office administration room	10	Yes
Electricity (on day of visit)	10	Yes
Generator backup	7	No, IASE Bilaspur, Jabalpur and Hyderabad do not have generator backup. All other IASEs have either a generator or an inverter.
Internet connection	10	Yes
Website	10	Yes
Boundary wall	10	Yes, IASE Bhopal shares the wall with other institutions.
Playground	6	No, IASE Guwahati, Bhopal, Aurangabad and Hyderabad has either no or not adequate playground.

4.6.9 Computer Centre or Lab

Computer and ICT use was noticed in all the IASEs visited by the TISS team. The number of computers, printers, internet facility and availability of other accessories varied between institutions. Internet connectivity was not uninterrupted in some IASEs, and computer labs were not fully functional in all IASEs. None of the IASEs seemed to be having add-on computer facilities for physically challenged persons.

4.6.10 Use of ICT in In-service Training Programmes

It was noticed that the use of ICT has remained restricted to presentations during teaching (most IASEs reported this), smart classrooms and online admission process (most IASEs). Leveraging technology through its innovative use was not evident in most IASEs. A few exceptions were IASE Hyderabad that uses MOOCs in their courses and IASE Aizawl that runs a multimode BEd in-service programme for regular untrained teachers. IASE Lucknow reported that due to poor availability of electricity, use of technology remains restricted.

Another exception are the IASEs in Maharashtra – Aurangabad and Pune – that are still not fully functional and reported that in-service training programmes are not conducted due to lack of funds. Faculty members spend time on trying to attract students from different BEd colleges to their MEd programme.

4.6.11 Library and Reading Room

All the IASEs visited have a library with reading rooms and sufficient number of books as per MHRD guidelines, but in many institutions the latest publications are not available. Important curricular documents like copies of NCF 2005 and NCFTE 2009 could not be found in a few IASEs. In a few cases, the space available for the library and the reading room were found to be inadequate. An interaction with the pre-service student-teachers also revealed the same fact. In a few IASEs, the post of librarian lay vacant.

4.6.12 Laboratories

Almost all IASEs visited by the TISS team had a functional computer lab with varying degrees of internet connectivity and computer availability. Some IASEs like Aurangabad in Maharashtra, however, do not have a designated science laboratory. Though IASE Guwahati has designated one room as a science lab, it is used as a regular classroom. Many IASEs do not have a language laboratory.

4.7 Summary

There is variation in the resource allocation, infrastructure availability and functioning of IASEs in India. While a few IASEs are better resourced and execute their roles as 'regional resource centres' and 'academic mentors' to other stakeholders, there are IASEs waiting for academic and non-academic posts to be filled or struggling due to lack of funds. A lack of synergy was noticed in most states due to the presence of two different academic heads, which leads to non-consultation on training requirements and duplication of trainings. Areas of improvement can be systematic and effective leverage of ICT in the routine functioning of IASEs and not just limited to classroom presentations and admission processes. Similarly, research work being done with only action research as the methodology needs to be discussed. Emphasis needs to be placed on well-planned research studies by faculty members which are qualitatively effective rather than research conducted just for the sake of doing it. Annual conferences for teacher educators and the larger teacher community can provide a platform for further deliberation.

CHAPTER 5

Colleges of Teacher Education

CTE, Ujjain, Madhya Pradesh

CTE, Lucknow, Uttar Pradesh

CTE and IASE, Jabalpur, Madhya Pradesh

CTE Raipur, Chhattisgarh

CTE Science Park, Mysore, Karnataka

CHAPTER 5: Colleges of Teacher Education

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College of Teacher Education (CTE)

The colleges of teacher education (CTEs) offer in-service training to secondary and higher secondary teachers and teacher educators. Once the Right to Education Act (RTE, 2009) was passed, it was imperative to take steps to equip teachers with the capacity to achieve the vision of providing free and compulsory education to children between 6 and 14 years. The CTEs were therefore assigned the responsibilities of pre- and in-service training for secondary and higher secondary school teachers. It was envisioned that the CTEs will coordinate with district education officers regarding the short-term and long-term needs of secondary school teachers, particularly under the RMSA plans. Meticulous planning for subject-specific in-service training was required alongside the preparation of handbooks for teachers. The CTEs were expected to develop perspective plans and annual work plans that included plans for infrastructure development, financial planning and budgeting, projection of expenditure and sources of income to meet the institute's goals (MHRD, 2012). Annual work plans were expected to present details of CTEs' performance against identified indicators.

Primary functions of CTEs

- Perform needs analysis and conduct baseline surveys to design appropriate training materials.
- Prepare implementation guidelines for planning and executing training activities and projects.
- Conduct impact studies to examine classroom processes.
- Study learning outcomes after training programmes for impact.
- Maintain updated database of secondary schools and teachers.

5.1 Process and Performance Indicators: Government of India Guidelines, 2012

To achieve the goals of excellence in teacher training, the CTEs are expected to collaborate with other academic institutions like the IASEs to work towards capacity building of CTE faculties in academic and research domains. A CTE is expected have adequate infrastructure to support these activities with an intake of 100 students for a BEd course and an academic staff of 1 principal, 3 readers and 13 lecturers (total of 17). It must have an academic area of about 5 acres with sufficient number of rooms and an administrative wing to support its activities. A library equipped with about 10,000 books, at least 10 professional journals and a seating capacity of 50 students has been envisaged in the CSSTE Guidelines 2012 (MHRD, 2012). Necessary audio-visual (AV) and computer equipment must be available and actively used in the teaching-learning process. It is also desirable to have separate hostels for men and women in every CTE with a minimum capacity of 150 each, with adequate provision for recreation such as grounds for games, athletics and physical activities. The CSSTE Guidelines 2012 has emphasised increased use of technology and integrating it with education (MHRD, 2012).

CTEs are also expected to follow the 1989 guidelines for the number of trainings to be conducted and the number of teachers to be trained under ISTE. Subject-based courses are to be of 3–4 week duration, while theme based courses must be 3–10 days long. The institutions are required to view their PSTE and ISTE activities as a continuum and institutionalise a training management system to track the number of teachers trained, their training needs and their professional and

educational qualifications. An annual in-service training planned in coordination with RMSA is desirable. Further, their visions for the trainings must align with NCFTE 2009 and include extensive use of ICT.

PSTE must be a part of the CTEs' annual work plan (AWP). The CTEs must maintain records of the feedback on the course, the number of secondary teachers qualified through the institution, their success ratio in the pre-service examination and the percentage of CTE students who have cleared the Teacher Eligibility Test (TET). Alongside conducting subject- and theme-based workshops, CTEs must make note of the percentage of faculty participants attending them. They are also required to conduct faculty development and research workshops, facilitate workshop series in coordination with the centre and state that engages experts as participants. ICT must also be actively incorporated for the professional development of faculty.

Networking and collaborations with other academic institutions like SSA, RMSA, IASEs, DIETs and SCERTs comprise part of CTE responsibilities. This involves not just professional development of faculty but also linkages with schools. Support can be provided to create supplementary materials and teaching aids, as well as to address issues in pedagogy, assessments, aims of education and schools and society among others.

Conducting research is a critical facet of CTEs' responsibilities to ensure quality education in schools. CTEs must identify experimental schools to conduct pilot research and studies. Field visits must be planned and conducted systematically with 2–3 subject experts to study the impact of in-service trainings. Research must also be conducted on children's understanding of concepts, on child development, review of textbooks and educational materials. CTEs are expected to conduct workshops on research methodology and guide school teachers in conducting action research in their classrooms.

5.2 CTEs in India: A Survey

As mentioned before, this study covers select CTEs across 13 states in India. A variety of tools, quantitative as well as qualitative, were used to study the role of the CTEs in teacher education, their existing infrastructure, faculty contribution to teaching and research, fund flow and staffing, and their collaborations with other educational bodies, among others, to gauge their ability and performance to meet the CSSTE guidelines.

The selected components of observation and analysis in this study are:

- Vacancies of academic and non-academic staff
- Faculty development and capacity building
- Pre- and in-service training and continuous professional development
- Research, publications and materials development
- Interaction and collaboration
- Infrastructure and CTE resources

Other indicators included in the study are the perceptions of faculty, students and institutional heads of the challenges faced and possible measures that would help them function more effectively. The sections below present the key findings from this study.

5.2.1 Faculty Profile and Vacancies

As the core component of teaching, faculty qualifications are often equated with their ability to teach effectively. Current norms under the NCTE require a post-graduate degree in Education and a NET or TET in education as eligibility criteria for teaching in CTEs. Sufficient number of faculty are needed in each CTE for the institute to function efficiently.

Table 5.1: Vacancy Status in Select CTEs Across States

Number of CTEs reporting vacancies											
State	Total Institutions (no.)	Academic Vacancies					Non-Academic Vacancies				
		Filled	<25%	25–50%	50–75%	>75%	Filled	<25%	25–50%	50–75%	>75%
Assam	2			1		1			2		
Bihar	2	1			1			1		1	
Chhattisgarh	1				1				1		
Delhi	0										
Himachal Pradesh	1			1					1		
Karnataka	2				1	1					1
Madhya Pradesh	2			1	1				1	1	
Maharashtra	2				2				2		
Mizoram	0										
Puducherry	1				1				1		
Rajasthan	2			1	1			2			
Telangana	2			1							
Uttar Pradesh	2			1	1				1		

The table shows that, with the exception of Bihar, all the states and institutions visited have vacant academic and non-academic posts. The percentage of vacancies varies between 25–75% with 2 CTEs having more than 75% vacancy (one each in Assam and Karnataka). Most noticeable is the complete absence of CTEs that have filled all their non-academic positions. Vacancies imply that faculty and staff have to work harder to reach the institution's set goals. Equally worrisome are the high number of institutions that have vacant academic positions. It is evident that these vacancies will have a negative impact on the execution of academic responsibilities.

5.2.2 Faculty Development and Capacity Building

Continuous professional development and capacity building are necessary to ensure consistency and quality in pedagogic and content knowledge. It is also necessary to align these with the recommendations of NCF 2005 and NCFTE 2009. It was observed that CTE faculty belonged to one of three broad categories:

- Administrative officers who do not contribute much to teaching and research
- Fresh faculty in need of training and teaching experience
- Seasoned academicians who focus principally on teaching and research

The challenges here are to identify and offer relevant capacity building programmes to update faculty knowledge. Also problematic is the constant shifting of faculty between the academic and administrative domains. This leads to fragmented visions in training, dilution of capabilities, and demands to retain faculty in a given position for a sustained period of time. Some questions to consider are how to reconcile the needs and capabilities of these different kinds of practitioners to create quality teacher education programmes. How can teacher education draw on individual expertise in a timely and systematic manner to meet the larger vision of the CSSTE?

Table 5.2 presents responses by CTE faculty about factors that can enhance their productivity as teacher educators. Provision of personal computers and laptops in the workspace can aid, simultaneously, in integrating ICT into their work and in individual and institutional research. Exposure visits to other institutions contribute to understanding best practices as well as creation of learning communities and peer interaction to face challenges in the workplace. Training in the new curriculum is necessary not simply to meet immediate requirements of the classroom but also to orient the faculty to the pedagogies of NCFTE (NCTE, 2009).

Table 5.2: Faculty Development and Capacity Building in CTEs

States	CTE Visited	Faculty Development Programmes	Laptops or Computers	Exposure Visits	Training for New Curricula
Assam	CTE1	F1: Y (2013–14)	F1: N	F1: N	F1: N
Bihar	CTE1	F1: Y	F1: Y	F1: Y	F1: N
Chhattisgarh	CTE1	F1: N	F1: N, but has a personal one	F1: Y, for consultancy	-
Himachal Pradesh	CTE1	F1: Y	F1: N	F1: N	F1: N
Karnataka	CTE1	F1: Y	F1: Y	F1: Y	F1: Y, but not effective
	CTE2	F1: Y	F1: Y	F1: Y	-
Maharashtra	CTE1	F1: After 2009, no	F1: N	F1: N	F1: Y
	CTE2	F1: Y F2: Y	F1: Y F2: Y	F1: Y, for exam visit. F2: N	F1: Y F2: No response
Mizoram	No CTEs	NA	NA	NA	NA
Madhya Pradesh	CTE1	F1: N F2: Y	F1: Y F2: N	F1: N F2: Y	F1 (Sr): N F2 (Jr): Y
Puducherry	CTE1	Y	Y	—	Y
Rajasthan	CTE1	Y	Y	N	N
Telangana	CTE1	F1: N F2: N	F1: N F2: N	F1: N F2: N	F1: N F2: No response
	CTE2	F1: Y F2: N	F1: Y F2: N	F1: Y F2: N	F1: Y F2: N

**F1, F2 and CTE1, CTE2 are used to designate specific faculty member interviewed and specific CTE visited in a state.*

Most noticeable in the responses is the faculties' lack of orientation to the new curriculum, with a large majority answering in the negative. Access to computers and laptop with an internet connection is also not uniform. In most institutes, these are shared. Most of the work on computers is restricted to administrative tasks like entering attendance and marks. Very few instances were observed of the faculty using computers for research. Exposure visits also appear sporadic and unstructured. A large number of faculty remarked across states that they felt intellectually isolated, suggesting that the visits that do occur do not adequately contribute to knowledge building.

5.2.3 Pre- and In-Service Trainings and Continuous Professional Development

CTEs are mandated to engage in different kinds of teacher training activities. Apart from giving pre-service training to fresh graduates, faculty at CTEs must conduct in-service training programmes for teachers and themselves attend continuous professional development workshops. Faculties' perception of these trainings and their use in the teaching profession, the approach of policies to training and professional development programmes, policies' translation into action and fund allocation affect teacher education programmes to varying extents. One important aspect of this study is to capture faculties' notion of quality, their perception of teaching as a profession and their responses' proximity to progressive thought. How do these perceptions relate to the different trainings they participate in and conduct?

A large proportion of work by faculty is channelled towards pre-service training of fresh graduates. A large number of the training programmes are conducted with outsourced resource persons, with the CTEs functioning only as coordinating agencies. Another problem is the nature of continuous professional development programmes attended by faculty members. A few faculty members stated in their discussions and interviews with the TISS team that lack of information about training programmes prevent them from participating more actively in the programmes. Yet another deterrent is inadequate funds to support their engagement in these programmes. Some faculty members reported a need for better training for ICT.

On the other hand, in most CTEs, in-service trainings are not as frequent as pre-service trainings. One common reason was that limited faculty and vacant positions — staff shortage, in other words — restricted CTEs from engaging more fully in training programmes. A few exceptions are CTE Chhapra in Bihar and CTE Lucknow in UP. While CTE Chhapra is currently focussing only on ISTE to clear the backlog of large scale newly recruited untrained teachers, CTE Lucknow is neither engaged in PSTE nor in ISTE.

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5.2.4 Research, Publications and Material Development

Faculty responses on research activities vary across states. A major gap perceived is in research that underlies meaningful training programmes. There seems to be a dearth of structured study into the needs of teachers and subsequent follow-ups to determine the impact of trainings conducted. Research in baseline impact studies and learner outcomes, which the CSSTE says

lack of systematic and sustained research in CTEs is perceived across states. Also noteworthy is the inconsistency of responses of CTEs to the same item within the same state. For instance, while one faculty at one CTE in Telangana (Warangal) displayed ignorance of training programmes, other faculty at Mahbubnagar have actively pursued trainings and materials development.

Individual research and publications vary across states. CTEs in Puducherry, Chhattisgarh and Karnataka, for instance, have motivated and intellectually active faculty who pursue research and publish their work. Telangana and Uttar Pradesh, by contrast, do not show active research. CTEs within a state presented different academic scenarios, for instance, two CTEs visited in Bihar (Chhapra and Turki). While CTE Turki appeared to be active in research, no similar evidence was visible in CTE Chhapra. It is possible to link research output to infrastructure support and opportunities for academic collaborations. States where faculty have greater autonomy and access to the internet and computers display greater academic initiatives than states without this support.

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5.2.5 Interaction and Collaboration

Interaction with other educational institutions remains sporadic. The interactions can be classified into two broad kinds.

- Interaction with DIETs, IASEs and SCERTs for the purposes of training and outreach of the faculty of these institutions
- Interaction with schools, monitoring activities, assessment of impact of teacher training programmes and classroom processes in schools

There is a high level of negative responses to questions about interactions with BRCs and CRCs in the CTEs visited for this study. The larger trend of responses indicates that in the CTEs that have adopted curricular changes pursuant to NCFTE 2009, supervision of student-teacher internships are the primary points of active collaboration with schools. The increase in course duration of the BEd course to two years seems to have aided this interaction because of the longer internship. Other collaborative activities that pertain to research or publications, exposure visits, exchange programmes and impact studies are largely absent. Several heads of CTEs, in effect, requested such measures and information that would help them send their faculty for interactions with their peers in other organisations. One principal expressed the need for an online portal that involves all teacher training institutes in a district, which can help convey information and encourage further interactions between peers. A major gap seemed to be disrupted flow of information about workshops and training programmes, which translates into lack of interaction opportunities for teachers. Another challenge articulated was lack of funds to sponsor faculty for conferences.

Interviews with faculty members and principals in CTEs revealed details of academic interactions and collaborations. All CTEs except two reported that they do not have any

academic interaction with BRCs and CRCs. Academic interactions reported by the exceptions, one each in Assam and Chhattisgarh, are limited to conducting training and capacity building programmes. Similarly, no CTE reported academic interaction with SCERT and only three CTEs (one each in Assam, Madhya Pradesh and Rajasthan) reported occasional interaction with IASE for training programmes. Every CTE, except Madhya Pradesh, indicated that they are attached to a nearby school for internship for their students. However, many CTEs, namely, those in Bihar, Chhattisgarh, Karnataka, Maharashtra, Madhya Pradesh and Puducherry, reported collaboration and interaction with NGOs.

In some states, collaborative work with some NGOs was noticed, but none of these collaborations were formalised. Also evident was the sporadic, and in some states almost no, visits by senior officials from the SCERT, SSA, RMSA and IASEs to the CTEs. There is evidence that CTE are visited by SCERT faculty; however, 33% of CTE are not visited by SCERT faculty.

5.2.6 Infrastructure and CTE Resources

Interviews with faculty and heads of CTEs on the availability of resources and required infrastructure were supplemented by observations at the sites. Table 5.3 illustrates the availability of infrastructure and its use in the CTEs visited.

Table 5.3: Infrastructure and Resources in CTEs

Number of CTEs Responding 'Yes'									
State	AS	BH	CG	HP	KN	MP	PD	TS	UP
Total covered (N)	2	2	1	1	2	2	1	2	2
Room for head or principal	2	2	1	1	2	2	1	2	2
Staff room	2	1	1	1	2	2	1	2	2
Classrooms	2	2	1	1	2	2	1	2	
Multipurpose hall		1	1	1	2	2	1	2	2
Library	2	2	1	1	2	2	1	2	2
Resource room		1	1		1	1		1	1
Labs	1	2	1		2	2	1	2	
Storerooms	2	2	1	1	2	2		2	1
Seminar rooms			1	1	1	2		1	1
Auditorium (if separate from multipurpose hall)				1	2	1	1		
ICT lab	2		1	1	2	2	1	2	
Separate toilets for men and women (staff)	2	1		1	2	2	1	2	1
Separate toilets for men and women (students)	2	2	1	1	2	1	1	1	1
Hostels for men	1					1			1
Hostel for women			1	1	1	1			1
Drinking water facility	2	2	1	1	2	2	1	1	2
Canteen	1		1			2			1

Number of CTEs Responding 'Yes'									
State	AS	BH	CG	HP	KN	MP	PD	TS	UP
Staff quarters	1	1	1	1		1		1	1
Office administration room	2	2	1		2	2	1	2	1
AV equipment	1	1	1		2	2	1	1	
Computer equipment in lab for students	2	1	1		2	2		2	
ICT in principal room	1	1	1		1	2	1	1	
ICT in staff room		1	1	1	1	2	1		
ICT for administration room	2	2	1	1	2	2	1	1	1
Recreational equipment	1		1	1	1	2	1	1	
Resources and TLMs	2	1	1	1	1	2		1	
Lab equipment	2	2	1	1	1	1	1	1	
Library books	2	2	1	1	1	2	1	2	2
Electricity	2	2	1	1	2	2	1	2	2
Backup generator	1	1			2	1	1		
Well ventilated rooms and fans	2	1	1	1	2	2	1	1	2
Internet connection	2	2	1	1	1	2	1	2	1
Internet working on the day of visit	2		1	1	2	2	1	1	1
Electricity on the day of visit	2	1	1	1	1	2	1	2	2
Website	2	2	1	1	1	2	1	2	
Boundary wall	2			1	2	2	1	1	2
Playgrounds			1	1	1	1		2	1
Accessibility (including transport to reach school)	1	2	1	1	2	1	1	1	2
• Note: No data for Maharashtra, Delhi, Mizoram and Rajasthan									

There is no common trend in infrastructure observed across the states. Some CTEs are functional with open, well-ventilated brick buildings and classrooms. Others are dingy, overgrown with vegetation, for instance, CTE Lucknow and Chhapra. The TISS team learnt that a major portion of the land of CTE Chhapra was "usurped" by the railways, which have constructed a museum on that land, and the CTE is functioning in the old, dilapidated building with no staff quarters or hostels for students. A common complaint across CTEs, however, is lack of funds for the maintenance of infrastructure. Computer and ICT labs in most states do not have internet connections for every machine. Some are intentionally not provided connections since the institute feels that students do not need the internet for preparing presentations or writing reports. They can take turns on the machines that have internet

according to need and availability. The same practice is extended to faculty who, in most colleges, do not have a dedicated work computer with internet, but work on shared resources. Few libraries are functional, and none hav the required numbers of books (10,000) and journals, as stipulated in the CSSTE. Most libraries do not have copies of NCF 2005 and NCFTE 2009.

5.3 Observations and Challenges in the Field

At a CTE in Jabalpur, a faculty member opined that the role of teachers must be clearly defined and fixed. This comment is relevant in light of the findings in this study. Teacher education faces many challenges ranging from teachers' lack of clarity about their responsibilities to their ignorance of relevant subject knowledge. A faculty member in CTE Chhapra in Bihar stated that they do diverse non-academic work, which disrupts their academic routine. Many faculty members are not clear about the three broad kinds of research they are required to conduct as part of their institutional roles:

- Needs analysis, impact and learner outcomes studies for in-service teacher training programmes
- Research to provide content and pedagogical support to schools
- Individualised subject specialisation research as academicians in their own rights

This study found that there is negligible research on the needs of school teachers and on impact or learner outcomes that could have informed design of future training workshops. The faculty development workshops attended by the faculty are also sporadic and unstructured, with lack of clarity on their goals or uses. One reason for this arises from the faculty's confusion over their roles and responsibilities in their institutions. It is also evident that faculty across the CTEs are over-burdened by multiple academic and administrative responsibilities.

In their general awareness of policies, faculty across most states displayed rudimentary knowledge of the RTE Act, the no-detention policy, the National Curriculum Framework 2005 (NCF, 2005), the National Curriculum Framework for Teacher Education 2009 (NCFTE, 2009), the programmes running in government schools and constructivist theories of learning. In those institutes that had a new curriculum for their BEd programmes, awareness of policies was better. This stems in most instances from faculty who have been a) stationed at the same CTE for a sustained period and b) involved in teaching the courses over the years. Knowledge of these acts and policies seem contingent, on the whole, on their inclusion in the syllabus as primary reading texts and is restricted to verbatim repetition of those texts. Opinions and discussions were, however, forthcoming from faculty who were self-motivated and read without relying solely on prescribed syllabi. These appear, however, to be a minority. The faculty and student-teachers were unable to engage in discussions on the rationale and implications of no-detention, for instance. This seems to agree with the (majority of) negative responses in the faculty questionnaires to the item on their training in the new curriculum. It should be noted that there is direct correspondence between faculty and student knowledge of policies and classroom practices. It is necessary to ensure, therefore, that faculty possess the knowledge and qualification necessary to educate the student-teachers.

The faculty and heads of institutes are unanimous in stating that there is a shortage of funds and insufficient infrastructure. Lack of ICT facilities, interactions and faculty exchange between institutions as well as learning communities seem to contribute to dearth of ideas. These are presented as some challenges in teacher education. Another challenge pertains broadly to the

quality of teachers leaving the CTEs. One problem, as reported by faculty, is that student-teachers who join CTEs do so as a last resort. Very few view teaching as a worthwhile profession, which affects the extent of their learning. Anothe problem is that CTEs impart pedagogical knowledge at the expense of content knowledge, which makes it difficult to ensure quality of subject teachers. In Puducherry, for instance, where the CTE has active and motivated teachers, the faculty feel that many students who join the BEd course after their undergraduate degree do not possess adequate subject knowledge. The faculty opine that an integrated BA/ BSc-BEd course will help CTEs ensure that adequate content and pedagogic knowledge is imparted. This, they feel, will establish the quality of teachers better since the CTE faculty can take an active part in the teaching-learning process. This suggestion is, of course, contingent on the presence of well-qualified and motivated faculty in the CTEs.

A recurrent negative response from faculty across institutions is to whether the CTE monitored private teacher education institutes. It is felt that a mushrooming of private education bodies is diluting the quality of teacher education. Further, no checks are in place to ensure that the training imparted in the CTEs is translated into practice in schools after the student-teachers graduate. These comments agree with the analysis earlier of research by faculty, which reveals that there are very few research studies being conducted in schools to gauge the impact of the training and the learning outcomes. Yet another refrain was that in-service trainings should be done by the CTEs and not the DIETs. There are, however, financial constraints that prevent the CTEs from carrying out these trainings.

Another identified challenge is the TET examination that student-teachers find increasingly difficult to clear. More than 50% CTEs remarked that they conducted "coaching" classes in TET apart from their existing workload to help students clear the exam. Also noted is hesitation on the part of a few senior faculty to attempt the NET (and risk failing it) when they are close to retirement.

Table 5.4 summarises some of the key limitations, challenges and recommendations offered by faculty and heads of CTEs across the states.

Table 5.4: Limitations, Challenges and Remarks for CTEs

Limitations	Challenges	Remarks
• Inadequate infrastructure • Inadequate funds • Inadequate faculty • Demotivated student-teachers • Lack of clarity about roles and responsibilities of CTE faculty and staff • Absence of research studies on needs and impact analysis	• Monitoring quality of teacher training • Monitoring private institutes' teacher training • CTET examination • Training in (philosophy of) new curriculum • School monitoring through studies in learner outcomes and impact of training	• Online portal for communication of information • Greater interaction and exchange between faculty across the country to share concerns and best practices • Better training in use of ICT by subject experts

5.4 Analysis and Insights

Following are some insights emerging from the current study.

- A clear demarcation of academic and administrative responsibilities of CTE faculty is currently missing. A proportionate distribution of workload would help in enhancing the productivity of these institutions.
- The CTEs find it difficult to prioritise their various roles in the education sector. A ranking of necessary activities to be performed by individual institutes and their faculty based on local context and need is necessary.
- Granting academic autonomy can aid many of these institutes in improving their current performance.
- Interconnectivity between different CTEs is currently lacking. Harnessing the potential of technology to establish this connection between CTEs across the country will greatly aid cross-pollination of idea, abilities and expertise.
- A training management system both at the institute and at the state level will enable better load sharing and easier dissemination of knowledge by tracing and tracking teachers who need to attend faculty development programmes.
- There is a need to better regulate fund flow and infrastructure development to support the activities of the CTEs.
- Performance-based incentives can be implemented with greater rigour to encourage and motivate capable faculty to contribute to teacher education and capacity building.

CHAPTER 6

District Institutes of Education and Training

DIET Puducherry

DIET Yadgir, Karnataka

DIET Resource Centre, Chamrajanagar: Karnataka

DIET Nagaon, Assam

DIET Korba, Chhattisgarh

CHAPTER 6: District Institutes of Education and Training

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District Institutes of Education and Training (DIETs)

DIETs are nodal agencies entrusted with the responsibility of providing academic and resource support at the district and grassroots levels for the success of strategies and programmes implemented in elementary schools. Under the National Policy on Education (MHRD, 1986) and with the support of the central government, DIETs functioned to ensure percolation of their vision of education to schools.

Some Functions of DIETs

- Revise the DElEd curriculum.
- Play an active role in the conduct of pre- and in-service teacher education programmes.
- Monitor schools through direct intervention.
- Conduct studies on education.
- Develop and function as resource centres for the entire district.
- Organise fora of interactions with teachers and teacher educators and provide academic support to CRCs and BRCs in the district.
- Engage in academic review and planning.
- Provide capacity building support to faculty members and teacher educators.
- Conduct inclusive education and special focus group programmes.
- Establish educational resource and documentation centres.

DIETs are required to have an academic staff comprising a principal, a vice-principal, lecturers and senior lecturers, work experience or work education teachers, a librarian, ICT support staff, statisticians, office superintendents, lab assistants for the different laboratories, personal assistants to the principal, typists, data entry operators, accountants and maintenance support staff belonging to Group D cadre.

DIETs must also have a programme advisory committee (PAC) comprising a chairperson who is the district magistrate, the district collector or the CEO of the zilla parishad; the district education officer; the district project coordinator of SSA or RMSA; two senior faculty of the DIET; two school headmasters and one representative each from the tribal welfare department, the social welfare department, the minorities department, and the women and child welfare department. The committee should also have on its board one BRC and one CRC coordinator, one principal of a private unaided or aided teacher education college, principals from an IASE and CTE, a representative from the SCERT director and an NGO that is working in the field of teacher education and two students from a pre-service course, with one from each year of the course. The convener of this committee is the principal of the DIET, and it is recommended that the PAC meet at least twice a year.

6.1 Process and Performance Indicators: Government of India Guidelines, 2012

The process indicators put forth in the CSSTE Guidelines (MHRD, 2012) define the functions of DIETs as institutes mandated to maintain detailed databases of schools, BRCs and CRCs in the districts they serve. Frequent minuted faculty meetings as well as records of the most talked about improvement processes in the DIET in the year are desired practices. The recommended

process for achieving the goals of DIETs is similar to that for CTEs, involving needs analysis of teachers in schools, in coordination with SCERTs and state pedagogic units to develop modules for teacher training, assessing infrastructural gaps and developing modules and trainings for educational administrators.

Action research remains an important task component of DIETs. This comprises research on teacher educators in the respective districts as well as publications and research in their subject areas through conferences, seminars, articles in journals, newspapers, magazines and others. Conducting periodic school-based studies on pedagogic practices, developing materials for pre-service programmes and initiating reform recommendations to the SCERT based on the studies are some identified functions of the DIETs. Faculty are also supposed to be deputed for conferences, study leaves and exposure visits.

Another critical role of the DIETs involves conducting professional development and in-service training programmes in coordination with SCERT. DIETs maintain records of feedback from teachers about the nature of trainings and in-service programmes. A TMS is, therefore, a requisite for DIETs. Responsibilities of DIETs differ from those of CTEs, however, in their focus on elementary education in schools and their not being perceived as institutes of higher education. Some identified challenges outlined in the guidelines are given below.

Identified Challenges (MHRD, 2012) p.21

- Enabling teachers in all schools to be qualified as per the requirements of the RTE Act
- Reforming and renewing curricula for PSTE at the elementary and secondary education levels
- Regulating the quality of PSTE in all institutions
- Improving the quality of ISTE and directing it towards overall teacher professional development and school improvement
- Overseeing the quality of school education to support equity and encourage community involvement
- Developing the professionalism and capacity of teacher educators
- Reforming school curricula, pedagogy, assessment and examination
- Developing interlinkages across departments and institutions engaged in teacher education and teacher training at the state and sub-state levels

6.2 DIETs the Status in 2017

This section surveys the functioning, roles and challenges of the DIETs in 13 states against the roles identified by the CSSTE. With their focus on training teachers of elementary schools, DIETs have a significant role to play in the Indian education sector. This is of particular relevance in light of the RTE Act that aims to provide free and compulsory education to children under 14 years of age. The Guidelines sketch the structure of DIETs as a higher education academic body with a focus on teaching and research. In the following sections, we examine the work ethos observed in select DIETs in the 13 states surveyed along the following rubrics:

- Faculty profile and vacancy
- Faculty development and capacity building
- Pre- and in-service training and continuous professional development
- Research, publications and materials development
- Infrastructure and DIET resources

6.2.1 Faculty Profile and Vacancies

The guidelines for the CSSTE assert that DIETs are located at 'an important point of decentralisation – the district" (MHRD, 2012). This indicates that DIETs are the meeting points of several stakeholders in the elementary education system. With the RTE Act, their role and capability in influencing education has become even more critical. The DIETs are entrusted primarily with the task of continual professional development of teachers in schools and therefore must work in active collaboration with schools and teachers in the district. In-service training comprises a major component of their work.

Learners who come to DIETs are primarily aspiring teachers who see in the course opportunities for a safe job. Pre-service student-teachers come from varied educational backgrounds, ranging from higher secondary students to graduates and, in some instances (as observed in this study), even postgraduates and professional degree holders. The study revealed that the conception of the student-teacher in a DIET as a serving teacher or a young student from school is limited. The DIETs, it was observed, offered a space of study, doubled as resource centres in some states and presented opportunities for professional advancement and financial independence for many students who chose to do the diploma course in education. Students' perception in many states also indicated that they looked upon teaching as a safe option offering professional growth and career advancement. Maintaining a vibrant DIET can greatly improve the educational health of the districts. Acquiring and nurturing adequate qualified faculty is, therefore, a pressing necessity.

Table 6.1: Vacancies in Academic and Non-Academic Posts in DIETs

Number of DIETs reporting vacancies											
State	**Total Institutions Covered**	**Academic Vacancies**					**Non-Academic Vacancies**				
		Filled	**<25%**	**25–50%**	**50–75%**	**>75%**	**Filled**	**<25%**	**25–50%**	**50–75%**	**>75%**
AS	4		1		2	1	2				
BH	4			4			1	1		1	
CG	5		1	1	1					2	1
DL	4		2						2		
HP	4	1		1					2		
KN	4		4					2	2		
MP	4	2	1	1				2	2		
MH	4										
MZ	4			4			1	1	2	1	
PD	1										
RJ	4										
TS	4					4		1	1	2	
UP	4		1		2			1	2		

A survey of DIETs faculty strength across the selected states shows a vacancy scenario of 25–75%. This is the case for academic and non-academic positions and stretches the capacity of the DIETs' faculty in performing more efficiently. Most faculty were unanimous in stating in interviews, for instance, that while the DIETs are capable of taking on the responsibility of secondary education, they will need adequate staff to do so. The vacancy problem appears to be a deterrent to the DIETs' ability to do its work. The DIETs in Rajasthan, for instance, have a noticeably acute shortage of staff that adds significantly to the workload of faculty. Similar trends were observed in Assam as well. It was heartening to note, however, that despite the severe shortage and delays of funds and faculty, the Assam DIETs emerged as thriving educational centres.

6.2.2 Faculty Development and Capacity Building

As in CTEs, IASEs and other institutes, building on the pedagogic and content knowledge of DIET faculty is necessary for them to function effectively as teacher educators. How often do faculty participate in such programmes? Have they been resource persons for other training programmes? Have they gone on exposure visits that can help them discuss and share best practices with their peers? What is the nature of the research they conduct and publish?

For the items in the questionnaire on faculty development programmes, exposure visits and provision of laptops and computers to faculty, more than 75% faculty stated that they have attended faculty development programmes. No common trend in themes was observed in the nature of these programmes. The topics varied from action research to orientation to the new curriculum. Most faculty replied in the negative when asked whether they were provided with a laptop. Faculty had access to computers but, in most cases, not for their exclusive use. The machines were shared resources in labs, often used by students, staff and faculty alike. Exposure visits also appeared infrequent. With the exception of Chhattisgarh and Mizoram where every single faculty member interviewed claimed to have gone on an exposure visit, responses from the faculty at other DIETs were mostly in the negative. They were also not very clear about what these visits entailed.

There were mixed responses by faculty to questions on faculty development and exposure visits. While no clear trend emerges, lack of knowledge of training and opportunities to attend them appear as common reasons for a non-interactive academic community. Most faculty are not provided with personal laptops but share common resources in the institutes. It was noticed that: a) Not all computers have internet connectivity. b) Computers are used on rotational basis in labs by faculty and students. c) Computers are used most frequently for administrative activities like entering attendance and marks. Erratic internet connections on limited machines made a truly integral use of ICT in planning and executing lessons difficult.

On a positive note, several DIETs have smartboards, CPUs and projectors in their classrooms that, students and teachers claimed, are actively used in the teaching learning process. The DIET at Puducherry is one such example. Similarly, in Karnataka, Mizoram and Chhattisgarh, DIETs faculty, without having received formal training in the use of computers, actively integrate technology as teaching learning aids in their classrooms. Powerpoints are encouraged in seminar presentations. Students are required to search the internet for relevant materials to prepare for their classes and assignments. Some institutes require students to prepare portfolios of all the TLMs prepared by them during the academic year. This again requires active and intensive use of computers.

6.2.3 Pre- and In-Service Trainings and Continuous Professional Development

The CSSTE guidelines stipulate that the responsibility for offering continuous professional development programmes as well as conducting pre- and in-service training programmes rests with the faculty of the DIETs. These activities must be conducted in coordination with SCERTs that help with module and material development as well as curricular changes.

Most of the faculty at the DIETs are intensely involved in pre-service training. There were mixed responses to questions about in-service training of teachers, with only Uttar Pradesh, Mizoram, Maharashtra and Karnataka stating that they have been conducting in-service training in a sustained manner. All the faculty interviewed in seven out of the 13 states responded positively to having been involved in CPD trainings for untrained teachers.

An overwhelming number of positive responses are found to questions about the pre-service teaching role played by the DIETs. These are primarily DElEd courses and serve to provide elementary school teachers to the educational community. Faculty development programmes for DIET faculty also seem active. Interviews with faculty suggest, however, that the programmes are not systematic or well-organised. One head of DIET observed that there was an 'uncoordinated overdose of training' (transcribed from interview with head of DIET, Udaipur, Rajasthan). Information about ongoing programmes does not reach faculty in a timely manner. Some DIETs reported the need for better resource persons for trainings in the use of ICT in the classroom.

Few DIETs use an active TMS. Some DIETs also stated that most of their in-service trainings are conducted by resource persons sourced from outside their DIETs. The reason given was lack of faculty to shoulder the responsibility of continuous in-service training of teachers on a regular basis. This corroborates with the data on vacancies, seen in Table 6.1. In such cases, the DIETs largely function as coordinating agencies in order to meet the growing demands of teacher training.

6.2.4 Research, Publications and Material Development

There are two broad categories of research that DIET faculty are required to perform in their institutional roles as teacher educators.

- Action research studies in schools on aspects like pedagogic practices, needs analysis of teachers that would guide the in-service training designs, impact analysis to determine the effect of training in learner outcomes and training effectiveness and identification of areas and themes for administrators to run institutions better
- Individual research in content and pedagogy as part of continuous professional development to constantly update their knowledge as academicians

Limited opportunities and lack of financial support act as deterrents to research and presentation of work in national and international fora. A case in point is the faculty of the DIET at Puducherry. The faculty displayed, during this team's visit, a series of research articles published in journals, including one in Elsevier. They told us that another paper had been accepted for presentation at a national seminar in Mizoram organised by NUEPA. They were, however, unable to attend it because they were not entitled to air travel and reaching Mizoram would take several days from Puducherry. They had to, subsequently, withdraw their paper. Unfortunately, such cases are not singular ones.

There is overwhelming negative response by faculty to questions on research conducted.

Similarly, faculty in a majority of states indicated that they had not published any article in the last 2–3 years. In cases where faculty claimed publications, the works were either articles in college magazines or newspaper articles. Academic journals were never mentioned as sites of publication, except in rare instances like Puducherry where faculty displayed copies of their research articles published in Elsevier. A majority of faculty across the states have replied in the negative to questions on publications. Research activities also do not register a constant trend across states. These are predominantly in the form of individual, domain-specific research that does not account for action research in schools. A similar negative characterises the trend of responses for material development as well.

Design and development of curriculum and materials based on teachers' needs is one of the roles assigned to DIETs. This relates to their larger role as researchers and teacher educators. It is envisioned that the DIET faculty establish connections and interact actively with schools in their district to identify gaps and challenges faced by school teachers. These are subsequently addressed as they provide support to the teachers in the functioning of the schools.

There is a need to emphasise foundational concepts in subject areas, particularly those which are taken as rules or axioms at the school level. For instance, during an interaction with student-teachers (DElEd first year students) in DIET Serchhip in Mizoram, TISS team felt that a few students were eagerly seeking clarity of basic mathematical ideas and concepts and greater understanding of basic concepts that they claimed they could not find in the books in the library or from other sources. One such question was why a natural number when raised to zero produces one. Is it an axiom or can it be proved? To respond to such deep engagement with basic concepts, the teacher requires a few more years of engagement with the core subject matter and interaction with equally qualified teachers for suitable guidance.

It was observed that most of the materials developed by the DIETs faculty are TLMs for pre- and in-service trainings. Very little role is played in curriculum (re)design and development, which could inculcate critical thinking and make students learn to ask questions. Interactions with schools are based solely on internship visits. A few instances of teaching-learning support extended directly to schools are seen in states like Assam, both through interaction with schools and with respect to lesson planning. A predominant reason provided for insufficient interaction was lack of funds, resources and staff to carry out the responsibilities assigned to the DIETs.

Some instances were seen of DIETs developing and adapting existing resources to suit the needs of their students. The DIET in Puducherry is a case in point. Though the current faculty team at this DIET is on deputation for 5 years, they have translated the textbooks for their DElEd curriculum from Tamil to English so that students are provided greater exposure to the language. The translation and printing was undertaken as an extra task by the DIET faculty, drawing on their personal time and DIET funds and with no external aid. Strangely, they did not see it as a mentionable activity and were silent on this initiative until probed further. Once again, this is not a singular instance of initiatives taken by the DIETs and improvisations made to meet their immediate and individual needs as academic bodies.

6.2.5 Interaction and Collaboration

Based on their responsibilities, DIETs' collaborations with other (educational) organisations are envisioned at many levels. Interaction with schools involve, as already mentioned, research and support in teaching and learning. Coordination with SCERTs, IASEs and CTEs help in faculty development, PSTE and ISTE. Other interactions happen with NGOs for a variety of purposes.

Faculty and senior officials were asked about collaborations with NGOs, visits to BRCs and CRCs, SCERTs and IASEs and school visits. Responses were varied. DIETs in most states said that visits to SCERTs and IASEs are negligible. NGO presence and collaborations seem high and active in most states. The most frequently cited NGOs are Pratham, Eklavya and Azim Premji Foundation. None of these collaborations were formal. It appeared that some of the DIET faculty helped NGOs conduct their studies and research activities after regular work hours. Visits to BRCs and CRCs seem to be taking place more frequently. At least 50% of the faculty interviewed in each state said they visited BRCs and CRCs. The only exceptions were Rajasthan and Puducherry. In Puducherry, there were no functional BRCs in the neighbourhood.

Questions on school monitoring received an overwhelmingly positive response. Every state's DIETs have active collaboration with schools. The extended duration of the new DElEd and BEd curricula has led to greater collaborations between DIETs and schools due to internships. Faculty are spending more time in monitoring pre-service trainings. It is, however, also noted that this is the only activity that most faculty do during their school visits. With the exception of Chhattisgarh, where DIET faculty also visited schools for impact studies and needs analysis research apart from monitoring trainings, none of the other faculty spoke of classroom-based research and learning. Unlike other states, Chhattisgarh faculty stated that they are paid TA/DA for these school visits.

Discussion with the faculty members and institution heads at the DIETs regarding visits to the institutes by SCERT faculty and officials like education secretaries and directors yielded inconclusive answers. Most DIETs have seen visits by SCERT faculty. The visits by senior officials, secretaries and directors are, however, sporadic and infrequent. Some DIETs had not been visited by senior officials for more than 2 years at the time of this study. Another problem was that responses by different faculty members in the same institutes were sometimes not consistent. Some faculty stated that they didn't know of any visit or couldn't remember one. There were DIETs in Himachal Pradesh and Maharashtra, for instance, where two faculty members gave opposite responses. It is difficult to trace a trend of visits to the DIETs by senior officials based on these responses.

It appeared in interviews with the faculty, and junior faculty in particular, that there is ambiguity in their understanding of their responsibilities. Apart from carrying heavy and multi-dimensional workload, the faculty are not very clear about their academic and administrative responsibilities in the DIETs. Several faculty members, especially in Karnataka, complained that they were unable to carry out their academic responsibilities or see through any task to its completion because they were performing many unrelated tasks. This reflects in the lack of research and publications from the DIETs as well, as faculty lack the time and resources to pursue structured and systematic study as required by the CSSTE guidelines 2012.

6.2.6 Infrastructure and DIET Resources

Availability of suitable infrastructure is critical for effective functioning of institutions. A healthy learning environment needs ICT resources and audio-visual equipment in classrooms to aid seamless movement into digital learning, access to the internet for faculty and students for the preparation of TLMs, well-equipped and updated libraries, independent research for innovative lesson plans and publications, clean and functional toilets, well-ventilated classrooms, drinking water facilities, recreational spaces for students and faculty, canteens and hostels for men and women.

Table 6.2: Infrastructure and Resources in DIETs

	Number of DIETs Responding 'Yes'												
State	**AS**	**BH**	**CG**	**DL**	**HP**	**KN**	**MP**	**MH**	**MZ**	**PD**	**RJ**	**TS**	**UP**
Total DIETs dovered (N)	4	4	4	4	2	4	4	2	4	1	4	4	3
Room for head or principal	4	4	4	4	2	4	4	2	3	1	4	1	3
Staff room	4	4	4	2	1	4	4	2	3	1	4	4	3
Classrooms	4	4	4	4	2	4	4	2	3	1	4	4	2
Multipurpose hall	3	3	3	4	1	3	4	2	3	1	3	3	3
Library	4	4	4	3	2	3	4	2	3	1	4	4	3
Resource room	4	1	3	2	1	1	4	0	1	0	3	1	2
Labs	4	4	3	2	1	2	4	1	3	1	3	3	1
Storerooms	4	3	4	2	0	3	3	2	3	1	3	3	2
Seminar rooms	2	2	2	2	2	1	4	0	2	0	3	1	2
Auditorium (if separate from multipurpose hall)	0	2	2	2	0	2	3	0	1	1	0	0	2
ICT lab	4	4	3	3	2	4	4	2	2	1	2	4	1
Separate toilets for men and women (staff)	4	2	3	2	2	3	4	1	3	1	4	3	3
Separate toilets for men and women (students)	4	3	3	3	2	2	4	1	3	1	3	4	3
Hostels for men	3	2	2	0	0	2	4	0	2	0	1	4	2
Hostel for women	3*	3	3	0	2	2	3	0	2	0	1	3	1
Drinking water	4	4	4	2	2	3	4	2	3	1	4	4	3
Canteen	2	1	0	2	1	0	0	0	3	0	0	0	1
Staff quarters	3		3	1	0	2	3	1	3	0	2	0	0
Office administration room	4	4	4	3	1	4	4	2	3	1	4	4	2
AV equipment	4	4	3	3	2	2	3	0	3	1	3	4	1
Computer Equipment in lab for students	4	4	4	3	2	3	3	2	1	1	2	4	1
ICT in principal room	2	1	3	2	2	3	3	2	3	1	1	3	3
ICT in staff room	1	0	3	0	0	2	3	0	2	0	1	0	1
ICT for administration room	3	3	4	3	2	4	3	2	2	1	3	3	3
Recreational equipment	4	0	2	3	2	0	3	1	2	0	2	3	0
Resources and TLMs	4	1	4	3	1	3	3	0	3	1	2	4	3
Lab equipment	4	4	4	2	1	2	3	0	2	1	1	4	1
Library books	4	4	4	2	2	3	3	1	3	1	4	4	3
Electricity	4	4	4	3	2	4	3	2	3	1	3	4	3
Backup generator	2	0	0	1	0	4	2	0	3	0	3	2	3
Well ventilated rooms and fans	4	4	3	3	2	4	3	2	3	1	3	3	3
Internet connection	4	4	4	3	2	4	2	1	3	1	4	4	2
Internet working on the day of visit	4	1	3	3	2	2	1	1	2	1	3	4	2
Electricity on the day of visit	4	4	4	2	2	4	2	1	2	1	4	4	3
Website	3	4	1	1	2	0	2	0	2	1	4	4	3
Boundary wall	2	1	3	4	2	3	4	2	2	0	2	4	3
Playgrounds	2	1	4	3	2	2	0	1	3	0	3	4	1
Accessibility (including transport used to reach school	3	4	3	4	0	3	4	1	2	1	2	4	3

Most of the DIETs visited have adequate numbers of functional classrooms, ICT labs with computers, principal's room, staff and administrative rooms and library. Several

DIETs, however, lack an auditorium and seminar rooms that could facilitate discussions and presentations. Also lacking are working internet connections. It was observed during the visits that while the DIETs are provided with computers, not all of them have internet connectivity. Faculty and students stated that they take turns on the machines with internet connections. Partial provisioning of facilities is a problem in light of ICT policies that promote use of technology in teaching and learning. Uninterrupted supply of electricity is also an issue observed during the visits. Only a few DIETs have a back-up generator.

Most noticeable in the institutes was (lack of) boundary walls, physically demarcated spaces and the condition of surrounding areas that can often make the DIET unwelcoming. DIET Dighi in Vaishali district of Bihar, for instance, is situated at a prime location between two important railway tracks and has broken boundary walls. The trespassing has become so rampant that a public pathway cutting through the DIET campus grounds has emerged to connect two adjoining colonies. One portion of the DIET land has been given away to KVS and a KV school runs in the same premises. Similar is the situation of DIET Sonepur in Bihar which has no boundary wall while DIET Bikram in Patna district has lost big pieces of land to JNV, Kasturba School hostel and a BRC opened in its campus. A DIET in Uttar Pradesh, for instance, is overgrown with vegetation due to lack of funds for maintenance of the institute buildings and grounds. Interestingly, however, it sees active teaching practice with students visiting the buildings for classes. It is necessary to factor the gap between available resources and faculty and learner commitments towards keeping these institutions active learning centres. An identifiable challenge here is to find a sustainable way of nurturing the intellectual life of these institutions to make them vibrant and welcoming learning spaces.

Another noticeable infrastructural gap is hostels and accommodation for students and faculty. This was remarked on as a challenge facing teacher education by a faculty member in Assam. The faculty reasoned that lack of accommodation on campus prevents creation of collegiate atmosphere, dissuades students from joining the institution and, in many instances, even restricts inter-institutional exchange. While the case is particularly relevant for Assam, a similar instance was noticed in Puducherry, where connectivity is a problem. In such cases, motivated faculty and vibrant academic spaces are out of the reach of many aspiring students. In the context of student exchange initiatives, Assam and Bihar faculty suggested programmes that involve students visiting DIETs in different parts of the country, as already happens in the case of faculty. This can encourage cross-pollination of ideas, learning cultures and pedagogies. For this to happen, however, infrastructural frameworks must be robust and functional.

6.2.7 Library and Reading Room Facilities in DIETs

Most DIETs have functional libraries with varying numbers of books. However, many DIETs did not have a copy of the *National Curriculum Framework* (NCF, 2005) or *National Curriculum Framework for Teacher Education* (NCTE, 2009). Most DIETs did not have a functional reading hall for its students and faculty members to read and work in a quiet space. A few DIETs (for example, DIETs in Serchhip, Bikram) have newly built buildings and space earmarked for library and reading rooms, but infrastructural facilities for reading rooms are not yet in place. The DIET at Chamarajanagar had a functioning resource centre equipped with relevant books and teaching learning materials and also ICT access for teachers. This resource centre was developed with the assistance of the National Institute of Advanced Studies (NIAS) and with support from the Tata Trusts.

6.2.8 Use of ICT as a Resource

Most DIETs displayed a skewed interpretation of ICT as an educational resource. Many faculty members and principals in DIETs confined ICT to making PowerPoint presentations for use during lessons. Only a few DIETs, for instance, Nalanda, Bikram in Bihar, cited use of the internet for material search and use of online resources for lessons. Faculty members of DIET, Nalanda, showed examples of videos of student-teachers' project-based activities that they have uploaded on YouTube for use as OER. Use of ICT reflected in their proto-research, too.

Not many DIETs could show evidence of using ICT for purposes other than administrative such as online admission system and declaration of results and so on. DIET Serchhip in Mizoram displayed an indigenous TMS that one of their faculty-members who is conversant in digital technology has developed to maintain a database of training requirements of teachers in the district and trainings conducted and attended by teachers by subject and school. Serchhip district is the district with the highest literate in India. Karnataka has developed a TMS but is yet to put it into widespread use.

6.3 Observations, Analysis and Insights

The challenges faced by the DIETs are varied. As critical points of 'decentralisation' in the Indian elementary educational system, DIETs possess a liminal and fluid identity of being simultaneously a body of higher education for student-teachers as well as engaged in the pedagogy of elementary education. Their primary challenge is, therefore, self-definition. Apart from teaching student-teachers and conducting in-service trainings for teachers, DIETs (like the CTEs) are also stipulated to conduct research and contribute to pedagogical and content knowledge in their relevant areas. This awareness is currently lacking. It can be argued that the lack of clear identity affects and demotivates DIET faculty from performing effectively. Another trend that emerges from the study is that the active and functional DIETs are located close to big cities and in well-connected areas. For example, the DIETs in Karnataka offer instructive examples of vibrant and rich learning spaces. Institutes in second- and third-tier cities face greater challenges ranging from insufficient funds to vacancies, de-motivated faculty and students and fewer opportunities for faculty development programmes.

A greater challenge for DIETs is monitoring the spread of schools covered under each district. As institutes responsible for ensuring quality of elementary school teachers, DIETs' volume of work is high and so they require larger faculties. The vacancies in DIETs is affecting their smooth functioning. Current lack of opportunities also seems to have a demotivating effect on DIETs. An overwhelming majority of faculty stated that DIETs should, and are academically positioned to, assume the responsibility of secondary school (teacher) education. They were also unanimous in stating that this was contingent on receiving the necessary funds, resources and infrastructure on time. Encadrement was seen as another possible incentive to motivate faculty to perform better.

Table 6.3: Limitations, Challenges and Remarks for DIETs

Limitations	Challenges	Remarks
• Inadequate infrastructure • Inadequate funds • Inadequate faculty • Demotivated student-teachers • Absence of systematic research studies on needs and impact analysis of trainings and learner outcomes in schools • Lack of a TMS in most institutions	• Monitoring quality of teacher training in schools • Absence of monitoring private institutes' teacher training • CTET examination • Training in (philosophy of) new curriculum • School monitoring through studies in learner outcomes and impact of training	• Online portal for communication of information • Greater interaction and exchange between faculty across the country to share concerns and best practices • Better training in use of ICT by subject experts • Encadrement desirable to motivate faculty

The following are some insights from this study:

- Greater awareness needs to be built among the faculty at DIETs regarding their academic and administrative responsibilities.
- Like the CTEs, a prioritisation of tasks is required at academic and administrative levels for more efficient work distribution and functioning.
- Greater academic and financial autonomy can help DIETs address the specific needs of their local communities more effectively. This pertains to administrative and pedagogic roles in the education ecosystem.
- An interconnection between DIETs can help cross-pollination of ideas, research and collaborative studies on best practices. It will also enable sharing of responsibilities at the level of materials design and curriculum development by creating communities of practice.
- Having a centralised training management system will aid in further cementing collaborations between the different DIETs in the state, not simply through faculty exchange and exposure visits but also by harnessing technology to track the needs of teachers in schools and address them effectively.
- A more transparent, regulated and timely flow of funds is desirable.
- Performance-based incentives, when introduced with greater rigour, can act as motivating factors for faculty to deliver efficiently and effectively in their duties. The notion of encadrement is quite welcome in this regard.
- There is a need to view courses in elementary education as professionally viable degrees. It was suggested at some DIETs that the course be renamed a Bachelor in Elementary Education, which can cause a change in expectations of faculty and students and bring a greater number of registrants.

CHAPTER 7

Block Institutes of Teacher Education

BITE Rangia, Assam

CHAPTER 7: Block Institutes of Teacher Education

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Block Institutes of Teacher Education (BITEs)

7.1. The Context

The 12th Five-Year Plan (GoI, 2012) emphasised the need to advance the cause of the minorities and focus on their educational advancement as a part of the Multi-sectoral Development Programme (MsDP) (GoI, 2012a). This led to a restructuring of several schemes in which the block replaced the district as the unit of planning for implementation. The government identified several districts and towns across India with a high minority population based on the 2001 census data. Major initiatives were launched to ensure the advancement of minorities as part of the MsDP.

One such proposed initiative was to set up Block Institutes of Teacher Education (BITEs) under the CSSTE in high minority concentration districts or in districts or towns with a high SC/ST population. The establishment of BITEs would ensure access to good quality teacher education facilities for rural and remote areas and facilitate the entry of talented persons, particularly persons from SC/ST and minority concentration areas, into the teaching profession. This would not only ensure the participation of SC/ST and minority groups in the teaching profession but also overcome the shortage of local teachers in elementary schools in these areas (MHRD, 2012).

The 2009 NCERT Evaluation Report of the CSSTE (NCERT, 2009) recommended that block-level teacher education institutes be created to meet the academic and curricular needs of teachers at the block level. It was proposed that additional DIETs be set up in 196 identified districts and that BITEs be established in the remaining 5,804 blocks that have a high concentration of SC/ST and minorities. The primary function of BITEs was to improve the in-service training of teachers from the pre-primary to the senior secondary level to create a pool of trained teachers from the local community who would be aware of and sensitive to the local realities and needs of their students. The existing BRCs were to be subsumed into the BITEs.

The MHRD announced approval for setting up BITEs in the 196 identified districts. The press statement released in 2013 said: "More than 690 crore rupees have been approved, with 1/3rd of this investment being made in 8 high deficit states of Uttar Pradesh, Bihar, West Bengal, Assam, Odisha, Chhattisgarh, Jharkhand and Madhya Pradesh. Over Rs. 6,300 crore are earmarked in the 12th Five-Year Plan for training of untrained teachers" (PIB, 2013).

However, the impact of this plan is not seen in reality as shown in Table 7.1 depicting the status of functional BITEs at the end of the 12th Five-Year Plan in selected states and UTs covered under this study.

Table 7.1: Status of Functional BITEs at end of 12th Five-Year Plan

State	Proposed BITEs	Functional BITEs*
Assam	14	1
Bihar	8	4
Chhattisgarh	6	0
Delhi	1	0
Himachal Pradesh	8	0
Karnataka	3	0
Madhya Pradesh	6	0
Maharashtra	4	0
Mizoram	10	0
Puducherry	-	-
Rajasthan	4	0
Telangana	-	
Uttar Pradesh	38	0
*information as reported by state nodal officers		

This study covers two BITEs — BITE Rangia in Assam and BITE Dariyapur in East Champaran, Bihar. BITE Dariyapur had been a Primary Teachers Education College (PTEC) established in 1956 and was recently upgraded to a BITE under CSSTE. The Basic Training Centre (BTC) in Rangia, Kamrup district of Assam, has been designated and functioning as a BITE under this scheme.

In Bihar, no funds were released after 2014–15 due to 'paucity of funds'. Proposals for four new BITEs that were recommended by the TEAB were also cancelled for the same reason (8th TEAB meeting minutes, 2015–16). In 2015–16, sanction for four new BITEs was cancelled in spite of recommendation from earlier TEAB meetings. It was suggested that the existing four BITEs be the only ones in the state. In Assam, 14 BITEs have been proposed, out of which, 7 have been sanctioned. Central assistance, however, has been released for only one BITE in 2014–15 (5th TEAB meeting minutes, 2014–15). It is evident from this data that the BITEs have not been established with the urgency expressed at the beginning of the 12th Five-Year Plan.

7.2 Observations from the Field

Both the BITEs covered in this study are located in minority concentration districts (MCDs) with low performance on education indicators (GoI, 2001; GoI, 2011). Poor educational attainment levels translate into lower work status and low quality of life. Teacher education with appropriate knowledge, skills and attitudes to navigate the challenges of multilingualism, minority conflict and other sociopolitical issues that emerge in a heterogeneous classroom.

In Rangia, the transition from BTC to BITE is still in progress. The SCERT, Assam, annual report for 2015–16 (SCERT Assam, 2016) acknowledges the central government guidelines that non-recurring central assistance will be made available for civil works for construction of BITE based on NCTE norms for a DEd institution based on the state government's sanction of land earmarked for BITE. Accordingly, BTC Rangia was identified for upgrading to BITE, and civil works were undertaken to ensure the repair and renovation of its building. As per tender No. 30 CE (BD) of 2013–14, the construction of a 2-storeyed building, repair and renovation of office and hostel, boundary wall, gate and deep tube well installation has been completed under the CSSTE. It has taken three years for the civil works to be completed and handed over. It is interesting to note that the signboard of the institution still says BTC Rangia, and the principal and faculty members are not aware of the what is entailed in restructuring of the BTC to a BITE.

7.2.1 Infrastructure

Table 7.2: Status of Infrastructure at BITEs

Equipment and resource	Status for BITE, Rangia	Status for BITE, Dariyapur
Room for head or principal	Yes	Yes
Staff room	Yes	Yes
Classrooms	2 sufficiently large and airy classrooms	3
Multipurpose hall	No. The classroom also serves as a hall.	Yes
Library	Room of 797.32 sq. ft. with a few almirahs holding around 400 books. The same space also serves the purpose of ICT resource room and resource centre. There is no seating arrangement for a reading room.	Yes
Resource room	No. Staff room is also the art and craft resource centre according to the institution website.	Yes
Labs	Not functional. Tables with maths and science equipment serve as the lab.	Yes
Storerooms	No	Yes
Seminar rooms	No	No
Auditorium (if separate from multipurpose hall)	No	No
ICT lab	Not functional as the entire institution has only one working computer, which is not for student use.	No
Separate toilets for men and women (staff)	Yes	No
Separate toilets for men and women (students)	Yes	No
Auditorium	No	No
Hostels for men	Yes, but existing hostel facilities are poor (not maintained, no drinking water, etc.). New construction is in progress.	No
Hostel for women	No	No
Drinking water facility	2 deep tube wells have been constructed recently under central assistance for BITE.	4 hand pumps
Staff quarters	Yes	No
Office administration room	Yes	Yes
Electricity (on day of visit)	Yes	Yes
Backup generator	No	No
Internet connection	No	No
Website	Yes, but as BTC, Rangia	Institution has a moderately active Facebook page. Last post was in July 2017.
Boundary wall	Yes	No
Playground	Yes, but covered with stagnant water due to heavy rains at the time of visit; can be used only during the dry season.	Yes

BITE Rangia functions in an old, traditional Assamese building (made of bamboo and clay). It has three rooms for the official staff — principal's room, administrative office, and a fairly large staff room for faculty. There are two large and airy classrooms, which also serve as a multipurpose hall. There are no meeting rooms, seminar rooms or auditorium. The hostel facility for men is not functional. There is a deep tube well for drinking water. There are separate toilets for men and women, and for use by the staff. We were able to get a glimpse of the students' toilets, but they were not well maintained or clean. There is a small courtyard which functions as the playground, but this was full of stagnant water due to the heavy rains. Water-logging is a common problem in the institution every year, and the principal showed us a picture in her room from a few years back when the BITE was waist-deep in water due to heavy flooding. The lack of proper drainage mechanism to flush out the stagnant water in this BITE is a pressing issue.

The infrastructural facilities of BITE Dariyapur seemed far from the standard norms. The building is old, with not very well-ventilated classrooms. The area has no boundary wall. The lack of toilet facilities in the premises is a hindrance. The institute is not well maintained, and poor cleanliness and hygiene emerged as major issues.

Table 7.3: Status of Equipment and Resources at BITEs

Equipment and resource	Status for BITE, Rangia	Status for BITE, Dariyapur
AV equipment	No	No
Computer equipment in lab for students	No	2 working computers
ICT in principal's room	1 computer	No
ICT in staff room	No	No
ICT for administration room	No. The computer in the principal's room is used for administrative purposes.	No
Lab equipment	2 tables with maths and science equipment	Yes
Library books	400, mainly dictionaries and old reference books; not many textbooks or reference materials of contemporary relevance	Around 2,100 books, mostly for general reference; no school textbooks

The faculty responsible for teaching the ICT course in BITE Rangia shared that ICT is taught theoretically, and he sometimes brings his personal laptop to demonstrate as there is no ICT lab. Students are not allowed to access the only computer on the premises. They usually use a cyber café in the nearby Rangia town or their own smartphones to access the internet for resources. No ICT facilities are available in Dariyapur either, and the student interviewed for the study responded that the course is not taught at all.

The BITE Rangia library houses around 400 books, with dictionaries and reference books, but it is clearly not enough to meet the needs of the students. A student shared that the library has very few resources that they can use for their course, and they rely more on their teachers' notes and on guidebooks and study materials available in the market. The study material from

Krishna Kanta Handiqui State Open University (KKHS Open University) in Guwahati has an in-service course, which is, according to the students and teachers, very similar to their own course and quite popular among the students. In contrast, the library in BITE Dariyapur had a wider collection of books, but a major drawback was that it did not stock school textbooks.

7.2.2 Faculty

The data from BITE Dariyapur indicates a significant shortage of faculty members. Only 6 out of the sanctioned 10 posts for faculty have been filled. Among the 4 vacancies is the principal's post, and a faculty member is the acting head. The faculty members do not fulfil the NCTE norms for TEIs.

There are no vacant faculty or non-faculty positions in BITE Rangia as per the BTC pattern. However, on restructuring into a BITE, new regulations will come into effect and more faculty members will need to be recruited. The existing 6 faculty members currently struggle to address the needs of over 200 students. There is no faculty for English and for regional languages like Bodo, though many students opt for the Bodo Method. Discussion revealed that each faculty member often has to teach more than three courses to make up for the lack of adequate teachers. From the current year, there are two more members attached to the institution, which partly eases the burden on the faculty, and classes for each course are held regularly. The faculty norms are different from the NCTE, and faculty members have the designation of 'teacher educator'. Most faculty members possess a BEd degree. It is observed that, despite the upgradation of the institute to a BITE, the faculty in either of these institutions have not been upgraded. New faculty have not yet been recruited.

7.2.3 Student Profile

The student teachers in the BITEs are primarily freshers who have come to the institute to fulfil the NCTE norms for trained teachers. Some are graduate students who have registered for this course to fulfil the eligibility criteria for BEd. The students come from the local community and aspire to become teachers in the government lower primary and upper primary schools in the locality. They have enrolled for the DElEd course in the hope that it will help them to get a secure job as a teacher. A significant proportion of the students belong to the SC/ST or minority communities. However, the exact figures were not readily available at the time of the field visit.

7.2.4 Teaching Learning Process

The classes at the BITEs seem fairly traditional. Subjects are taught theoretically, with little help of teaching aids. There is no facility to teach concepts through audio-visual aids. The lab is seldom used by students for demonstrations. However, classes are held more or less regularly, and the students seemed comfortable with their teachers.

On talking to the students in BITE Rangia, we realised that they were quite satisfied with the faculty and their teaching. The students talked about the need for faculty to receive more capacity building and on the need for the library to be more effective. They shared how their teachers were extremely approachable and helpful and also regular with their classes.

The students are mostly very comfortable using the internet, and they often use it for developing their lesson plans and are encouraged to do so by their teachers. The only difficulty is that the medium of instruction is the local language for most of these students, making language a hindrance when navigating the mostly English language online resources. There are hardly any students who have opted for the course in English.

7.3. Conclusion

The study reveals a shortage of faculty, inadequate infrastructure and other facilities (e.g., well-equipped library or lab) that arise from the lack of adequate and timely funding. This adversely affects the quality of teaching learning offered in the institution.

Most teacher educators in the BITEs do not fulfil the NCTE norms and have not received adequate capacity building to enable them to meet the needs of the trainee teachers sufficiently. The linkages with SCERT, DIETs and other teacher education institutions at the state and district levels are not very strong, with visits reduced to procedural work rather than actual handholding support. There is a significant number of faculty members who have not attended even a single capacity building programme organised by the SCERT despite many years of service. A proper monitoring and support mechanism needs to be urgently developed to ensure that the BITE can serve its intended purpose.

Though the BITEs have been proposed and sanctioned in many MCDs across India in the 12th Five-Year Plan, only five are functional so far. The TEAB minutes of the states over the past five years (2012–17) reveal administrative logjams and financial roadblocks that have led to several revisions and re-examining of the sanctioning of the proposed BITEs. The faculty members of the BITEs seem largely unaware of the welfare agenda with which these institutions were envisaged.

The BITEs have been envisaged as a powerful means to reach the goal of quality and contextually relevant elementary education by ensuring the participation of local youth in the teaching profession. They have the potential to bring about positive change in the classrooms through the creation of a dynamic group of trained professionals who are aware of local realities and are well equipped to meet the challenges. There seems to be a major gap in the communication of the vision, mission and aims of this institution to all the stakeholders involved, which perhaps hinders the implementation of the scheme in its original spirit.

CHAPTER 8

Teachers' Professional Development:

Modalities for In-service and Pre-service Teachers' Education

DIET Kabirdham, Chhattisgarh

DIET Bhopal, Madhyapradesh

Language Lab, DIET Janjgir, Chhattisgarh

CHAPTER 8: Teachers' Professional Development: Modalities for In-service and Pre-service Teachers' Education

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Teachers' Professional Development: Modalities for In-service and Pre-service Teachers' Education

This chapter explores various modalities of in-service teachers' training and the role of SCERTs and other TEIs, including IASE, CTE, DIET and BITE, in these trainings.

A primary agenda of the CSSTE is the capacity building of teachers, teacher educators and teachers' education institutions to support and enable quality education in government schools. This conceptualisation is based on a notion of teacher education that has been articulated in policy documents such as NCF 2005 and NCFTE 2009. Moreover, the RTE Act mandates the professional training of teachers, which adds to the responsibilities of teacher education institutions to train untrained teachers.

8.1 Schemes for Teachers' Education

The Government of India has three different schemes for supporting schools and teachers' education, namely, the SSA, RMSA and CSSTE. While the three schemes have significant components for in-service teacher education, the CSSTE also has a pre-service component embedded in it. The modalities of in-service training are dependent on the structure of the policy and scheme under which these trainings are usually funded and conducted within the state structures. The TISS evaluation team had specific and categorical discussions with all levels of functionaries regarding the roles of the SCERT and TEIs in teachers' professional development.

Sarva Shiksha Abhiyan

Sarva Shiksha Abhiyan (SSA) is the flagship programme of the Government of India for universalisation of elementary education. It is visualised as the primary vehicle to implement the Right to Education Act mandating free and compulsory education for children between 6–14 years of age. Ensuring education of satisfactory quality is the key SSA goal, for which a major emphasis is teachers training. It is worth noting that all quality reforms are contingent on teachers training. With regard to raising the standard of teaching by building the capacity of teachers through regular training programmes, the CSSTE provides support for three kinds of training: i) annual in-service teachers' training for up to 20 days, ii) a 30-day induction training for newly recruited teachers, and iii) 2-year training for professionally untrained teachers. One of the major current contributions of SSA is its visualisation and execution of the sub-district structure of BRC/CRC for teachers' support and teacher training. SSA also provides support for head teachers' training and training of resource persons.

Rashtriya Madhyamik Shiksha Abhiyan

Rashtriya Madhyamik Shiksha Abhiyan (RMSA) is another flagship programme of the Government of India, which provides support for the training of secondary school teachers. Under this scheme, provision is available for in-service training of secondary school teachers, induction training for newly recruited teachers and training of head teachers on school leadership.

Within CSSTE, a support mechanism is available for SCERTs, IASEs, CTEs and DIETs for conducting teacher training for different categories of teachers and teacher educators. Most states organise teacher training with the help of SCERTs, DIETs, CTEs and BRCs/CRCs. IASEs

also train selected number of teachers and teacher educators. Select states take help from NGOs and in a few cases, universities, to achieve their training targets.

It is important to note that RMSA has no formal structure for providing regular training to in-service teachers. Therefore, RMSA either approaches NGOs, works with ad-hoc structures or transfers the trainings to SCERTs and DIETs. Considering the limitations of BRCs and CRCs, some states directly approach SCERTs and DIETs. This leads to duplication of training programmes.

These kinds of ad-hoc measures also lead to loss of expertise. A case in point is Rajasthan. In 2010–11, an MoU was executed with a national-level trainer's team, which was facilitated by UNICEF. A team of 140 trainers at the state level was selected through screening workshops. This team was given intensive training in five workshops of five days each. The training modules evolved during these workshops were field tested with the teachers to gather the feedback of teachers during their trainings. This team of trainers was referred to as key resource persons (KRPs). With the help of these KRPs, similar selection and screening workshops were organised at the district level to identify potential master trainers (MT). Approximately 750 MTs were selected. These MTs were trained in three workshops by the KRPs. MTs conducted the training for 25,000 head teachers of upper primary schools. After two years, however, all the resource persons disappeared. They were in the system but not necessarily providing support to teachers.

The case of Rajasthan suggests a need to merge various in-service teacher training programmes and activities provided for by different schemes, so that the activities could be focused and have the intended impact. Senior officers and functionaries are of the view that it is important to merge all centrally sponsored teacher trainings, including the CSSTE, RMSA, SSA and other schemes.

There are instances of parallel activities occurring due to non-coordination among the various schemes. For example, under CSSTE, the central government provides a regular budget to improve the quality of training of in-service teachers. DIETs are supposed to conduct selected in-service teachers' training under CSSTE. In some states like Uttar Pradesh and Chhattisgarh, DIETs are also supposed to conduct teachers' training for SSA from the budget allocated under the SSA and in some cases, the RMSA.

SCERTs and DIETs are to fulfil the RTE Act mandates of regular training and capacity building of all teachers at the elementary level. However, primary surveys indicate some concerns on the quality of in-service teacher training and education. There have been varying degrees of success and failure of in-service teacher training in motivating teachers to alter and develop their classroom practice in ways that improve student learning and provide educationally rich experiences to them. In any case, there is no robust mechanism or conceptual planning to track and trace how in-service teacher education translates into and makes an impact in the classroom.

There is a large institutional network along with financial provisions (though shrinking) for in-service teacher education under various policies and schemes of the government. There is also an expectation that in-service teachers' education will lead to improved learning outcomes in the classroom. However, these activities are not yet linked to or supported by a model that can be executed. All senior officers contacted for this study were of the view that there is a need for linking BRCs to DIETs and for developing BRCs as full-fledged residential training institutions for in-service training. Furthermore, none of the states (except Mizoram) were found to be using a TMS to rationalise, plan, track and maintain records of various trainings

being offered, the teachers nominated for various trainings, and other such information.

Education secretaries from 9 states and directors of 12 SCERTs were of the opinion that all teachers' training of SSA and RMSA should be merged with CSSTE. Since SSA and RMSA are not academic bodies and primarily function through an ad-hoc structure, it would be better to transfer all trainings to the SCERTs through CSSTE.

Some of the problems that were highlighted by SCERT and DIET faculty members regarding in-service teacher trainings were as follows.

1) A single uniform module cannot be applicable for all teachers of the state. There is a need to prepare different sets of modules based on an analysis of the situations. Secondly, delivery of training is resource person dependent, with training modules as the main material. Resource persons remain unaware of other materials that could be used. Since the resource personnel are not being shortlisted by a rigorous process, they are unable to use various teacher training materials such as reading materials for teachers and ICT/audio-visual resources, self-learning material and teacher manuals.
2) Not only should the SCERT and other institutions such as IASEs, CTEs, and DIETs be involved in the teacher training process at the institutional level, but they should own and implement all trainings. However, without full faculty strength, technical upgradations of SCERTs, DIETs and CTEs, and any institutional base, it is difficult to conduct large scale teacher training.
3) TMSs are not in place.
4) Without BRC-CRC linkages, school-based support, supervision and monitoring for the trainings is not possible.
5) ICT is not yet being used in any significant way in in-service training or supporting in-service training that can translate into practice in schools.
6) Quality and relevance of training content also needs to be reviewed and strengthened.

8.2 Pre-service Training

In some cases, the state has reported that teachers, head teachers and the community are not willing to send teachers away from school for long trainings. States need to consider ways of managing this, by ensuring that there is management of teachers at a cluster level so that clusters of schools are able release some teachers to attend specific trainings based on their needs and new developments in their fields, while managing the teaching needs of the school.

It is important to understand that in-service training is a sequel to pre-service training. DIETs can thus be a link between BRCs and CRCs to maintain continuity. Moreover, pre-service teacher education is not a barrier to conducting in-service teacher education at the DIETs. For example, in the case of Bihar, the state government has rejuvenated around 30 DIETs during 2009–10. It was observed that while the DIETs' functionaries were not involved in in-service training before 2008, there is sufficient evidence of the DIETs faculty's involvement in in-service training since 2009.

Some critical issues that can have an impact on the quality of teachers' in-service training need focus and deliberation. Transferability of what is learned during training programmes (both pre-service and in-service) into actual classroom transaction is still an area of concern. There is a need to develop organic linkages between the training institutions or agencies and teachers

by associating a particular DIET faculty with a group of teachers so that there is clarity on every aspect of the group's capability. But this can happen only if we visualise links and continuity between pre-service and in-service training. The current approach is focused more on the individual teacher with very limited inputs of technical skills or potential for creativity. Further, these inputs are present in a very fragmented manner. Training at one centralised place is the primary approach for in-service training. For professional development and training of teachers, there is a need to evolve a school-based training approach, and this can be achieved only through a sub-district level structure. Effectiveness of DIET training programmes could be further enhanced through proper planning of the DIET curricula and syllabi and strengthening its existing linkages with BRCs and CRCs at the sub-district level.

Existing structures could work together towards a more holistic and integrated approach for strengthening the existing teacher support mechanisms as well as providing wholesome professional development of teachers. Continuous professional development of DIET faculty could be made a prerequisite for improving the quality of the existing cadre of teacher educators. The capacity of DIETs to support and shape educational developments across the district depends heavily on their relationship with CRCs and the district education office. The policy should therefore provide space for these convergences.

8.2.1 Pre-service: Selected Cases

A major aspect of the CSSTE is to extend support for pre-service teacher training programmes. There are many successes and issues in pre-service components. Major activities under pre-service and in-service teachers' education programme for untrained teachers in selected states and UTs covered under CSSTE are as follows:

Table 8.1 Pre-service teacher training and training of untrained teacher in selected state

State	Activities
Assam	Pre-service training at IASEs, CTEs, DIETs, BITEs and in-service training for untrained teachers from Krishna Kanta Handique State Open University (KKHSOU) and National Institute for Open Schooling (NIOS)
Bihar	In-service training for untrained teachers through multiple channels, including DIETs
Chhattisgarh	Pre-service training at DIETs and CTEs and in-service training for untrained teachers through multiple channels
Delhi	Pre-service training through DIETs and IASE
Himachal Pradesh	Pre-service training through DIETs and IASE
Karnataka	Pre-service training through DIETs and IASE
Mizoram	Pre-service training through DIETs and in-service training for untrained teachers
Maharashtra	Pre-service training through DIETs while CTEs are reluctant to take admissions
Madhya Pradesh	In-service training for untrained teachers through multiple channels, including DIETs
Puducherry	Pre-service training through DIETs and CTEs
Rajasthan	Pre-service training through DIETs and CTEs
Telangana	Pre-service training through DIETs, CTEs and IASE
Uttar Pradesh	Pre-service training through DIETs

8.3 Notion of Quality

According to state officials, the Lucknow DIET is considered one of the best and vibrant DIETs in the state. There are about 350 pre-service students enrolled in the BTC (Basic Teaching Certificate) course. A few clear positives are that there is relatively better faculty strength, student teachers engage in project work, take their internships seriously and write their exams at a different centre. However, the idea of quality itself is simplistic. Students have a limited sense of (or access to) good reading materials for the course content they study. Key books written by commercial printers just to pass the examination are used as primary resource material. The quality of infrastructure is bad. A single batch of 150 students sit together in one class and teachers conduct their classes for the entire batch of 150 students together. There is hardly any scope for a thorough classroom discussion or an effort to delve deep into the subject. Simply put, the notion of quality education in the minds of the students is not aligned to the idea envisioned in NCF 2005 and NCFTE 2009.

Equally problematic is the lack of engagement with pedagogical and content knowledge that emerged during student and faculty interviews. In most cases, the students interviewed at the CTEs and DIETs revealed rudimentary knowledge of the latest educational policies of the government. In institutions that had a revised syllabus and curriculum incorporating the NCF 2005 and NCFTE 2009 in their reading, students showed familiarity with the terms. This was, however, restricted to a verbatim repetition of the policies without deep understanding of its implications. Worryingly, a similar trend was observed among faculty as well. While faculty at DIETs in Karnataka, such as Mysuru and rural Bengaluru, displayed deep knowledge and opinions about the latest developments in education, which they imparted to their students, faculty at other DIETs displayed rudimentary knowledge. If the quality of education in schools depends on teachers and student-teachers, this knowledge gap needs concerted attention.

8.4 Moving Towards In-service

In the last 3–4 four years, a major gap has appeared in DElEd courses due to non-recruitment of faculty by the government, leading to a change in the perception of the course among parents and students. The declining enrolment in DElEd courses has, consequently, shifted the focus of DIET faculties from pre-service to in-service teacher training, often resulting in the neglect of the DElEd course by principals and DIET faculty. In some DIETs, the faculty were seen to work towards in-service training, while the DElEd students were taught by deputed primary teachers. Several institutes have rich infrastructure but it is poorly managed. Teachers are not regular at work. A few upset students remarked: "Often, we don't get a single lecture in a day; teachers excuse us from class by giving reasons like DIECPD training work."

Vacancies in faculty positions and in-service and pre-service trainings are critical issues to address when we consider the quality of teacher education in India today. It was observed that several institutions, due to paucity of faculty, resort to outsourcing the training responsibilities. Who are the agencies selected? What are their credentials? Are they aware of and agree with the national policies on school and teacher education like the NCF 2005 and NCFTE 2009? Who monitors these trainings administered to in-service teachers? These are some critical questions to consider. They also need to be factored into future courses of action if scarcity of faculty and vacancies continue, since they will directly affect the quality of teacher training programmes.

A predominant opinion from the institutes visited was that the teacher training conducted

by the government is more effective and reliable than those by private institutions. An indiscriminate increase in the number of private institutes that lack focus on quality or expertise of the faculty and commercialisation of education are compromising the quality of the training programmes. It was felt that all trainings should remain in the hands of the government to maintain accountability and ensure quality. This is, however, a far from simple exercise when we consider the resource and financial constraints faced by the DIETs. It was recounted by a respondent that in the previous year, a few faculty members in DIET Vaijapur had forced students to change their admissions to a nearby private DEd college. After protests from parents, they agreed to start the DIET course again with temporary teachers allotted from outside. A similar practice of sending students to private colleges was also observed in DIET Nagpur.

Many principals of TEIs strongly hold the view that pre-service training should not be discontinued since it is the main source of energy and institutes achieve deeper engagement with in-service programmes only by conducting pre-service programmes. While they did not have a problem with the discontinuation of the DElEd programme, they were all united in suggesting that this function should then be taken up by the university and not be left to the private institutions.

It was also highlighted that 70% of the private institutes were fraudulent and students would not get a proper education in them. The key positive outcome the faculty and principals perceived for the DIETs in case of discontinuation of the PSTE programme was that DIET faculty would get more time to focus on monitoring schools and dedicated time for INSET activities. One major concern that emerged over the prospect of closing pre-service training at DIETs is that the beneficiary students of these institutes, who are lower caste, girls and other marginalised categories of candidates, will have fewer opportunities of employment and upward social mobility.

Students recounted during interviews that they favoured the longer duration of internships because it offered them a space to experience classroom practices firsthand before entering the education system. They also saw this as a professional degree that would provide them with a secure job. This expectation was articulated particularly by women candidates in the DIET at Puducherry, for instance, who saw in the course scope for not just financial independence but also further studies. The subsidised fee structure and training by qualified teachers remain key attractions of a government institution that needs continued support to ensure that quality teachers enter the education system.

8.5 Private Teachers' Education Institutions

The mushrooming of private teacher training institutes is a major challenge reported by the CTE head and faculty in Uttar Pradesh, Telangana, Rajasthan, Karnataka and Maharashtra. These institutes relax attendance requirements, allowing students to only pay the fee and appear for the examinations. These provisions suit students who are ready to pay extra fees and do not wish to do any coursework. As the sole criteria for teacher recruitment is to clear the entrance examination, students from private colleges get an edge over government colleges as they only focus on preparing for such examinations, while the latter spend their time and energy doing coursework and fieldwork. Furthermore, in private colleges, the absence of regular classes gives their student-teachers time to prepare for the TET exam. Thus, despite the training received, students from DIETs find themselves at a disadvantage while appearing for the exam.

With the total absence of monitoring of these institutions, as recounted by the faculty

of government institutions in interviews, there is no check on the faculty or student-teacher quality. The high fee structure acts as a further roadblock for aspiring student-teachers from disadvantaged backgrounds. Student-teachers interviewed for this study stated on this point that most of them could not afford the fees demanded by the private teacher training colleges. A result of this is that there are many teachers working in schools who have cleared the TET but who have not received adequate formal training in the profession.

8.6 Curricular Change and Capacity Building

As discussed earlier, DIETs are entrusted with the dual responsibility of conducting the pre-service teacher education course (DElEd) and in-service teacher training for elementary school teachers. During visits to the DIETs in Madhya Pradesh, it was felt that although the faculty members are enthusiastic about teaching the DElEd course, organising the INSET trainings takes a lot of their time and effort, resulting in lack of focus in classroom teaching. However, the faculty state that they like visiting schools for monitoring and providing academic support. A common concern raised by faculty from the DIETs, CTEs and IASEs was the need to receive regular orientations on the curriculum and research aspects of teaching at the PSTE level. In most institutions visited, the DElEd curriculum was revised after NCFTE 2009 and the state is currently working towards integrating the changes in accordance with the NCTE 2014 guidelines. However, the revision of the BEd curriculum has been left to the respective universities. There was a certain level of discomfort because of frequent revisions in textbooks and teaching methods. Also discomfiting was the lack of concrete guidelines for implementing the changes and rejecting certain approaches during teacher trainings. For example, the DIET in Madhya Pradesh had trained elementary teachers for Activity Based Learning. However, by the time it was integrated into the teachers' regular pedagogy, they were asked not to practice it any more.

It was noticed in interviews with faculty and student-teachers at the CTEs and DIETs across the states that a majority remained bound by textbook knowledge. They had only cursory knowledge of NCF 2005, NCFTE 2009, the RTE Act and no-detention policies. In those states where curricular reform had happened and these policies were explicitly included in the syllabus, their knowledge appeared better. Understanding of the implications of these policies and their applications remained negligible. There is a need to build the capacity of faculty and student-teachers alike in this area.

8.7 Problems of Untrained Teachers

It was observed in a few selected states under study like Bihar, Uttar Pradesh, Chhattisgarh, Assam and Mizoram, that the machinery for teacher education is struggling to train untrained teachers even with the help of NIOS. It was decided by the central government that the training of untrained teachers will be taken care of by the MHRD. These trainings will be conducted under the NIOS. The difficulty here is that the resource persons identified for evaluation come from the pool of untrained teachers, which defeats the purpose of training in new pedagogies. SCERTs are sceptical of this process and opined that if there is no support from the centre or the state, the entire process and effort of training becomes infeasible.

What is evident in these cases is the mismatch of the bureaucratic and the pedagogic imaginations. With fund flow and systemic processes being managed by officers with an administrative background, the content and pedagogical demands and necessities that should comprise the heart of any educational systems are deprioritised.

8.8 Impact of New Reforms

In the light of NCF 2005 and NCFTE 2009, states are at varying stages of incorporating reforms into their curricula and pedagogical practices. The variations are most noticeable in their pre-service teacher training programmes.

Bihar, for instance, claims to have incorporated all these visions, including the RTE Act. Other states claim to have incorporated the visions built over the last few years. The TISS evaluation team also observed the use of new vocabulary and ideas in the interaction with faculty and students and observations of classroom practices. Most faculty and student-teachers initially appeared conversant with ideas of constructivism and its use in the classroom. Knowledge and opinions on the NCF 2005 and NCFTE 2009 were, however, restricted to institutions that had revised the curriculum and had included these policy documents in their syllabus. Even so, considered opinions on the implications of these ideas were not forthcoming, with comments limited to a verbatim repetition of the ideas in the policies. This was observed in faculty and students alike, indicating that transfer of knowledge was not happening effectively and was limited, in a majority of the cases, to the faculty's own knowledge of a topic. One of the causes is inadequate training of the faculty in the new curricular reforms.

There was a noticeable lag in trainings in the use of ICT and communication courses. While the latter, it emerged, were largely repetitive with minor variations in content, the trainings in ICT were inadequate. Faculty at a few DIETs observed that there was a pressing need to review the contents of the ICT training modules currently in use and engage people competent in these topics to conduct the trainings. Most evident in interactions with faculty and students alike was their lack of knowledge of what ICT entails, apart from the use of spreadsheets and MS Office. The faculty at the DIETs and CTEs in Madhya Pradesh stated, for instance, that they have informal collaborations with Microsoft Corporation that trains them. This alone comprised their understanding of ICT. The possibility of using technology innovatively to teach and learn did not even occur to them. This gap in knowledge, while understandable given the relatively recent emphasis on ICT as a field, is still troubling and needs immediate attention.

The team's experience also underlines the need for a deeper study of recent reform in teacher education at state levels.

8.9 Some Concluding Observations

An emerging trend across the institutions seems to be a disconnect between policies, their intent and their impact on the key stakeholders of the education system – the teachers and the students. This widens the gap, mentioned earlier in this chapter, between the bureaucratic and the pedagogic imagination.

Fund allocations to institutes and lack of their timely release is another common thread underlying the narratives. Late release of funds and lower amounts than requested prevent institutions from carrying out their stipulated work plans. Their inability to deliver due to these factors becomes the reason for non-allocation of funds for the next year. This directly affects training schedules. There is a need to break this cycle on a case-by-case basis to ensure timely release of funds and monitor their use systematically to ensure they abide by the institutions' AWP.

From the perspective of student-teachers, mixed responses were observed to the teaching programmes. Students in Puducherry and Ujjain DIETs, for instance, appreciated the changes duration and intensity of the pre-service courses and internship periods, notably BEd. They

felt that it gave them greater exposure to the classroom environment and strengthened their pedagogic and content knowledge. They viewed these as professional courses that can lead to potential job opportunities in the government sector. The teaching profession was described in many instances as a 'safe job', particularly for women. A major hurdle, however, is the CTET that is seen as difficult to clear. In many states, choice of English or Hindi language poses a barrier to attempting and clearing this exam.

The shift in alignment of syllabi from the state to the NCERT boards was also the cause of some initial discomfort. It was felt, however, that the move is desirable in standardising learning and pedagogies across the country.

Some of the key concerns and possible responses are summarised below:

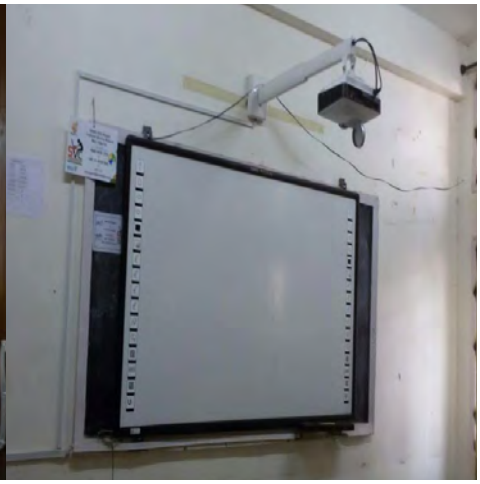
- There is a need to streamline the idea of continuous professional development. Training should be needs- and demands-based, deriving from research into classroom practices and impact of trainings imparted earlier.
- Current training programmes are scattered and unsystematic. There is a need for a merger of schemes so they are aligned towards the larger common goals of teacher training. This can even be brought under the direct purview of the cabinet committee. The current approach focuses more on the individual teacher, with very limited inputs of technical skills or potential for creativity. Further, these inputs are presented in a fragmented manner. Training at one centralised place is the sole approach for achieving quality in in-service training.
- Absence of rigorous long-term planning was observed during the study. A large number of trainings seemed to address the immediate needs of teachers rather than also factor in sustained and sustainable teaching modules. There is a need to plan pre- and in-service trainings with a long-term perspective that can better address the changing needs of the education system.
- In continuation of the point about long-term planning, there is a need to link pre- and in-service trainings to maintain continuity in content and pedagogic knowledge dissemination on a sustained basis. Organic linkages must develop between the training institutions and teachers by associating a particular DIET faculty to a group of teachers so that there is clarity on every aspect of the ability of the group. But this can happen only if we visualise links and continuity between pre-service and in-service training.
- Existing structures should adopt a holistic and integrated approach for strengthening the existing teacher support mechanisms as well as providing comprehensive professional development of teachers. Continuous professional development of DIET faculty can improve the quality of the existing cadre of teacher educators. Also desirable are relationships with CRCs and the district education office. The policy should provide space for such convergences.
- Encadrement practices seemed, on the whole, to be received favourably. They presented prospects for upward mobility and promotions and could thereby act as motivation for faculty to update their skills and competencies.

CHAPTER 9

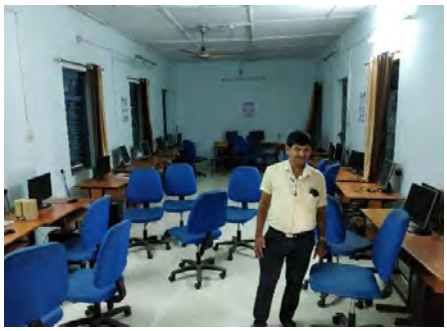
Technology Use

DIET, Dharmshala,
Himachal Pradesh

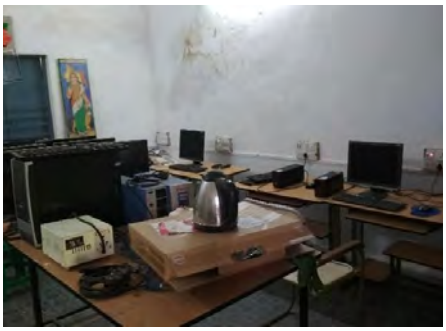
DIET Solan,
Himachal Pradesh.



SCERT Solan,
Himachal Pradesh.



CTE, Raipur



DIET, Kabirdham, Chhattisgarh

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Technology Use

In his book *The Children's Machine: Rethinking Education in the Age of Computers*, Seymour Papert (1991) writes a parable of time travellers. He asks us to imagine a set of surgeons and school teachers, let us say, from a hundred years back, travelling to the current age. The surgeons from the bygone era would be mostly unable to determine what is happening and what the devices are in a modern operation theatre. This is because there has been a *mega-change* in the field of medicine by use of technology. In contrast to this, the school teachers from the bygone era would be perfectly in-tune in today's classroom, barring some strange devices, and would know what was being taught and might be even be able to teach in the contemporary classroom. With this parable, Papert (1991, p. 2) asks the question: Why, through a period when so much human activity has been revolutionised (by use of computers) have we not seen comparable change in the way we help our children learn? This question is relevant for teachers as well.

9.1 Expectation of CSSTE: Recommendations from the Guidelines

The penetration of Information and Communication Technologies (ICTs) in the field has happened in varied ways. The CSSTE *Guidelines for Implementation* (MHRD, 2012) provides a basic framework to integrate ICTs with teacher education (Ch. IX, pp 80–85). Though ICTs have impacted all aspects of life and administrative and bureaucratic matters in general, yet no fundamental changes are seen that have happened in the use of ICT in the way our teachers develop professionally and personally. In ICT use in teacher education in India, there are parallels to the parable from Papert. The children in this case are our teachers who are undergoing pre-service or in-service training.

The four major recommendations from the guideline are taken as a starting point to look at the current scenario regarding the usage of ICT across the field.

According to the guideline, the main goal of ICT literacy should be:

> ... to expose teachers to a wide variety of ICT resources – hardware, software as well as digital learning resources. This requires an emphasis on using available free / public digital resources. Teachers must not treat ICTs as a black box – they should be taught to install even the operating system, open up hardware to study components' (p. 80).

Another aspect of ICTs use in education is the integration of ICTs into subject teaching-learning. The guideline notes that:

> The biggest drawback so far in ICTs has been to treat it as a standalone subject. However, ICT is a new and powerful method for mediating teaching — restricted to the classroom and virtual learning spaces allow for greater one-to-one interactions, at space and time convenient to the teacher-educators and student teachers (p. 80–81).

The guideline also provides a list of software resources that could be used for integrating ICTs into the subject teaching-learning that can enhance the quality of learning experience (p. 81).

Finally, a major theme discussed in the guideline is the use of blended learning models in teacher education. Various online modes of conducting the course, like Moodle, are discussed. Though there is no mention of massive open online courses (MOOCs), a trend towards them can be sensed. Since the guidelines were published, the ownership of a smartphone has risen. The presence of a smartphone has become ubiquitous across all sections of the respondents in the survey.

One major recommendation in the guideline is the use of free or public software (sometimes also called as F/LOSS or Free/Libre Open Source Software) which includes various free licenses for both software and content.

> ...allowing for use of privatised digital learning processes (in the form of proprietary software or content) would be detrimental to education and the public education system should use only publicly owned curricular resources (p. 82).

The guideline particularly notes the reasons for using free software when the teaching-learning process is involved. The recommendation of free software for teaching-learning processes has a strong pedagogical, social, political and philosophical basis. Apart from these four points, the survey looks at the many ways in which ICTs have impacted and can impact the future of teacher education and professional development.

9.2 Findings from the Survey

This section presents the responses of the institutes and individuals covered in the survey on these four major themes. A general observation is that though ICTs have made impressive inroads in administrative and bureaucratic matters, academic and pedagogical matters remain largely untouched at the core.

9.2.1 Administrative and Bureaucratic Matters

There are two major areas in which ICT has made inroads in teacher education. The first is administrative matters and the second academics. The mode of access, that is the devices used to access data is also an important area covered by the survey.

Email usage: The formal mode of communication between various institutes has shifted to emails and use of online portals. The online portals (Table 9.1) in various states have the required information for the schools and the state. Each school has a login to this portal where the information regarding the schools is maintained in the form of an online database (education portal).

Satellite communication: Satellite technology is used for video conferencing with other officials and teachers. But in many places, this use has decreased because of technical or maintenance EduSat, where it is functional, is used for ISTE and PSTE. In case of Chhattisgarh, the SCERT has a vibrant ICT department which has produced numerous videos on several topics pertaining to the curriculum. The EduSat is used to disseminate these to the schools and to teachers during scheduled meetings. These meetings happen at the cluster level in the schools where such video conferencing facilities are provided.

In Telangana state, MANA TV is used for broadcasting educational content in the form of video lectures. In Himachal Pradesh and Delhi, ERNET is supporting simultaneous video virtual classrooms to all DIETs of the state to overcome faculty shortage.

Social media platforms: Another powerful mode of communication that is being used is social media platforms like Whatsapp (a proprietary software, alternative free software is Telegram). Almost all teachers (both in-service and pre-service), principals, government officials have access to a smartphone. The social and peer pressure to be on Social Media platforms is immense. Most of the notifications regarding government orders, circulars, official visits, trainings, leave are given through Social Media platforms. Also, the faculty of the TE institutes interact with higher authorities, teachers and teacher-students via SM platforms. Each faculty or student member of the institutes visited is a part of many SM groups with specific purposes. Groups

were created for a given class of MEd or BEd or for teachers of a particular block or a subject. For faculty, this is an easy way to reach their students. Sharing of information, videos and resources seems to be the main use of SM platforms. The nature of interactivity in these groups is not known, but the potential to use them for continuous interaction with teachers should be exploited in the future.

The use of Social Media platforms allows rapid spread of information across groups. Though this has mostly advantages, it also enabled teachers to cover up their absence by making an appearance once they came to know from colleagues that a school monitoring visit is on. In Nagpur a special app was created for monitoring school visits and school teachers. In Nandurbar CTE, an app was developed to help teacher-students and keep track of their progress.

Monitoring within campus — surveillance cameras and biometrics: In some institutes, surveillance systems have been installed across the campus. The purpose behind these installations seems to be monitoring of the institutes and their functioning. The heads of the institutes told us that after the installations of CCTVs, attendance in trainings has increased dramatically and teachers don't leave halfway through the trainings. Some institutes have biometric attendance systems.

Institutional websites: Institutional websites are an indicator of the online presence of the institute, its people and programmes. The responses to questions about a website were varied. Many institutes (51/72) have a functional website. In some cases, the sites were built some time back and were non-functional at the time of the survey. In one case, the respondent confused the website with an email address. The content of the websites could not be surveyed in detail for quality and quantity.

ICT labs: Most institutes reported the existence of an ICT lab (51/68). But the actual state of the labs showed great variation. In some cases, the labs were well maintained and all the computers were operational. In other cases, only a few of the computers were operational and some were very outdated. In some cases, the labs were barely functional and not maintained at all.

9.2.2 Faculty Usage

While most of the faculty members did have some training in the use of ICT, some had undergone no training. Most of the faculties across the institutes reviewed were not supplied with an individual computer by the institute (54/92). Typically, they used common computers or computers in the lab and the classroom. Typical computer usage reported by the faculties were:

- Typing and creating documents and spreadsheets (text and numerical data)
- Making and showing presentations (PPTs)
- Showing films, websites in the classes
- Searching the internet for TLMs, resources
- Searching for information and materials for the courses they teach
- Checking email
- Smartboard usage
- KYAN projector and MANA TV (in TS)

Some of the faculties had undergone a training course in basic digital literacy (39/77). This was mostly on the use of office software and introduction to browsers (Microsoft based). In many places, Microsoft provides the training and syllabus for such a course. Typically, this course does not teach any software specific to subject pedagogy like mathematics and science or languages. This severely restricts the teachers' ability to imagine use of computers in the teaching-learning process. Teachers should be exposed to exemplars of the use of ICT in subject teaching. Also, prevalence of proprietary software further restricts use of ICT resources as licensing fees take up a large amount of funds. Computer labs are present in many institutes (50/67) but with varying degrees of functionality. The main purpose of such labs is to give basic training in digital literacy, based on the office software suite.

Some of the respondents were aware of the idea of massive open online courses (MOOCs). TESS India conducted MOOCs for the faculty of many institutes, but most of them could not extend the idea to the trainings that they undertake. The idea that they can be creators of such courses was not found among the respondents. There is untapped potential in MOOCs to reach more teachers in an efficient way.

For the MOOCs to function efficiently, the trainees must have access to the internet through their own individual devices. But this also allows the trainings to be *extended, continuous* and more *interactive* than only face-to-face training for a limited time.

9.2.3 Student-Teacher Usage

Most of the student-teachers from the sample had access to a smartphone (68/88). The smartphone was the primary device for accessing the internet. Though in some cases, the institute provided wireless access to the internet, most students also had personal access. The primary internet usage of student-teachers was being part of various social media groups and browsing the internet for information. Most students, where computers were available, reported that the teachers use ICTs in the classroom. Teachers used computers mostly for showing PPTs and videos.

The student-teachers have ICT as a topic in the MEd, BEd and DEd programmes. How can they cope with this subject in the absence of ICT labs? The syllabus seems to be mostly theoretical with the focus mostly on basics of the operating system and the office suite (see the box item below). There is little scope for hands-on experience for integrating ICTs in the classroom by using applications specifically designed for learning. Such syllabi are promoted by industry with the aim to sell their products which are not designed to help teaching-learning processes. Most of the times, this is the only exposure student-teachers and faculty have to the use of ICTs, which severely limits the use of appropriate applications in the classroom teaching-learning processes.

The problem has several dimensions. One of the factors is the availability of and continued access to ICT devices. This is directly dependent on creation and maintenance of computer labs, which are not functional or maintained in many places. The second aspect of this problem is availability of various platforms and subject-specific applications to student-teacher. The problem is compounded by the fact that faculties themselves are not aware of the availability of various applications and their potential use in the classroom. Finally, to get a good conceptual understanding of an application and its use, one needs to spend some time with the application and to practice it. Only then can student-teachers achieve mastery of the application and the confidence to take it to the classroom as envisioned in the CSSTE guideline.

9.2.4 Perceived Problems Reported by Respondents

The main roadblocks in the widespread use and adoption of ICTs as perceived by the heads of institutes are:

- Grants should be made available on time.
- More and well equipped and maintained labs are needed, including high-speed internet connections and backup UPS.
- Resource persons required for trainings are not available.
- Lab technicians and programmers for various tasks are not available.
- There is no continuous engagement with ICT for teachers or teacher trainers.
- Concerned faculty do not take an initiative.
- Teachers are not enthusiastic about or comfortable in adopting technology.

Most of the issues raised are regarding the infrastructure or human resources. But there is hardly any mention of the nature and content of the trainings. The accepted norm seems to be that ICT training is limited to the office suite.

9.3 Role of Teacher-Educator : Consumer or Producer?

This section gives a couple of examples of institutes that have taken an interest in developing capacity for ICTs use. Almost all the respondents looked at ICTs in a very positive light. This positive intent was shared across the spectrum by directors, institute heads, faculties and student-teachers. A positive attitude, though essential, is not sufficient. ICTs can be used in expensive and restrictive ways without achieving the best possible learning outcomes. In such a case, students are seen as passive recipients of the content. On the other hand, there is an example where ICTs inclusion happens right from the ground level and teachers are producers of a variety of materials.

9.3.1 Technology for Administration and Delivery and Consumption of Content

In SISE-CTE Jabalpur, the current principal has a very positive attitude towards technology. He has used it to automate various aspects of the administrative work in the institute. The institute has a well-maintained computer lab of about 30 terminals based on the N-computing model. The computer lab is used for training in basic office suite comprising of document writing, slide presentation, spreadsheets and basic internet browsing. No software used in the training is linked to subject teaching. The emphasis was on the use of computers in administrative matters like writing letters and reports. The only possible use of this training in the classroom is making slide-based presentations. Other uses were finding information from the internet in the form of notes, TLMs or video lectures.

At the institute level, there is an effort to create 3-D videos for various topics in science. There is an excellent auditorium with a silver screen and Dolby Digital surround sound to watch these films with 3-D goggles. These films require a proprietary plugin to run. The films are in American English, and efforts are on to create Hindi and other local dialect versions. The films themselves were copyrighted by the company which provided them, their copyright text running through the length of the video. This is perhaps a very good example of the limitation of the pedagogical imagination about education in general and about use of ICTs in education in particular. Though showing such a video in a training can lead to some interesting discussions, this is a very restricted use of ICTs.

The very idea that ICTs can be used to create knowledge by learners themselves after hands-on practice is not part of this approach. All the effort in this case has been to recreate the old model of dissemination of knowledge in a digital way. This is against the guidelines of CSSTE and also against the spirit of constructivism as elaborated in NCF 2005. Furthermore, the creation (this set of videos had cost several lakhs) and more importantly dissemination of such videos is not scalable due to both hardware and copyright restrictions.

9.3.2. ICTs for Production

In contrast to this the model, in Karnataka, a vibrant movement has developed around the effective use of ICTs in the classroom teaching-learning processes. The NGO IT for Change has been central to bringing about this change in the state. There is a very active and collaborative platform of Karnataka OER (KOER) maintained by IT for Change. The KOER platform has open content created by teachers across the state and has various features like Lesson of the Week, Online Courses, Videos and Interactives, Question Banks and more. This has resulted in grass-roots level participation of teachers, making the movement sustainable. A typical curriculum for ICT courses here focuses on the use of ICTs in communicating the subject matter through hands-on experience of various applications designed for teaching and learning (see box below). Assessments in this course are mostly in the form of digital portfolios and discussions in the online forums. This approach is along the guidelines of CSSTE for ICT training and its integration with teaching-learning process.

Even with this approach not all institutes in the state could have excellent or sufficient infrastructure or provide an integrated approach to teaching-learning with ICTs.

OER usage in other states: Apart from Karnataka, four other states in the survey were using OER materials and making innovative use of ICTs in teacher education and classroom interventions in the form of the Connected Learning Initiative (CLIx) project of the Tata Institute of Social Sciences.

9.3.3 Use of Smartphones as Production Devices

One positive outcome of the spread of smartphones with cameras is their use in recording, collecting and sharing data. There are several instances where photos from the school are used regularly for monitoring or updating purposes. An interesting example of the use of smartphones came from a group of pre-service teachers. The student-teachers, while interning at the school, video recorded their teaching sessions. These videos were then uploaded on the internet (YouTube) to get feedback from the faculty mentors. Though this is not advocated as a replacement for on-site support, the idea of video-recording of a classroom session opens up many possibilities. The use of the smartphone in the classroom as a recording or data collection device has potential research opportunities for the teachers. The recordings enable an analysis of their own teaching and discussions about it with peers and mentors, which can be immensely enriching for in-service and pre-service teachers alike.

Though the smartphone has its own uses, a computer is much better suited to certain operations, especially ones that need more computing power or larger screen space. Also, certain applications are available only on computers at present.

Table 9.1: Summary of ICT Use in Education in Various States

State or UT	State of ICT Labs (functional/ total institutes)	Websites Across Institutes	Education Portal	Computer Access	ICT Training for Faculty
Assam	5 / 8 present	7/8	http://www.online.assam.gov.in/web/guest/education-in-assam	2/8	3/8
Bihar	3/6	7/7	http://www.educationbihar.gov.in/	4/7	0
Chhattisgarh	6/6	4/6	http://eduportal.cg.nic.in/Login.aspx	5/6	4/6
Delhi	7/7	3/6	http://www.edudel.nic.in/	2/4	2/4
Himachal Pradesh	3/3	3/3	NA	0/3	0/3
Karnataka	¾	4/7	http://karnatakaeducation.gov.in/	5/8	NA
Madhya Pradesh	6/8	6/7	http://www.educationportal.mp.gov.in/	9/12	12/12
Maharashtra	4/6	2/5	https://education.maharashtra.gov.in/	9/11	7/11
Mizoram	2/4	5/5	https://schooleducation.mizoram.gov.in/	7/7	6/7
Puducherry	2/2	2/2	http://schooledn.puducherry.gov.in/	3/3	0/3
Rajasthan	2/4	4/5	http://education.rajasthan.gov.in/	3/3	0/3
Telangana	6/7	7/7	http://ssa.tg.nic.in/ (not functional)	3/12	4/12
Uttar Pradesh	½	2/9	http://www.upefa.com/upefaweb/	2/8	5/8

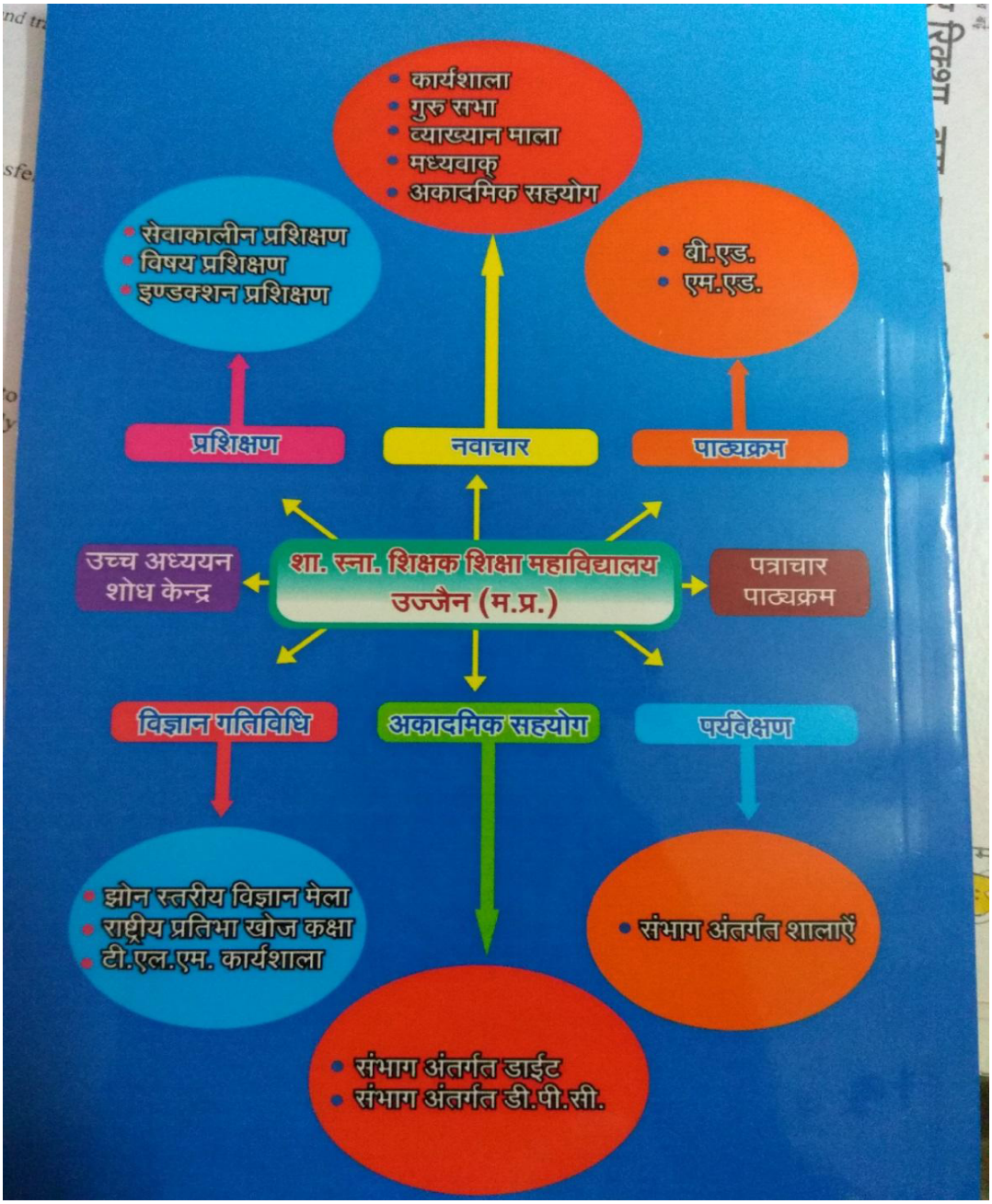
9.4 Reflections on the state of ICTs in the TE Institutes

ICT use and adoption in TE institutes presents a varied picture across states. In certain states, the overall infrastructure seems to be much better than in other states. But even in one state, conditions are quite varied. Some institutes have functional ICT labs, while others have a barely functional lab, and yet others do not have one at all. In some cases, students report that almost all faculties use computers (mostly for slide shows for their classes); in other cases, the faculty don't use a computer at all. In general, as the availability of computers increases, their academic usage also increases. When there are fewer computers, they are mostly used for administrative and bureaucratic functions. Only when there are sufficient computers are they utilised for academic purposes. This reflects the priority that the system gives for computer use. Users' familiarity with computers through practice is essential if computers are to be integrated into teaching as per the guideline. The same pattern of prioritising administrative work is also reflected in the usage of computers in schools.

Most of the four points discussed in the first section of this chapter are not achieved. The hope that teachers should not treat the computer as a black box and should master both hardware and software is not realised. The second point that ICTs should not be considered standalone subjects is negated by ICT curricula which are based only on the office suite. For the third point about the use of online platforms for teacher training, no exemplary evidence was found in this survey. The fourth point recommends the use of free or public software, which is not seen in practice. Except in Karnataka, proprietary software is used for both administrative and academic purposes. For a deeper understanding of the issues, a more substantive and comprehensive survey with the focus on ICT is needed.

CHAPTER 10

Governance, Programme Management and Fund Flow



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Governance, Programme Management and Fund Flow

It is important to understand the overall governance and support structure in CSSTE. Being a central government scheme, the major source of funding for this scheme is through the central government, supplemented by states' share. In a way, the MHRD has done a wonderful job by establishing the programme and supporting the states in its implementation. Looking back on 2012, there seem to be significant improvements in planning, implementation, governance and record-keeping of the scheme. Clear and thorough development is visible in timeliness and approval, particularly compared to the situation before 2012. MHRD had established a Technical Support Group (TSG) in 2012–13, which has been doing impressive work since 2013–14.

Many institutions are involved and impacted by the scheme, directly and indirectly. The functioning of state-level teacher education institutions, including SCERTs, IASEs, CTEs, DIETs and BITEs, is directly impacted by this scheme, while other institutes and schemes such as SSA, RMSA, BRC, CRC, Directorate of School Education (Elementary and Secondary) are indirectly impacted.

Despite significant change and directed effort in the approach to the scheme, there are certain issues that need to be addressed.

10.1 Norms of the Scheme

At the central government level, the programme norms are reviewed and suggested by the MHRD. However, they are finalised and decided by the cabinet committee. The norms were last revised in 2012. It is important to note that the norms are indicative of the upper limit of funding while in practice the allocation does not happen to that extent. The following concerns have come to the fore during our interactions with state-level functionaries.

- Norms are uniform and standardised across the country. They are fixed for selected activities, with no flexibility in accordance with the diverse needs of different institutes.
- The norms are old, and inflation makes it is difficult to manage activities under the stipulated constraints.
- There is expectation of some kind of convergence among different schemes of the government of India.

10.2 Inadequacy of Financial Norms and Allocation

The norms related to monetary allocation were decided in 2012 and despite inflation, the same norms are being used at present (in 2017). Moreover, the present approach to financial norms does not support diversity. States are not happy that MHRD has a blanket approach — deciding uniform and the same standards for varying levels of training needs in different geographies, institutions, target groups and training deficits. It was also found that there was slashing of funds under different heads related to the functioning of teacher education. For example, the SSA funds meant for research and evaluation were cut off. Even more troubling are the inordinate delays in salary disbursement of DIET faculty. Sometimes, DIET faculty are not paid timely salaries for as long as 6 months at a stretch. Indeed, one DIET staff member had casually remarked that in teaching circles, it is understood that "if you have got a posting in DIET, it means that from now on you won't get a salary." This, the respondent stated, is a serious deterrent for people to join DIET.

A major concern of the states was that of norms and approval. Mid-level functionaries have expressed that, given the setting of the current norms of CSSTE, if the MHRD cuts down the fund allocation for any particular head or item, the state government too makes a proportionate cut. In other words, any slashing of funds at the centre has twice the impact. One suggestion from one of the SCERT directors is that "the norms need to be revised every year or fixed at par with inflation. Our teachers too deserve quality training in good environments."

10.3 Fund Flow

It seems that, over the years, there has been a lot of improvement in timeliness of budget approval and release. Table 10.1 about the dates of TPAB meetings and release of minutes indicates the categorical improvements.

Table 10.1: Dates of TPAB and Release of Minutes

States	**2015–16**		**2016–17**		**2017–18**	
	Meeting Date	Meeting Minutes Date	Meeting Date	Meeting Minutes Date	Meeting Date	Meeting Minutes Date
Assam	05/03/15	08/06/15	04/03/16	10/03/16	22/02/17	18/04/17
Bihar	27/03/15	13/04/15	29/04/16	24/05/16	08/03/17	18/04/17
Chhattisgarh	27/03/15	13/04/15	10/03/16	05/04/16	08/03/17	18/04/17
Delhi	13/03/15	21/04/15	21/04/16	11/05/16	10/03/17	18/04/17
Himachal Pradesh	10/04/15	23/04/15	08/04/16	25/04/16	02/02/17	18/04/17
Jharkhand	10/04/15	23/04/15	18/03/16	05/04/16	10/03/17	18/04/17
Karnataka	06/02/15	17/03/15	05/02/16	19/02/16	15/02/17	18/04/17
Madhya Pradesh	20/03/15	06/04/15	18/03/16	05/04/16	02/03/17	18/04/17
Maharashtra	13/03/15	21/04/15	NA	25/04/16	09/02/17	18/04/17
Mizoram	20/02/15	10/03/15	26/02/16	04/03/16	23/02/17	18/04/17
Puducherry	10/04/15	23/04/15	12/06/16	26/02/16	01/03/17	18/04/17
Rajasthan	27/03/15	13/04/15	08/04/16	25/04/16	17/02/17	18/04/17
Telangana	06/02/15	17/03/15	19/02/16	01/03/16	01/03/17	18/04/17
Uttar Pradesh	20/03/15	06/04/15	21/04/16	11/05/16	27/03/17	18/04/17

As per the information provided by the selected states, the status of fund flows is as follows.

Table 10.2: Fund Flow: Case of 2015–16

States	Funds proposed (Rs.lakh)	Funds Allocated (Rs. lakh)	Fund Received (Rs. lakh)	Date of Receipt of Funds
Assam	18609.00	5202.82	198.68 (1st) NR 139.00 (2nd) 2142.59 (1st) R 225.475 (2nd) R 245.33 (2nd)	05/10/16 05/10/16 27/06/16 31/03/17 21/03/17
Bihar	NA	NA	114.345	NA
Chhattisgarh	NA	1196.58	717.95	May 2015 March 2016
	NA	1523.80	819.56	May 2016 March 2017
Delhi	4576.36	1842.87	1049.86	1st – 29/07/2015 2nd- 26/02/2016 3rd- 29/07/2016
	3428.00	2076.06	2076.06	1st- 20/06/2016 2nd- 30/03/2017
Himachal	2362.94	2082.60	270.00	2/11/2015
	3811.19	2222.51	1000.13	10/02/2017
Karnataka	4637.31	3477.98	1738.99*	03/11/2015
	4395.39	2637.24	1318.62 559.31	22/07/2016 31/03/2017
Maharashtra	15211.17	3710.47	1391.43 370.21	10/7/2015 08/08/2016
	16096.66	3915.72	1174.71 522.10	08/08/2016 06/03/2017
Mizoram	5136.25	1766.13	2574.02	23/07/2015, 23/02/2016
	5230.78	1246.22	1246.22	30/12/2016
Madhya Pradesh	6022.35	2638.43	1118.85	18/01/2017
	6,313.14	2,237.70	1,118.85	8/01/2017
Puducherry	252.2	172.75	80.79	July 2015
	289.2	245.2	139.44	June 2016
Rajasthan		6918	52222.29	22/07/2015 28/01/2016
		7830.37	5044.02	18/07/2016 30/12/2016 27/02/2017
Telangana		863.03	80.00	03/11/2015
	4711.37	983.91	295.17	28/02/2017
Uttar Pradesh	19346.60	5247.05	5247.05	10/07/15(I1) 08/03/16(I2)
	15408.02	5681.27	4260.95	21/07/16(I1) 03/03/17(I2)

* Only one instalment was received. There was no second instalment.

During discussions with lower-level functionaries, it emerged that they were not happy with the timeliness of the fund allocation. Further discussion revealed that the fund receipt typically happens in August-September and that they start scheduling the trainings in about a fortnight from then, until end-march. In other words, the actual training window of the teachers is limited to only 5–6 months in a year. IASE faculty at Hyderabad informed us that funds reach the institute at the end of the year and it is very difficult to use them in the available time. Instead of sanctioning funds at the end of the year, it will be more worthwhile, meaningful and beneficial if they are given at the beginning of the year. One important suggestion that emerged during field work was that, to avoid this problem, MHRD may release 25% of the budget early, right at beginning of the year on the basis of advance calculations.

10.4 Vision, Planning, Institutional Development, Knowledge and Orientation to TE

There is a need of separate cadres for academic, educational administration and technical faculty at SCERTs, CTEs and DIETs. The shortfall in education and training staff was apparent during the discussions. The creation of an academic cadre does not seem to have taken place. During interviews with state-level functionaries, it appeared that administrators have very simplistic ideas about some issues in education. In the overall hierarchical structure, academic and technical faculty are not in a position to be heard and register their ideas vis-a-vis administrative officers. It was found that officials had varying backgrounds and hence varying levels of understanding of the teaching-learning scenario. While they were confident of their understanding and perceptions, there seems to be lack of awareness among very senior bureaucrats as well as lower-level functionaries about the teaching-learning process. The activity of teaching-learning is widely considered to be something simple and common knowledge. Knowledge of TE is limited to those activities to which funds are allocated and for which there are government orders. It is important that all key officers handling CSSTE need to be thoroughly oriented before joining the position. The orientation should be supplemented with frequent subsequent orientations. Faculty who are appointed to various posts by and large learn on the job and there is no induction. There are also no systematic provisions of faculty development for the faculty of the institutions.

10.4.1 Planning

The approach to planning is a decentralised one. However, the norms do not seem to allow for it. They are perceived as fixed and not adaptable to local requirements. Moreover, the process of planning itself is creating a huge constraint. States are struggling with uniform and centralised norms. Its impact is obvious throughout the system. Ground-level functionaries are of the view that DIETs with good infrastructure and full faculty strength should continue with pre-service training, but if infrastructure and faculty strength are not well provided for, pre-service may be revisited.

10.4.2. Technical Support to State

During discussions with state officials, it emerged that they require more and frequent support for capacity building of state-level functionaries. The NCERT structure and capacity do not allow them to do sustained and continuous work with state- and district-level officers. Moreover, NCERT is also not in close contact with the reality of the states. Given this, strengthening the TSG is necessary for regular support and capacity building of states.

10.4.3 Shortage of Experts and Trained Teacher Educators

This is a manifold problem that includes a large number of vacancies and putting administrative officers in the role of DIET or CTE faculty. It also creates a long list of expectations of the faculty. IASE faculty at Hyderabad informed, "In this institute, we have a very small number of faculty and these faculties are called to work at SSA, RMSA and SCERT all the time as there is a small number of staff in those institutions." State has introduced English medium in most of the district colleges, without appointing the necessary faculty. In SCERT Telangana, there are only two staff members at the assistant professor level who understandably have inordinate levels of work. As mentioned earlier, there seems to be a certain lack of alacrity in filling all the posts in the institutions. Furthermore, even among existing faculty, there is a great need for capacity building. As the secretary in Uttar Pradesh indicated, "Training and learning of developed world would not work; we need socially and culturally rooted ideas and training materials in indigenous language."

10.4.4 Interdepartmental Coordination

Education institutes at both the state and the district levels have reported that there is lack of coordination among education institutes and other offices like SSA and RMSA. Though SCERT is the nodal institute for academic matters and development work, it is reported that very often in-service teacher trainings are organised by RMSA, SSA or the department of school education without consultation with state or district academic institutions. Due to this lack of coordination, teachers attend multiple, sometimes similar, trainings organised by different departments. It is strongly recommended that, for all the trainings pertaining to state teachers, SCERT should be consulted and trainings be conducted by state or district institutes. It is also important to develop e-governance for teacher education and coordination among various departments.

10.4.5 Technical Support Group

In the last couple of years (after 2013), the TSG has done some remarkable work in the space of teacher education. TSG's work is evident from the minutes of meetings pertaining to coordination with states, its defining of norms for teacher education institutions, and its orientation of state academic groups on various academic and administration disciplines. The TSG also reported supporting state resource person for visits to Arizona State University for capacity building programmes and exposure to new techniques through TESS.

TSG WORKSHOP

The National Consultation Workshop to discuss the evaluation of the CSSTE was held at Mirza Ghalib Hall, Scope Convention Centre, Scope Complex, New Delhi, on 25 August 2017. Some major points of discussion were improvement in physical infrastructure, incentivising teacher education, redefining the role of SCERT, teacher education institutions (TEIs) as registered societies, convergence of TEIs, upgradation of existing resource material, open educational resources (GROER), professional development of teacher educators, strengthening of linkages between states and UTs, use of ICT, SCERT as the nodal authority for teacher training, replacement of 2-year DElEd course, supervision and monitoring, quality of teaching learning materials, real-time monitoring through mobile apps, DIETs as the nodal institution of the district, redefining the role of SCERT, funds for training, replacement of 2-year DElEd course with 3-year or 4-year integrated teacher education courses, single hierarchy system self-financing autonomous model of DIETs.

In the recent past, however, the role of TSG in state participation has decreased radically, being now restricted to a few core areas like the formulation of training, curriculum reforms and development in the planning phase of states. Due to limited budget availability, the TSG's role has been bound by select areas of expertise like planning, appraisal and monitoring. Further, there is a need to build the capacity of the TSG in other core competency areas, such as teacher education design, supporting the state in modules and curriculum development, addressing issues of quality in the landscape of teacher and school education.

NCERT

The nature of contributions and responsibilities of NCERT emerge principally from academic necessity rather than field requirements and through the work of a few senior functionaries who can enrich state capacity. According to the SCERT functionaries, the younger faculty require capacity building, of which monitoring is a strong component.

10.5 Conclusion

There is a need to restructure the design of the CSSTE. Doing so will enable the central government to help the states. It is desirable that teacher trainings under SSA and RMSA be transferred to the CSSTE. Since SSA and RMSA are mostly administrative bodies, it will be a help to the states to transfer the funds for research on school education to the SCERT through the CSSTE.

Poor fund allocations to institutes and the lack of their timely release is another common thread underlying the narratives. Late release of funds and the amount being smaller than that requested prevent institutions from carrying out their stipulated work plans. Their inability to deliver due to factors beyond their control become the reason for non-allocation of funds for the next year. There is a need to break this cycle on a case-by-case basis to ensure timely release of funds and to monitor their use systematically to ensure they are aligned to the institutions' AWP.

One emerging trend across the institutions surveyed seems to be a disconnect between policies, their intent and their impact on the key stakeholders of the education system — the teachers and students. In some states, infrastructure and funds pose barriers to teachers to achieve their full potential. Motivation and inherent zeal seem to be the key factors driving programmes in many states.

There is a need for better coordination among state education institutes and other scheme offices (SSA, RMSA). State-level SCERTs need to be strengthened adequately to coordinate among different department of education and primarily be involved in planning teacher education at district levels. All resource persons or technical faculties at BRC and CRC should be directly linked with the DIET and come under the direct supervision of the SCERT and DIET. There is a need as well to develop e-governance for teacher education to efficiently plan resources and implement various teacher education programmes.

CHAPTER 11

Conclusions and Recommendations

DIET, Nandurbar

CHAPTER 11: Conclusions and Recommendations

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Conclusions and Recommendations

The TISS team visited 11 states and two UTs, collected data from 50 DIETs, 19 CTEs, 13 IASE, 2 BITEs and 12 SCERTs, and met 8 education secretaries, 2 SPDs,12 SCERT directors, 71 heads of TEIs, 91 faculty and 82 students.

In this final chapter, we present our conclusion and recommendations. In Part 1, the key findings from the five types of institutions and three thematic areas are summarised. In Part 2, we summarise our findings with reference to the key research questions. Part 3 is devoted to the best practices that were noted. Part 4 provides a summary of key recommendations.

11.1 Summary of Key Findings

11.1.1 SCERTs

SCERTs were found to be mostly carrying out all of their core functions. The evaluation team found that each SCERT is declared the academic authority for its state under Section 29 of the RTE Act. SCERTs were found to be performing a range of tasks to meet the requirement of the RTE Act, which includes curriculum reform, development of school curriculum, syllabus and textbooks as per NCF 2005. It was observed that the SCERTs engage in curriculum, module and material development for pre-service and in-service teacher training, as well as perform research in the domain of school education. SCERTs are also involved in conducting achievement surveys to estimate the learning levels of school students in relation to their grade and age.

There are certain critical issues. First, it was observed that due to a bureaucratic structure, the SCERTs are able to influence state-level policy to a limited extent; in most cases, they act as an advisory body. Secondly, the lack of in-house capability for necessary pedagogical processes, in particular, curriculum development for schools, teacher development and research, is made worse by vacancies and other administrative workload on existing faculty. There is apprehension that this institution may turn into an administrative body rather than an academic one. Faculties of the SCERT have limited chances for their own capability building. Thirdly, components of rigorous vetting and review of existing curricular and material development process are missing. This has a significant impact on the quality of development work and research.

For SCERTs to meet their constitutional mandate, every SCERT must have sufficient faculty as per the guidelines of CSSTE and the respective states must have plans and budgets for nurturing this institution.

11.1.2 IASEs

There is a variation in resource allocation, infrastructure availability and functioning of IASEs in different states. Encadrement of teacher educators is absent in most states. Appointment of many members of the teaching faculty is co-terminus with the CSSTE, which is a cause of great anxiety and concern for the employees. While a few IASEs are better resourced and executing their roles as 'regional resource centres' and 'academic mentors' to other stakeholders, there are others that are waiting for both academic and non-academic posts to be filled or struggling due to lack of funds. A lack of synergy was noticed in most states due to the presence of two different academic heads, which leads to non-consultation on training requirements and duplication of trainings.

Libraries in many IASEs are not rich enough and few have access to e-resources. A few IASEs

do not even have curricular documents currently in use such as NCF-2005, NCFTE and so on. Subscription to international journals and e-journals is missing in most IASEs as are subscriptions to academic magazines. Latest publications were not available at the time of the visits. Reading halls are insufficient in size in many IASEs. A full-time librarian is not appointed in many IASEs.

There is no evidence of effective leveraging of ICT in the routine functioning of IASEs. Use of ICT is limited to classroom presentations and admission processes. Research work only uses action research as a methodology. A major focus and emphasis is required towards well-planned research studies conducted by faculty members that are qualitatively effective rather than research conducted just for the sake of doing it. Annual conferences for teacher educators and the larger teacher community can provide a platform for further deliberation.

11.1.3 CTEs

The study revealed that at the level of academic work, faculty are not clear about their teaching and research responsibilities. There is negligible research on the needs of school teachers and impact or learner outcome studies leading to the future design of appropriate training workshops. The faculty development workshops attended by the faculty are also sporadic and unstructured, with lack of clarity on its goal or use. It is also evident that faculty across the CTEs are burdened with multiple academic and administrative responsibilities. Knowledge of latest policies and their implications for teaching in the classroom is limited among faculty and students. It is more prevalent in institutes that have incorporated the policies into their curriculum. Their knowledge is, however, restricted to verbatim repetition of the terms rather than understanding of what the terms mean.

The faculty and heads of institutes are unanimous in stating that there is shortage of funds and insufficient infrastructure. Lack of ICT facilities, interactions and faculty exchanges between institutions as well as learning communities seem to contribute to a dearth of ideas. These are reported as some challenges in teacher education.

Another challenge pertains broadly to the quality of teachers leaving the CTEs. On the one hand, faculty felt that student-teachers who join CTEs do so as a last resort. Very few view teaching as a worthwhile profession, which affects the extent of learning. On the other hand, ensuring quality of subject teachers in PSTE becomes a challenge since CTEs impart pedagogical knowledge at the expense of content knowledge. Some CTEs felt that floating an integrated BA–BEd and BSc–BEd programme will fill this gap since the faculty can then impart content and pedagogical knowledge alike to the students and ensure quality.

The increase in the number of private institutions was seen as a challenge since the quality of teachers produced by these institutions is suspect. Further, no checks are in place to ensure that the training imparted in the CTEs is translated into practice in schools after the student-teachers graduate.

These comments agree with the data that reveal that very few research studies are being conducted in schools to gauge the impact of training and learning outcomes. Yet another refrain was that in-service trainings should be done by the CTEs and not the DIETs. There are, however, financial constraints that prevent the CTEs from carrying out these trainings.

Another identified challenge was the TET examination that student-teachers find increasingly difficult to clear. More than 50% CTEs remarked that they conducted "coaching" classes in TET to help students clear the exam; this was in addition to their existing workload. Also noted

was hesitation on the part of a few senior faculty to attempt the NET since they were closer to retirement.

11.1.4 DIETs

The challenges faced by the DIETs are varied. Apart from teaching and conducting in-service trainings for teachers, DIETs are also stipulated to conduct research and contribute to pedagogical and content knowledge in their areas. This perception is currently lacking since the faculty appear unclear about their roles and responsibilities apart from teaching and administrative work. Research activities pertaining to domains were a little more than impact and needs analysis in schools. In most institutes, publication of works is restricted to college magazines and local dailies. Very few DIET faculty have written for academic journals.

Another trend that emerges from the study is that the active and functional DIETs are located close to big cities and in well-connected areas, while the DIETs in second- and third-tier cities face greater challenges, ranging from insufficient funds to vacancies, demotivated faculty and students and fewer opportunities for faculty development programmes. Lack of functional online portals communicating information of training programmes and other opportunity limited the exposure opportunities for the faculty. Most faculty also expressed lack of confidence in clearing the CTET and felt it was crippling career advancement for fresh and seasoned teachers alike.

Another challenge for the DIETs is monitoring the spread of schools in each district. As institutes responsible for ensuring quality of teaching by elementary school teachers, DIETs' volume of work is high, and therefore, they require greater number of faculty. The existing vacancies in the DIETs are affecting the smooth functioning of these institutes. The current lack of opportunities also seems to have a demotivating effect on the DIET faculty.

An overwhelming majority of faculty stated that DIETs should, and are academically positioned to, assume the responsibility of secondary school (teacher) education. They are also unanimous in stating, though, that this was contingent on receiving the necessary funds, resources and infrastructure on a timely basis. Encadrement is seen as a possible incentive to motivate faculty to perform better.

11.1.5 BITEs

Of the 102 approved BITEs, only 5 are functional (the sanctioned ones as per TEAB minutes are almost hallf). It is noted that teacher strength is very poor in the observed BITEs and in one of them, the existing faculty are not even aware of the transformation processes involved in converting their BTC to a BITE. The 'paucity of funds' repeatedly argued in the TEAB meetings that reduce the number of sanctioned BITEs are a sad state of affairs.

Furthermore, the current implementation cycle has not met the purpose of establishing even these sanctioned BITEs, which is to build capacity at the local level and to improve the pupil-to-teacher ratio and enhance sensitisation of teachers to local needs.

11.1.6 Infrastructure and Governance

Lack of infrastructure and facilities for faculty, such as computers at desks were found to be problems during the survey. Libraries were found to be poorly equipped in all but a few Institutions. The resource centres at Chamarajanar, Karnataka, and IASE Jabalpur were notable exceptions. There were no effectively functioning internal fora for faculty discussions, reviews of work and other tasks. Most work planning was carried out but in a 'line department' manner with the institution head responsible for assigning tasks. Most institutions conducted weekly or

daily meetings, but no instances of yearly review were cited. Faculty were found to have limited opportunity to interact with experts and no opportunities for faculty development. Although all SCERTS had constituted programme advisory committees, there were very few that met systematically to review and contribute to the process.

Impact of CSSTE is visible in various aspects of teacher educations which aims to ensure quality of school education. It has the most potential among the schemes and programmes of the government of India to address quality components of the RTE Act 2009. As of now, the scheme is mostly governed through SCERT at the state level. However, there are exceptions as in the case of Bihar where the scheme is governed through the directorate of training. It seems that despite inadequate funding as per the approval given by PAB and the norms under the CSSTE guideline, the scheme is able to spread across the 13 states and UTs that were covered under the study.

The evaluation team observed that, from 2012 onwards, there has been greater regularity in conducting TEPABs, release minutes of meetings and release funds. MHRD, through TSG (TE) is able to establish a coherent mechanism for release of funds and monitoring through frequent JRMs. TSG plays a significant role in supporting the capacity building of state government functionaries for planning and implementation of CSSTE. TSG (TE) and the teachers' education department of NCERT should work together to provide technical support to state governments. MHRD should focus on capacity building of TSG (TE) functionaries.

It is important to note that there are frequent transfers, postings and deputations of administrative officers in academic positions such as SCERT director. It was observed by the evaluation team that some senior functionaries have little knowledge of teachers' education and school education. CSSTE should work in coordination with Lal Bahadur Shastri National Academy of Administration or other institutes of reputation to develop a course for senior officers.

Moreover, the website of the institutions should be functional and monitored on a quarterly basis.

11.1.7 PSTE and INSET

Most states had revised their curricula and made concerted efforts to improve the quality of the programme and the use of specially developed modules and technology for students (as seen in Bihar, Karnataka, Chhattisgarh, Himachal Pradesh and Mizoram). There were also improvements in student admissions. Students were found to be enthusiastic about and responding well to the new curriculum. The introduction of MEd into IASE (Mizoram) was cited as important and useful to address shortages of faculty for TEIs. DIETs were perceived as good institutions by student-teachers. However, in some states, dealing with large enrolments was a problem particularly in view of vacancies. However, overall student interest in taking up teacher education programmes is weak since teacher recruitment in most states is increasingly irregular and private employment is not remunerative. The BEd programmes changing to two years' duration also affects student interest. Centralised admission processes need streamlining as delays are affecting quality (Karnataka). TET is being implemented in all states. However, there is a feeling that TET based on only a written test is not sufficient and an interview component should be included in teacher selection.

DIETs in some states (like Bihar) were found to be catering only to the untrained in-service teachers' need to get training rather than the needs of new teachers. There are cases of in-service

teachers holding BEd and even MEd but deemed 'untrained' to teach at the primary level of school education since they did not have a DElEd/DEd. In a few states, such as Mizoram, on account of inadequate BEd colleges, students with bachelors and masters degrees were enrolling for DElEd/DEd course in DIETs.

TMSs are not in place in most TEIs. BRCs and CRCs are still not formally linked to DIETs. Without these linkages, support for training, supervision and monitoring, as well as responding to local needs is limited. There were no assessments of quality and efficacy of INSET. There were also few instances of convergence and coordinated planning and strategy of INSET. Each state has done significant and massive work in in-service teacher education, and although they have a good repository of such training modules, these are often scattered. Currently, they can offer a list of options to teachers to choose as per their requirements, and the state of Karnataka is providing such options to its teachers.

Contrary to the general perception of quality in the government sector, it is important to note that all the stakeholders (bureaucrats, faculties and students) are of the view that the pre-service teachers' trainings of government institutions are much better than those in the private sector. It is noted that the quality of the process and output is much better in the government-run institutes. All the states have reformed their curriculum of DElEd and are now struggling with the development of reading materials in the local languages.

Among the most critical observations that emerged during the field work for this evaluation study is the need for the merger of different teachers' training programmes and activities. This will result in the efforts being focused and can have the intended impact. Senior officers and functionaries are of the view that it is important to merge all centrally sponsored teacher trainings into CSSTE, including the trainings under RMSA and SSA. Funding under several schemes creates a problem of duplication of efforts at many levels.

11.1.8 Use of Technology

Technology is being used in administration. Most heads felt that institutions need technical assistance. ICT labs are under development, but their establishment is uneven. It was observed in most institutions that faculty are not provided with personal computers or laptops. The extent of computer literacy among faculty of different states varies. Some states have progressed far beyond others in ICT infrastructure (Maharashtra, Puducherry). Some states are using online student admissions and other administrative functions (Bihar, Mizoram).

However, ICT is not being used to manage the TE programmes nor are students receiving much exposure to ICT use. ICT is also not being used in any significant way in the in-service professional development programmes, such as through the use of TMSs or ICT- and multimedia-based trainings. The Karnataka subject teachers' forum was found to be a notable exception, and similar fora are now being tried out in a few other states such as Telangana.

In a few states, teachers were involved in the creation of OERs (Karnataka, Telangana), and were beginning training in ICT integration into the classroom (Assam, UP). There were a few cases of use of ICT for school support to teachers. With the exception of a few states, teacher telephonic helplines have been made available. While WhatsApp groups are increasingly common, there are no systematic strategies for providing in-service support through social media. The use of free software for both administrative and academic purposes should be encouraged and supported, currently proprietary software programmes are the norm in most places except Karnataka.

11.1.9 Vision for the TE sector and CSSTE

In most states, there is a feeling of lack of a coherent vision for the sector. Where private colleges have proliferated, it is seen as having a distorting effect on teacher preparation. There is little coordination between institutions and stakeholders. While most institutions seem to be preparing AWPs for the scheme, there is generally a low level of awareness of a state perspective plan on TE under the CSSTE. The exceptions to this are Chhattisgarh and Karnataka). Even where there is awareness of such a plan, the stakeholder institutions are not aware of it. None of them had seen or referred to the CSSTE guidelines, even for the purpose of preparing their own AWPs. There was a feeling that, on the whole, the CSSTE scheme has been neglected (exceptions being Bihar, Mizoram), with resources being used to pay salaries but with no coherent vision being implemented through the scheme. Monitoring of institutions and of the scheme seems to be routinised and limited. Teacher educator encadrement is found only in a few states like Karnataka and Delhi.

In most states, SCERT was the single point for dealing with institutions on academic matters. In Bihar and Mizoram, however, there is also a directorate of research and training (DRT), thereby making two authorities who plan TE programmes in these states. There seems to be no means of convergence. Annual audits, report submissions, and data gathered on formats were cited as the monitoring tools. Only a few DIETs (Bihar, Chhattisgarh and Mizoram) cited visits from education officers, the SCERT director or senior faculty to their institutions. Bihar and Mizoram cited the creation of a DIET principals' WhatsApp group to share information. Delhi cited coordination by SCERT. Almost all the states cited problem of vacancies which are not being filled.

11.2 Key Research Questions

In this section we take up the key research questions that were formulated to guide the study and review the evidence to try to answer these questions.

1. *Has there been an improvement in pre-service teacher education, and has it contributed to overall improvement of teacher professional development and school improvement? Has there been improvement in the accessibility of PSTE? Have resources been developed?*

   There has been an improvement in pre-service teacher education at the very least because the curriculum for PSTE has been revised in all the states and UTs in the light of NCFTE 2009. A few states have also developed handbooks and support resources for PSTE.

2. *Has there been an improvement in in-service teacher education, and has it contributed to overall improvement of teacher professional development and school improvement? Have structures for in-service training been strengthened? Have resources been developed?*

   None of the states has revised its approach to in-service education or made investments towards improving its quality. Only one state was found to be using a TMS. One state was found to be moving towards a choice-based system for INSET. There were a few individual cases of modules being designed at local or decentralised levels (mainly DIET) to address local needs and based on local talent in the faculty. Most training designs were centrally prepared and focussed on meeting training targets of SSA and RMSA. There was no convergence of various schemes and activities in INSET.

3. *Has there been development of professionalism and capacity of teacher educators?*

   There have been few systematic efforts to improve professionalism and capacity in teacher education. By and large, this sector remains neglected. There are also very few opportunities being provided to them.

4. *Have strong interlinkages developed within teacher education and the training sector between the following: existing departments and institutions at the district level; existing departments and institutions at the state level; higher education institutions; schools; non-government organizations.*

   There are evidences of non-government organisations' involvement in the teacher training sector in most states. There is coordination between SCERTs, RMSA and SSA at the state level. However, at the district level, there is only limited interaction between them. CTEs and IASEs are not systematically integrated or interacted with in almost all contexts. Integration of IASEs and their contribution to overall state teacher education revitalisation, in particular, weak.

5. *Have institutions at all levels led to the adequate supply and quality of trained teachers at elementary and secondary levels of education?*

   All institutions at all levels are making meaningful contributions to PSTE, however, their role and contribution is affected in all cases by inadequate faculty (in spite of which, many institutions carry out their activities with diligence) and in some states by the presence of aided and private institutions leading to oversupply of PSTE opportunities and distortions in the system of seat allocation. Students report a preference for DIETs and government TEIs because of their quality and cost. Further, states are found not to keep detailed data on subject teacher requirement and deployment, so there is no overall human resource planning in place.

6. *Are processes, systems and structures in place across institutions to ensure planning, monitoring and tracking?*

   There are almost no systems of tracking in place internal to the states or between the centre and the states. The platform PRASHIKSHAK, which has recently (in early 2017) been introduced by MHRD is only partially useful and up to date.

7. *Has there been an adherence to guidelines related to staffing?*

   Positions are vacant. Recruitment is through internal transfer without care being taken to ensure that the person's qualifications meet NCTE requirements, or through the state public commission and delayed. There are huge variations between states on the adequacy of staffing, there are also during the academic sessions, disrupting the academic cycle for students.

8. *Has there been adherence to guidelines related to the infrastructure?*

   Yes

9. *Has there been adherence to guidelines related to the flow of funds?*

   Yes, states are following the guideline for fund flow.

10. *Has there been use of ICT to enhance institutional, instructional and teaching quality across institutions?*

    The use of ICT on the whole has been found to be limited. Only in SCERTS do faculty

have access to ICT for their office work. Most staff have received ICT-related training, but the use of ICT is not an integral part of their functions and role. Websites in all but four places were found to be of poor quality and with limited information.

11. *To what extent has the academic profile of the institutions been strengthened through the following: Research and publication, education courses for faculty, seminars, workshops, study tours. Is there an enabling environment of governance, and are the institutions able to network and collaborate? To what extent are the institutions able to work in a convergent manner?*

    In only a few cases have such academic activities been undertaken systematically to strengthen the institute's academic profile. On the whole, this area is neglected, with poor inter-institutional functioning and profiling. Most institutions, with a few exceptions, have resource centres or libraries that are up-to-date.

12. *Has there been a one-time situation analysis and stocktaking by institutions where mandated? Has there been a regular and frequent situation analysis by institutions and states where mandated? Is there regular monitoring?*

    With one exception, there have been no situation analysis or stocktaking. Most states do not have a regular monitoring process, although they may have meetings of principals to review work assigned from time to time.

13. *Has the flow of funds affected the quality of implementation of the scheme? Are there avenues for new funding?*

    Yes, the fund flow has affected the quality of implementation. It has been observed that there is a gap between the state proposal and the funds approved by the PAB, and a further gap between funds approved and funds released by MHRD. States are taking limited support from NGOs and charitable trusts for implementation of selected programmes. As of now, there are very limited non-government sources available for funding.

14. *Has there been scope for operational autonomy for institutions under the scheme?*

    Yes and no. Planning has largely adhered to meeting programme targets and applying norms with little evidence of any attempt to 'develop' the institutions to play a significant role in TE in their area.

11.3 Best Practices

11.3.1 Faculty capacity building

a) Special courses and innovation for teacher educators: IASE Aizawl runs a 2-year BEd multimode programme that it has developed on the recommendation of the Educational Reforms Commission Mizoram 2010 to clear the backlog of teachers without professional qualification or 'untrained' in-service teachers. The intake capacity is 100 per study centre — IASE study centre and CTE study centre. This course is the same as the regular BEd course offered by Mizoram University. This multimode BEd programme uses the blended mode with a contact period and an online period. (Coincidently, the TISS visited IASE Aizawl during their 30-days contact classes period.). The online period is heavily ICT-dependent.

b) Utilisation of learnings from exposure visits by teacher educators: At DIET Bhopal, the training received at Arizona University was used to shape the internship programme at the DElEd level and the innovation of internship evaluation diary by faculty members.

c) Learning material creation: At DIET Puducherry, several faculty have been building on the existing outdated curriculum to impart to students additional knowledge of subjects. This is based on their own research initiatives and experience as domain experts.

11.3.2 Research, Development and Innovation

a) Encouraging proto research: The DIET Nalanda principal mentioned her academically useful visit to Arizona, USA, in 2013–14, which was a huge moral booster. She realised that "one can carry out small scale observation and research and publish them". She mentioned that we need to go beyond action research and adopt different research methods. She has encouraged other faculty members in DIET Nalanda to make TLMs using ICT and the videos have been uploaded on YouTube for wider use.

b) Outside the walls innovation: DIET Bilaspur (rural) in Himachal Pradesh, though under-resourced, has developed a botanical garden and installations for experiments with sound and light. They also had a science activity lab, developed in partnership with an NGO, which had a number of models to support textbook experiments.

c) Inclusive education and research curriculum: IASE , Delhi, in partnership with SCERT, has developed and implemented a curriculum across ISTE/PSTE on research for school teachers and inclusive education.

d) DIET Bangalore (rural) is involved in creating awareness among SDMC members regarding their roles and responsibilities through 'SAMAGRA' magazine, which is used by the school HMs during SDMC meetings.

e) Development of local language dictionary: At DIET Ujjain, at the initiative of the principal, a Malvi-Hindi dictionary is being developed to be used as a resource across the district for teaching Hindi in schools.

11.3.3 Teacher Education Practices

a) Mixed ISTE-PSTE classes: SCERT is engaged in textbook development, projects for out of school children and online learning options called 'Chalklit' in partnership with other organisations. SCERT also runs mixed classes for ISTE and PSTE students, which may be of interest to research learning processes and impacts.

b) Resource materials for students: At DIET Puducherry, the faculty depends on Tamil Nadu SCERT for its DElEd curriculum and textbooks that are in Tamil. The faculty voluntarily translated all the textbooks into English themselves and printed a limited numbers of books in-house for their students using DIET funds. This was to ensure that students get exposure to English language in an education system that was primarily Tamil medium.

c) Dynamic monitoring: A monitoring system for students' activities and teachers' projects through a software-based monitoring system at HP SPD-SSA/RMSA is promising to be scalable, though trainings planned on these outputs are mandated to be carried out by SCERT-HP.

d) Morning assembly and storytelling: Across all the TEIs visited in Bihar and Madhya Pradesh, the morning assembly is an essential part of the timetable. It is also an allotted time for developing presentation skills and building confidence among students by encouraging them to present on different topics. Storytelling is an important component of the morning assembly in many places. It is seen as a simple step towards motivating the teacher-students for self-study and also for handling different situations in their work domain.

e) TMSs: DIET Serchhip in Mizoram maintains a functional TMS. A lecturer in DIET maintains this facility, which helps in mapping profiles of the entire teacher cadre in the district, the professional development trainings they have received and the need for future professional development. Mapping is also done by school and by subject.

f) Inspiring award for the students: DIET rural facilitates an inspiring award, NTSC, NMMS (National Means Merit scholarship] for students through MHRD.

g) Volunteers' role in teaching: Provision has been made for volunteers to teach on the weekends in rural schools by registering online, specifying the school name and subject they are teaching. Volunteers can teach students with specific skills too.

h) *'Odu Karnataka'*, a remedial programme is being conducted at DIET Mysore in collaboration with an NGO, for training teachers of Classes 4 and 5 to improve learning among children lagging behind in these classes.

i) To promote culture in classroom activity, DIET rural, Bangalore, is sending a specified number of teachers from each taluka to CCERT [Centre for Cultural Resource and Training] and also monitoring the statistics on the number of teachers sent.

j) Stress management module for teachers (Sanmarga Darshana): DIET Bangalore (rural) is working on the module for teachers.

11.3.4 Infrastructure, Resources and Library

a) The digitisation of the library (work in progress) and the science centre and technology lab annex buildings established with CSSTE support are an effective benefit for CTE Dharamshala. Centrally enabled ERNET from DIET Dharamshala connects to 12 other DIETs and is used to enable students in far off areas to connect to and access the virtual classroom.

b) Science laboratory: At DIET Indore, with the support and initiative of the principal, the DIET was able to set up three separate sections within the science lab for physics, chemistry and biology, with the resources for each.

c) Resource centre: DIET Chamarajanagar has developed a well-equipped and well-maintained teacher resource centre with resource materials and books, textbooks and reference materials, which is used by school teachers, student-teachers, school students and faculty of TEIs.The main problem, however, is that this resource centre has been dependent on external support for its HR as the department has not made appointments of librarians and resource centre in-charge.

11.4 Key Recommendations:

1. **Continuation of CSSTE:** The CSSTE should be continued to meet the constitutional mandate of the RTE Act 2009. This scheme has a huge potential to ensure improvement in the quality of school education.
2. **Visioning and planning for the sector** of teacher education is essential to benefit from the scheme effectively. There is a need for states to develop a vision and plan their approach to the sector as a whole for better governance of teachers, including regular recruitment, for teacher requirements to be managed effectively and for guiding intake in TEIs. Human resource planning for the sector is also necessary to guide approach to PD and CPD. However, most states are found not to have reliable data on teacher requirement and subject teacher requirement. The CSSTE needs to be actively and strategically leveraged by states rather than mechanically oriented only to utilising funds allocated under prescribed activities. Towards this, the MHRD must consider having visioning and planning workshops for regions and states, with the involvement of research institutions and NGOs who have been active in the sector. The plan could incentivise evidence being shown of how the scheme is being adapted to meet local challenges and requirements. The sector could replace the concept of 'teacher training' with 'teacher professional development'.
3. **Staff vacancies** must be filled; both academic and administrative staff must be provided in full complement, and appointments must be carried out in a timely manner. Institution heads must have autonomy to make ad hoc appointments while tenure appointments are under process. Making adequate appointments of non-academic staff is also necessary for the smooth functioning of the institution. It is recommended that an advisory may be sent to the states, drawing their attention to this requirement, particularly in the light of the proposed DIET restructuring from the MHRD and requiring them to address the creation of separate cadre for academic staff.
4. **Faculty for TEIs under the CSSTE:** There is a need of a separation of academic and administrative cadres in the states and a focus on nurturing academic faculty to carry out the core education, research and training activities of the institutions of TE under the CSSTE. Linkages for upward mobility within the cadre, opportunities for school teachers to acquire additional qualifications to become faculty, as well as circulation and infusion of external views from other departments and colleges of education of the higher education system is desirable. States must be given incentives to achieve encadrement, which is often resisted by departments who fear that it will limit mobility. The lack of academic cadre separated from administration, however, leads to compromising the knowledge and practice of teacher education.
5. **Strengthening the scheme** requires that all key officers handling CSSTE need to be thoroughly oriented before joining the position. They must also have opportunities for exposure visits to other states and internationally to understand how this scheme could be leveraged to strengthen the teachers and teacher professional development as a whole. They should also be oriented to developing appropriate information systems to manage the sector. Strengthening of TSGs is needed for regular support and capacity building of states. Capacity building opportunities for state-level functionaries provided by NCERT, NUEPA and other universities is desirable.

6. **Faculty development** is essential for the strengthening of the sector. There is a need for a range of faculty development opportunities, including courses, fellowships and deputations, collaborative teaching and research, that need to be developed and offered to faculty at these institutions. Faculty who are appointed to various posts need induction to orient them to their roles. This is necessary to renew the knowledge base of teacher education consistent with NCF 2005 and as elaborated in NCFTE 2009. International exposure is also a valuable input for faculty development. Care could be taken to enable faculty to use the new skills and perspectives they have acquired when they return to teaching, by giving due consideration to their role and responsibilities. Faculty exchange and interaction should also be enabled not only among CSSTE institutions but also with other higher education institutions and NGOs working in the sector
7. **Consolidation of TEIs:** DIETs must continue to provide pre-service teacher education as they are of better quality and attract good students. DIETs may be upgraded to also address in-service teacher education needs of secondary schools as they are located in every district. DIETs could develop more specialisations for its pre- and in-service teacher education. The possibility of developing specialised teachers at DIETs, such as teachers with specialisation in physical education, special education and art education, needs to be considered and planned for.
8. **Pre-Service Teachers Education:** Almost all stakeholders including senior functionaries such as Principal Secretaries, Secretaries and SCERT Directors are unanimously in favour of continuing to provide pre-service through DIETs. They are however, sceptical about the quality of private TEIs. They are also of the view that there is a need for a state-level mechanism to ensure quality of pre-service in private TEIs. It is recommended that DIETs should continue with pre-service teachers' education and also play a role in monitoring quality of PSTE in private TEIs of the District.

   The government's effort to restructure the pre-service programme in TEIs to a 4-year integrated programme is desirable. Mechanisms need to be developed to enable coordination with local liberal arts and science colleges to fulfil the programme requirement. The MHRD and NCTE have initiated steps to upgrade the D.El.Ed. Programme from a diploma to a degree and to strengthen in-service teacher education
9. **In-service teacher professional development** needs to be addressed for quality and effectiveness. States must adopt TMSs and LMSs to plan, organise, and manage in-service trainings and professional development. A system of reviewing and including in-service programmes on offer from other institutions, university departments and NGOs could also be developed so that they can all be provided on a common platform and teachers enabled to register for approved programmes based on their interests and needs. The integration of continuous professional development with new ICT-enabled opportunities also needs to be developed, and the use of new platforms such as the national teachers' platform need to be explored and developed. In-service training being offered across different schemes must be rationalised and consolidated for better impact and management. This will require SSA RMSA and the CSSTE plans for in-service to be converged and conceptualised within a common framework and if possible under CSSTE only. Trainings provided

by other agencies should also be brought under a common framework so that there is synergy and consolidation possible. The quality of in-service training must be reviewed and ensured. Support for teachers to improve their classroom practice should be provided.

10. **Structural linkages and work integration** between DIETs, BRCs and CRCs needs to be developed. The current hierarchical, supervisory and monitoring (line management) relationships are inappropriate and not meaningful for the roles and responsibilities given to these institutions. Instead, there needs to be coordination and collaborative work: research, teaching in pre- and in-service training, material development, supervision of quality of teacher education institutions in the area, faculty development, and district-level academic seminars and interactions, teacher education festivals are some of the areas in which meaningful collaboration and coordination can be achieved.
11. **Resource centres and libraries** with relevant and updated print, multimedia and teacher learning resources need to be developed in all institutions. These will serve both the students of the institution as well as the teachers in the district.
12. **ICT use** for academic and administrative matters needs to be systematically provided for. There must be provisioning of computer for each faculty member as well as access to data and the internet throughout the institution. Use of ICT and ICT-based resources needs to be promoted systematically. These should favour interactive resources and open education resources. MOOCs and other such resources on Swayam and Diksha will be increasingly available and should be drawn upon by faculty and students to improve the quality of instruction. The use of social media platforms for developing communities of practice and outreach also need to be developed and used by faculty for CPD and to work and mentor student teachers. Central Institute of Educational Technology and other higher education institutions and NGOs with relevant experience and knowledge would need to lead by offering a range of courses and orientation programmes to faculty on resources and pedagogies for this space. The scheme will also need to be revised to ensure that the appointment of suitable IT professionals (systems administrators, etc) to manage these resources in the institute. In future, institutions may also be provided with studio facilities to produce multimedia resources.
13. **Monitoring:** Regular monitoring of the scheme and institutions under CSSTE is necessary and should form a feature of both state monthly reviews and central quarterly reviews. Monitoring data of 'Prashikshak' needs to be in public domain with yearly analytics on the basis of selected parameter of teacher education. It should be updated annually for comparison and analysis on these comparative parameters, to allow transparency in monitoring and data processing.
14. **Resources and funding:** Funds should reach institutions at the start of the session and be released in a timely manner. Funding could be managed by institutes so that individual non-compliant institutions do not affect the entire state's TE budget releases. There will also need to be greater flexibility with regard to norms. There are some critical challenges that should be addressed. MHRD needs to re-think about the uniform funding pattern under CSSTE. Funding should be ensured as per the norms laid out, and needs and diversity of the institutions. It is extremely difficult for state

functionaries to demand a budget from the state governments under the same head as CSSTE. Delay of funds can be addressed through release of 25% of estimated budget at the beginning of the year.

15. **Merger of different teachers training programmes:** It is critical to merge and consolidate all kind of in-service teacher trainings provided under different schemes such as SSA and RMSA. It will be good if the central government takes steps to converge all these in-service teacher trainings.
16. **SCERTs** should be nurtured as independent academic bodies with appropriate funding provision to serve as an academic authority under Section 29 of the RTE Act, 2009.
17. **Restructuring Support for IASE & CTE: T**he IASEs and CTEs were visualised as bodies that support research and development in school education. They are however, administratively bodies of higher education. The MHRD reports that less than 1% of CSSTE funds are allocated to the IASEs and the CTEs. At this stage it may seem desirable to separate this part of the scheme and dovetail it with higher education for administrative convenience. However, we anticipate that increasingly aspects of teacher professional development will be in areas of direct intersection of school education with higher education. All teacher education is slated to be degree programmes, and CPD will also be linked to higher education certification. Hence it will be desirable to develop mechanisms of working between school and higher education for teacher professional development. Going forward, it should be possible for movement of faculty between higher education institutions and the institutions of the CSSTE scheme. The administrative convenience of separating IASEs and CTEs and handing these over to Higher Education should be weighed against the direction for professional development developing in the sector as a whole.
18. **The road ahead:** It will be worthwhile to constitute a core committee to address Teachers Professional Development to analyse gaps and requirements in the context of Curriculum, Content, National Teachers Platform (NTP), DIKSHA and to ensure essential common standards for designing basic modules for TE. A possibility of partnership with CSSTE participant organisations could go a long way in building linkages and synergies across TEIs**.**

11.5 Reflections

The CSSTE is a unique, wholly indigenous effort to strengthen the teacher education sector. This sector is the core of quality in education. The scheme and its intent are, therefore, central to the foundations of universalisation of quality school education. However, the scheme has not been high-profile as it has not enjoyed the attention of multilateral agencies or funding and has often had to work at cross-purposes with or be ignored by high-profile missions. The work of teacher preparation is complex and requires attention to detail. It is hard-core academic work, carried out in classrooms and in research and teaching processes, and is not a visible administrative matter. Teacher professional development needs to work in tandem with school administrators who are employers of teachers and are concerned with teachers' ability to deliver quality. The scheme's effectiveness has, therefore, been limited as it is an academic programme, ideally suited to higher education, but located and administered within school education, which is the sector it serves.

At this juncture of the development of the Indian education system, teacher education has assumed centre stage because of the shift from access to quality overall. Moreover, the state is now looking at school education comprehensively — bringing about a shift in the overall approach to pre-service teacher preparation towards parity between elementary and secondary teachers, as well as a comprehensive view of in-service teacher education. There are significant developments in the sectoral approach to in-service training and also new possibilities being opened up through the introduction and use of ICT. The need to take measures that will enhance the status of the profession as well as the quality of teacher education is now a part of the national agenda.

In this context, the CSSTE needs to rise to new challenges and achieve new visions and goals for the sector. States and the centre need to review and renew their approach to the sector as a whole and to see how the scheme can best be leveraged to meet the sectoral goals, rather than simple routinised 'implementation' of the scheme.

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