

GOVERNMENT OF KARNATAKA

**EVALUATION OF IMPACT OF MID-DAY MEALS
SCHEME IN KARNATAKA STATE (2016-17)**



ಕರ್ನಾಟಕ ಮೌಲ್ಯಮಾಪನ ಪ್ರಾಧಿಕಾರ
Karnataka Evaluation Authority

**KARNATAKA EVALUATION AUTHORITY
PLANNING, PROGRAMME MONITORING AND STATISTICS DEPARTMENT
GOVERNMENT OF KARNATAKA
JUNE 2021**

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**HYDERABAD KARNATAKA CENTRE FOR ADVANCED LEARNING
KALBURGI**

DEPARTMENT OF PRIMARY AND SECONDARY EDUCATION



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Foreword

Education has multidimensional effects that include individual as well as social benefits and it is a critical element in promoting 'Inclusive Growth' in a knowledge economy. Therefore, towards achieving universalization of elementary education, the Government of Karnataka has initiated many programmes and one of the most important incentive driven programs of the government include supply of hot cooked meals under Mid-Day Meal programme from 1 to 10th std. with other components of supply of nutrition tablets, Rashtriya Bala Swasthya programme and Ksheera Bhagya. The programme is thus, an integrated approach to promote enrolment and enhance learning capacity through better food, health, and nutrition for the children from poor households. The Evaluation of Impact of Mid-Day Meals scheme in Karnataka State (2016-17) was initiated by Department of Primary and Secondary Education through Karnataka Evaluation Authority (KEA). The study was taken up by M/s. Hyderabad Karnataka Centre for Advanced Learning (HKCAL) under the guidance from KEA.

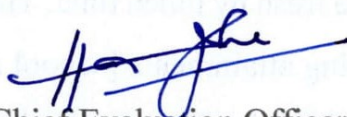
The findings are derived from field level data from a comprehensive sample of 510 schools covering 102 talukas in 34 educational districts consisting 5,158 students (equal proportion of boys and girls), 2,621 parents, 76 educational officers and 10 NGOs. The major findings are- schools have adequate infrastructure facilities and cookware (90%), but there are no Ayahs in 24% schools, among the mandatory registers, low maintenance is observed in three categories- Video of MDM conduct (18%); 5-point vigilance (56%) and SDMC meetings (57%) quality of food grains is good/satisfactory (98% schools). Supplies are on time, food served by NGOs is from a Central Kitchen and it will not be fresh by lunch time. There are significant and positive correlations between learning attainments [school results] and MDM attendance as well as X standard school results. Parents also have good opinion about quality of food. 5.1% of total

children in government sector schools do not get breakfast at home and depend on milk and food at school.

The major recommendations are- Provide breakfast to all children who attend government schools especially in districts with high levels of poverty. Attach all anganwadis with GP level schools for integration of education, provide millet-based food – ragi balls, jowar roti, navane, bisibelebhath for 2 to 3 days in a week – customize it to regional food habits. Engage in MDM tourism to ‘good’ schools from other low performing schools, organization of taluka level MDM Cooking Competitions and giving incentives/ prizes to schools. Showcase ‘Good’ (MDM) schools in Department Newsletter – Shikshana Vaarthe. Encourage NGOs to move away from Central Kitchens to school-based kitchens, strengthen First Expire First Out (FEFO) practices and re- sensitize concerned officers of education and health departments on this. Review job charts of block level educational officers and involve Education Coordinators in M&S of MDM/Milk. Include MDM demand estimation techniques, FEFO/health care menu chart variety along with their calorie strength, nutrition potential and mineral content in training modules to M&E officers.

I expect that the findings and recommendations of the study will be useful to the Government and Department of Primary and Secondary Education.

The study received support and guidance of the Additional Chief Secretary Planning, Programme Monitoring and Statistics Department, Government of Karnataka. The report was approved in 49th Technical Committee meeting. The review of the draft report by KEA, members of the Technical Committee and an Independent Assessor, has provided useful comments and inputs to improve the report. I duly acknowledge the assistance rendered by all in successful completion of the study.



Chief Evaluation Officer

Karnataka Evaluation Authority

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The “Evaluation of Impact of Mid-Day Meals Scheme in Karnataka State (2016-17)” was compiled with efficient analysis of primary and secondary data obtained from the valuable information contributed by beneficiaries of the scheme selected from 34 Educational districts of Karnataka. Hyderabad Karnataka Centre for Advanced Learning (HKCAL) would like to acknowledge the following personalities for their valuable contributions in completing this evaluation study.

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Dr. A.S Seetharamu has carried out this study as its Principal Investigator and prepared this report. His total dedication for the evaluation study and involvement in preparing this report is highly appreciated. Our special thanks to him. We thank our team members for their meticulous job and digital support in preparing tables, doing needed statistical analysis.

Smt. Aparna M Kolla, Director of HKCAL is the key person for HKCAL in lending overall support in successful completion of this evaluation study. Our sincere thanks to her and all the HKCAL team, who contributed in taking up the Evaluation of the Scheme without whom the evaluation would not have been possible.



President

Hyderabad Karnataka Centre for
Advanced Learning, (HKCAL), Kalburgi

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Abbreviations

ADPI	Assistant Director Public Instructions
AWP & B	Annual Work Plan and Budget
BEO	Block Education Officer
BRC	Block Resource Person
CCH	Cook-Cum-Helper
CEO	Chief Executive Officer/ZP
CPI	Commissioner of Public Instruction
CRPs	Cluster Resource Persons
CW	Clean Water
DBT	Direct Benefit Transfer
DDPIs	Deputy Director of Public Instruction
DHO	District Health Officer
DISE	District Information System for Education
DoE	Department of Education
DSERT	Department of State Education Research and Training
DIETs	District Institute of Education and Training
Ed.CIL	Educational Coordinators, India Limited.
FCS	Food & Civil Supplies
FEFO	First Entry First Out
FGD	Focus Group Discussion
FRK	Fortified Rice Kernel
FSI	Food Security Index
GER	Gross Enrolment Ratio
GIR	Gross Intake Ratio
GoK	Government of Karnataka
HFW	Health & Family Welfare
HPS	Higher Primary School
HS	High School
HT	Head Teacher
IDI	In Depth Interview
JD	Joint Director,
JRM	Joint Review Mission

KEA	Karnataka Evaluation Authority
KMF	Karnataka Milk Federation
KFCFC	Karnataka Food and Civil Supplies Corporation , Limited
LPS	Lower Primary School
M & S	Monitoring and Supervision
MC	Mother's Committee
MDM	Mid Day Meal
MHRD/GoI	Ministry of Human Resource Development
MNP	Multi Micronutrient Powder
MPCE	Monthly Per Capita Consumer Expenditure
NCERT	National Council of Educational Research and Training
NCLP	National Child Labour Project
NEK	North East Karnataka
NER	Net Enrolment Ratio
NGOs	Non Government Organizations
NIC	National Informatics Centre
NPNSE	National Program of Nutritional Support of Primary Education
OOSC	Out Of School Children
PDS	Public Distribution System
PUCL	People's Union for Civil Liberties
RDPR	Rural Development & Panchayath Raj
RTE	Right to Education
SDMC	School Development Monitoring Committee
SoP	Standard operating Procedures
SSA.	Sarva Sikshan Abhiyan/Samagra Shiksha Abhiyan
SPD	State Project Director
SWOT	Strength, Weakness, Opportunity and Threat
ToR	Terms of Reference
TQM	Total Quality Management
ULBs	Urban Local Bodies
UNICEF	United Nations International Children's Emergency Fund
ZP/TP	Zilla Panchayat/Taluk Panchayat

Executive Summary

Introduction:

53.48 lakh children are served hot, fresh, cooked mid-day lunch in 54839 Government, private aided-schools of the State including LPS, HPS and High Schools. This figure constitutes 92 per cent of total enrolments. 64,000 Anganwadi children are also covered – outside the scope of this study. NCLP and Madrasas are also covered. This data is for 2018-19. MDM is served for school children on all 6 days of the week. There is a differentiated unit cost of Rs.4.13 for MDM of children of 1 to 5 standards and Rs.6.18 to children of 1 to 10 standards; MDM has variety of vegetables during the whole week as per departmental specifications. Primary school children (LPS) get 490 calories of nutrition and 8 to 10 gms. of protein while HPS/HS children get 720 calories and 12 to 16 gms. of protein. It is noted in this context that 27 per cent children in State, as of 2016-17 NFHS survey, suffer from severe malnutrition.

Further, every school going child is daily served 150 ml. milk, irrespective of age, (also Anganwadi kids) on 5 days of the week across 34 educational districts of the State. On a trial basis, flavoured milk (SMP) is served in Mysore and Raichur districts.

Health care is integral part of MDM scheme. Iron, Vitamin A and Deworming tablets are given to students as per norms.

RDPR/ZPs/TPs, KSCFC/FCS, KMF/DMUs, KDLWS, NIC, NGOs collaborate with the DoE in implementing the scheme. NGOs (71) serve Milk/MDM to 9.3 lakh children of 5587 schools in 14 districts of the State, 17 per cent of the total load of the DoE. MDM is financed by both the GoI and the GoK on a 60 : 40 ratios, as this is a flagship programme of the GoI. A sum of Rs.1,465 crores is spent on MDM by the State Government during 2018-19.

Eradication of anaemia, arresting malnutrition, promoting health and nutrition, significantly contributing to enrolments, retention, children's concentration in studies, promoting learning attainments, and strongly supplementing food security constitute the foci of the scheme.

Objectives of the Evaluation Study:

Objectives of the study are specified by the KEA/DoE in its ToR. (a) Coverage of the scheme across regions/social groups, (b) delineation of the supply chain and processes for MDM scheme, (c) examination of physical infrastructure facilities and adequacy of manpower for MDM management, (d) study of impact of the scheme on educational objectives, (e) extent of food security, (f) involvement and performance of NGOs in MDM, (g) issues in harmonization of MDM organization with teaching schedules at school, (h) relevance of the scheme to target groups w.s.r.t. food security, (i) community involvement and social equity, (j) stakeholders perceptions of the scheme on health and nutrition, (k) constraints in implementation are the variety of objectives of the study, (l) suggestions for effective implementation and needed remedial measures for observed problems are also expected objectives.

Methodology:

(a) Descriptive Survey, documentary analysis of secondary data from schools and the education department, observation and case studies are the chief methods.

(b) Primary data is collected from schools, head teachers, nodal teachers, parents, students, educational officers and NGOs using questionnaires, interviews, IDIs and FGDs. Case studies of ‘good’ and ‘other’ schools are completed. Validation of field investigators data is done through the field supervisors. Validation analysis is done.

(c) 34 districts of the study are ranked on Milk/MDM performance using 76 variables/sub-variables. Analysis of data is done district-wise, division-wise and State-wise, everywhere.

(d) Correlation Analysis of MDM attendance and learning attainments as well as Levene’s ‘t’ test analysis of differences across divisions have been done.

(e) Sample is drawn in consultation with KEA and as per ToR. There are 515 schools at a minimum of 15 schools per district, 5,158 students (equal proportion of boys and girls), 2,621 parents, 76 educational officers and 10 NGOs which cover 3.73 lakh children of 2,410 schools (40 per cent of total NGOs).

Results and Discussion

School Facilities: Schools have sufficient cookware (89%). They have fire extinguishers (86%) – this is a mandate of the Supreme Court of India. There is shortage in eating plates and drinking glasses in nearly 25 per cent schools

Management Concerns: 86% schools display menu while 76% do it correctly with day/date/menu details. Cooks/Ayachs clean kitchen (not students) everywhere; 89% do it daily. There is shortage of Ayachs everywhere. There are no Ayachs in 24% schools. Students clean eating places. There is sufficient water for drinking, cooking, cleaning work (90% schools). 150 schools (over 30%) maintain a kitchen garden. But only 30 of them (20%) received the Departmental, one-time grant of Rs.3,500/-. 40% schools have received NGO contributions – eating plates, drinking glasses, utensils. One time grant of Rs.5,000/- had been given by DoE at the beginning of MDM services by schools for purchase of kitchenware. Cookware needs replenishment in schools established before 2000 AD.

Documentation: 9 registers for MDM are mandated by the DoE. Compliance is as follows: MDM attendance (92%); Stock (88%); Taste (94%); SoP (76%); Tablet distribution (86%); HT/Nodal teachers' supervision (69%); Video of MDM conduct (18%); 5 point vigilance (56%) and SDMC meetings (57%). None of the registers is maintained in Raichur and Bagalkote districts; only one register is maintained in Bellary. Districts are classified on maintenance of registers – OK (7 to 8 registers), Satisfactory (4 to 6) and (3 or <3) unsatisfactory. This will facilitate M & S by DoE.

Other Concerns: (a) 87% schools receive contingency amount for processing of food through DBT. (b) Health Cards are issued (93% schools); entries are there (79% schools) of last year; (c) folic acid (57% schools); Vitamin A (57%); de-worming tablets (75%) are issued as per norms. 50 per cent children consume tablets. (d) A highly insignificant proportion of schools face problems of water (11% schools); security (theft – 5.35%), threat of theft (33% schools). (e) Hygiene management is a problem as there are no ayachs in 30% schools. Girls of higher classes clean eating places – a case of Sex-typing. [in 24% schools as per HT; in 30% schools as per students' reports].

Compliance to SoP Guidelines: (a) SoP guidelines are for nomination of nodal teachers on rotation basis; (b) hygiene management; (c) FEFO compliance; (d) documentation; (e) cooking and serving processes. There are 62 variables and sub-variables, guidelines of SoP.

Sample schools across divisions have obtained scores in the range of 74 to 82 per cent on compliance to SoP.

Monitoring and Supervision (M & S) of MDM: Head Teachers report to NIC on day's MDM attendance every day (88%). Community involvement for supervision of MDM, visit of MC members is moderate (67% schools). There is short supply of MDM materials – rice (18% schools), pulses (19%), oil (19%), iodised salt (36%), milk powder (20%) plus tablets (21 to 26%). However, quality of foodgrains is good/satisfactory (98% schools). Supplies are on time. Co-ordination across block/district educational officers as well as TP/ZP offices and stakeholders – KMF/KSCFC/DHO is quite good, with a few exceptions.

M & S of NGOs: Food served by NGOs is from a Central Kitchen. It will not be fresh by lunch time, even though it may get re-heated. NGOs depend on average attendance in schools of previous month to gauge needed supply of MDM food unlike DoE managed schools which use day's morning attendance. NGOs use MC members for food services. Students are not engaged for any work. They rely on their own auditors for MDM audit.

M & S by Educational Officers: CRPs are the 'food soldiers' of MDM scheme. 6 out of 28 CRPs are not able to cover all schools under their jurisdiction (15 schools) at least once a month for MDM supervision. By and large, educational officers of all ranks miss out on M & S of milk services. Their community connect – attendance at MC/SDMC meetings – is quite good. Demand estimation techniques for all taluq schools are unsystematic and divergent. BEOs do not mandatorily discuss MDM at monthly meetings of CRPs. M & S is good at cluster level, weak at block level.

Impact of the Scheme:

(a) Enrolments at (i) LPS stage declined in spite of Milk/MDM schemes. This is due to population deceleration; admissions under RTE 12 (1) (c) in private, unaided schools; growth of private schools. (ii) Decline is marginal at HPS stage due to decreases in drop-outs, better retention. (iii) Increases in enrolments are observed at high school stage. (b) Retention is quite high at all stages of school education. (c) There are significant and positive correlations between learning attainments [school results] and MDM attendance as well as between MDM attendance and X standard results. Differences across divisions in relation between attendance and attainments are not significant.

(d) Qualitative Feedback – Parents:

(i) Profile of parents reveals that milk/MDM serve the **poor and humble**. (ii) Parents report (as per their children’s feedback to them) that MDM served is adequate (96%), of good quality (96%) and hygienic (89%). (iii) Quantity of milk served is satisfactory (94%), of good quality (82%) and good taste (93%). (iv) Perfumed milk served in 2 districts is appreciated by 84% parents (children). (v) Parents value milk for its nutrition potential (97%), contribution to physical strength (96%), concentration in studies (98%), health status (95%), zeal in life (93%). (vi) 52% parents treat MDM as a substantive meal as they can provide only one meal at home (5.1%) and two meals (47/4%). Going by this sample study, it is informed that 2,14, 500 children (5.1% of total children in government sector schools) do not get breakfast at home. Milk at school is their first food.

(e) Qualitative Feedback – Students

(i) There is convergence of feedback across parents and students with a highly marginal difference in percentages. Students value milk more than MDM for contribution to studies. (ii) Only 15% students sit with their own social groups for consuming MDM.

(f) Summary Insights on Impact of Milk/MDM

Impact of milk is wholesome, very deep and intense. MDM has moderate impact on learning and concentration for lessons. There are other factors in the dynamics of learning. Intended impact on health is not wholesome. There is tremendous impact of milk and MDM on nutrition and food security. Impact is perceptible on enrolments at secondary stage of schooling as well as on retention and transition at LPS/HPS stages. Milk/MDM carry significant impact on learning levels even while according to educational theory/psychology of learning, no single factor like milk/MDM can exclusively determine learning and scholastic achievements.

CASE STUDY Insights:

Case studies of 12 ‘good’ schools and 8 ‘other’ schools (other end of the scale as perceived by educational officers, field supervisors), was done. They were reviewed on 121 sub-variables across 17 major variables of MDM performance. ‘Good’ schools are functioning at 95 per cent efficiency while the ‘other’ schools are doing this at 73 per cent efficiency.

Conclusions:

Conclusions are drawn within the WHO (ILO/UNESCO) framework of parameters of evaluation of a development project/scheme. There are 5 parameters: Relevance, Efficiency, Effectiveness, Sustainability and Impact.

MDM has a very high degree of relevance as majority of beneficiaries suffer from food insecurity and were unable to attend school regularly and do well in learning at school. They also suffer from severe to moderate malnutrition. This study has shown that the programme is being managed with a high level of efficiency. Even at the macro/state level coverage of beneficiaries is on a mega scale. It is highly effective in ensuring enrolments and learning attainments at secondary stage of schooling. MDM/Milk have improved nutrition levels; sustainability depends on stability of participation of NGOs in future. Impact analysis has already been discussed.

Major Recommendations:

- 1) As of now, there are 60,000 government sector schools spread across 28,000 villages and urban habitations. The need is to move away from small/medium schools to GP/Ward level 1 to 10, comprehensive schools. Number of schools will get reduced to 6000 GP schools plus urban ward level schools. Provide good road and transport connectivity to satellite villages of GPs. Transport children with escorts to school and home. Good quality schools can be maintained due to scale economy. MDM management can be MECHANISED; easy to manage and will be efficient.
- 2) Provide breakfast to all children who attend government sector schools. Begin with drought prone talukas.
- 3) Attach all anganwadis with GP level schools. Discontinue with standalone LPS/HPS. A child will spend his/her life from age 4 years to 18 years in the same school. Student Attainment Tracking System (SATS) will be easy and efficient.
- 4) Provide millet based food – ragi balls, jowar roti, navane bisibelebath on 2 to 3 days in a week – customize it to regional food habits. Give vegetable based (mineral) sweets twice a month. Give Huruli, Hesaru Kalu, Kadale Kalu as variants of pulses.
- 5) Engage in MDM tourism to ‘good’ schools from ‘other’ schools.
- 6) Organise taluqa level MDM Cooking Competitions and give incentives/ prizes to schools.

- 7) Showcase 'Good' (MDM) schools in Department Newsletter – Shikshana Vaarthe.
- 8) All 34 districts are ranked on milk/MDM performance in this study. Areas of low performance are also identified. Tighten M and S on districts at bottom end of performance – low ranking districts.
- 9) Provide adequate staff, specifically Ayahs, to schools as per existing norms. Avoid cleaning work of eating places by students – specifically girl students. It is not fair. Alternatively, give cash incentives to cooks/CCH staff to clean eating places. Provide contingency amount for that. Replenish cookware in old schools. Stagger amount of contingency grants/kitchen garden grant cookware purchase/replenishment grant to strength of schools. Do not give uniform grants.
- 10) Strengthen FEFO practices, tablets distribution and consumption practices. Re-sensitise concerned officers of education and health departments on this.
- 11) Encourage NGOs to move away from Central Kitchens to school based kitchens.
- 12) Review job charts of block level educational officers and training for that. Involve ECOs also in M & S of MDM/Milk. Include MDM demand estimation techniques, FEFO/health care M & S, menu chart variety along with their calorie strength, nutrition potential and mineral content.

1. Introduction

1.1 Background of the Study:

The MDM programme, popularly referred to in this way, has three components – the Ksheera Bhagya, the Anna Bhagya and the Rashtriya Bal Swasthya Karyakrama (RBSK). Health, Nutrition, Food Security and most significantly Education are the ultimate goals of the MDM programme. This programme, with intermittent mutations, is being implemented in the State for over five decades. It has become more systematized since 2002.

1.1.1. Programme: The Karnataka State Government MDM programme has three components: distribution of milk to all children of government and private aided schools as soon as they attend school in the morning. Every child from 1 to 10 standards is served 150ml. milk since the launching of the programme on 01.08.2013. Initially it was served for 3 days in a week and it was extended to 5 days since 01.07.2017. There are 34 educational districts which include 30 revenue districts in the State. Flavoured milk is served only in Mysore and Raichur districts on a trial basis. In all other districts, regular/non-flavoured milk is served. Eradication of anaemia, provision of balanced food, eradication of malnutrition and significantly improving the learning ability among children are the objectives of the Ksheera Bhagya scheme. Incidentally, it is noted that this scheme is also being implemented in all Aanganawadis of the State.

The MDM programme serves hot cooked meal during lunch time to all children of government and government aided schools from 1 to 10 standards, on all the six working days of the week. Even National Child Labour Project (NCLP) schools are also covered (1112 children in 2018-19). 50 Madrasas and 29 NCLP schools were covered in 2016-17. Differentiated provisions are made for 1 to 5 standards and 6 to 10 standards students. Accordingly, unit cost also varies at Rs.4.13 and Rs.6.18 for the two stages, which is not the case with milk distribution scheme. There is variety in the menu served on all the six days (Menu chart is appended – Annexure No. XIII). Primary stage children get 490 calories of nutrition and 8-10 gms of protein perday. Figures are 720 and 12-16 gms for HPS/HS stage children. Stepping up enrolments and attendance, arresting dropping out of children, stepping up health and nutrition, improving learning levels, develop inclusiveness and equality in social life of kids and finally serve drought affected children during summer vacation are the immediate objectives of the MDM programme. Fortified rice, richer in vitamins and minerals than normal rice, is distributed in 4 districts, one in each division, on a pilot basis.

Health Care is integral of the MDM programme. Nutrient tablets are served to primary, higher primary and high school students in differential doses, along with de-worming tablets. Vitamin A tablets are given twice a year. Iron and Folic acid are given every week, one tablet on every Monday. Again, deworming tablets are given twice a year. In addition, health checkup of all children is conducted every year which is accompanied by referral services in relevant cases. Pro-active action and circumspection for balanced growth, nutrition and health care of children are the objectives of this programme.

1.1.2 Evolution of the Programme

MDM has a chequered history. It began in pre-independence India in 1925 in Bombay City Corporation limits under British administration and was there for a short period. In post-independent India, it began in Tamil Nadu in 1962, and ran for a short period. In 1982, the programme was upgraded on a large scale in Tamil Nadu. Later, it was also, introduced with UNICEF / FAO (Food for Learning supporting Bangalore city/slum schools through a Central kitchen arrangement. The programme was run in an inconsistent way and in a partial regional coverage in India till in 1991-92, with international aid. Sometimes, it was run on a ‘One-Rupee a Day’ basis, or supply of food grain to families of regularly attending (80 percent attendance) children. A good, valuable and entitlement (rights) programme had no stability or systematic character.

Position after 2000 AD:

After the strong and unequivocal recommendation of Dr. Raja Ramanna Committee in the State (2000) and the mandate of the Supreme Court (2001), there was a concerted thinking for universalization of hot cooked meal under MDM in schools of the state. The MDM scheme evolved in the service of State in stages. The following chart presents the stages of evolution.

1. 2002-03- Children in 1 to 5 standards, Government Schools, North Eastern region of Karnataka
2. 2003-04 – Scheme expanded to all the districts
3. 2004 September – Scheme expanded to Government Aided Primary Schools
4. 2004 October – Scheme extended to 6th and 7th Standards of Government / Aided Primary Schools
5. 2007 – 08 – Scheme extended to Government / Aided High Schools
6. 2009 – 10 – Scheme Covered Madrasahs and NCLP Schools

1.1.3 Union and State Governments in MDM

The Midday Meal Scheme is a noon meal programme of the Government of India designed to improve the nutritional status of school-age children nationwide. The programme supplies free lunches on working days for children in primary and upper primary classes in government, government aided, local body, Educational Guarantee Scheme and alternate innovative education centres, *Madrassa* and *Maqtabas supported under Sarva Shiksha Abhiyan*, and National Child Labour Project schools run by the Ministry of Labour. Serving 120,000,000 children in over 1,265,000 schools and Education Guarantee Scheme centres, it is the largest Programme of its kind in the world.

In April 2001, the People’s Union for Civil Liberties (PUCL) initiated the public interest litigation (Civil) No.196/2001, People’s Union for Civil Liberties v. Union of India & Others – popularly known as the “right to food” case. The PUCL argued that article 21 “right to life” of the Indian constitution when read together with articles 39(a) and 47, makes the right to food a derived fundamental right which is enforceable by virtue of the Constitutional remedy provided under article 32 of the Constitution. The PUCL argued that excess food stocks with the Food Corporation of India should be fed to hungry citizens. This included providing mid-day meals in primary schools. The scheme came into force with the Supreme Court order dated 28 November 2001, which requires all government and government- assisted primary schools to provide cooked midday meals.

The Central and State governments share the cost of the Midday Meal Scheme, with the Centre providing 60 percent and the States 40 percent. The Central government provides grains and financing. Costs for facilities transportation, and labour is shared by the federal and State governments. While the eleventh five-year plan has allocated Rs.384.9 billion (US\$5.4 billion) for the scheme, the twelfth five- year plan has allocated Rs.901.55 billion (US\$13 billion), a 134 percent rise. The public expenditure for the Mid-Day Meal Programme has gone up from Rs.73.24 billion in 2007-08 to Rs.132.15 billion in 2013-14.* The per day cooking cost per child at the primary level has been fixed at Rs.4.13 (5.7c US) while at the upper primary level it is Rs.6.18.

Distribution of 150 ml milk for all children of 1 to 10 standards in all government sector schools as soon as they attend school in the morning is an exclusively State funded programme of the Government of Karnataka.

* Source: Department of Education

1.1.4 Milk and MDM Programme in the framework of sustainable development goals of Karnataka State [SDG Goal 2,3,4 and 10]: Enrolment, attendance, retention and learning levels constitute the prime objectives of the MDM schemes. They are also the abiding concerns of Sustainable Development Goal, SDG number 4, as enunciated by the United Nations. 2022 and 2030 are the target dates fixed for realization of these and other objectives. Apart from these education centered variables, other chief purposes are to provide food security, improve health and nutritional status.

Within a national context, Karnataka is doing well on SDG goal 4, the rank of the State being 4 among States of the Union. SDG Index India classified all States in India under three groups – Front Runners, Performers and Aspirants, on the basis of their goal-wise scores. Karnataka is classified as a Front Runner in quality education, Goal 4 – ‘Ensure Inclusive and Equitable Quality Education and Promote Life-long Learning for All’. NITI Aayog identified 68 priority indicators (out of 169) of which 7 indicators are for goal 4, education. Karnataka is far ahead of all India’s performance in regard to Net Enrolment Ratios (NER) 1 to 10 standards, and, in learning at classes 5 and 8. However, the performance of the State with respect to all India performance on Drop-out Rates at Secondary Stage (9th and 10th standards) is in the red. These performances, good or otherwise, are relative. In an absolute sense, performance is sub-optimal. Reported performance in regard to NER is 85.54 in 1 to 10 standards for the State, learning levels for 5th and 8th are 68.67 and 54.50 per cent on Language/Mathematics and Environment Science, cumulative average. Drop-out rates at secondary level is 26.18 per cent. (All Values are for 2018-19).

As per UDISE data, NER values at primary, upper primary and secondary stages, during 2017-18, in the State are 94.45, 80.35 and 64.07 per cent respectively. 100 per cent target has been set by the year 2022. Gross Intake Ratio for VIII and X standards by 2017-18 (Number of children enrolled in 2017-18 expected to reach 8th and 10th standards after another 7 and 9 years) are observed to be 93.99 and 82.37. There are traces of out-of-school children, either not enrolled or left school mid-way even by 2017-18. As per ASER, a reputed NGO, survey, 25 per cent of kids at Class VIII are poor in basic reading skills while 50 per cent fail to perform subtraction and simple division.

This sub-optimal and unpleasant status of schooling is attributed in a large measure to poverty and deprivation. A large section of poor and disadvantaged families is not able to provide two square meals a day. Agricultural labourers, unskilled construction labourers,

coolies, marginal farmers who also overlap with SC, ST, OBC social groups are prominent in this category. Milk in the morning and hot cooked full meal in the afternoon at school attracts them to join school, stay there, learn and progress upwards with age and growth. Is it happening to expected levels and at all places of the State? There is a need for valid and reliable information in this direction. Hence this study.

Health status of children is also a significant variable in scholastic performance and overall fitness of a child. Anemia leads to stunted growth, lack of fitness, malnutrition, failing health and weakness. It also leads to attention deficit in life and classroom learning. Failing health leads to absenteeism which in turn leads to cumulative learning deficits. Discontinuity in learning eventually leads to drop- out of children from school. Proper food and nutrition will obviate these forms of difficulties and problems. Health and nutritional status of children in Karnataka is below normal ranges among considerable proportion of children. Here is data.

IMR – Infant Mortality Rate is as high as 27.7 in the State (Number of children who do not survive up to one year out of every 1000 children. Within this IMR, NNMR (Neo Natal Mortality Ratio – Death of a child within 7 days of birth, is 19.2). Survival rate after one year is better, as CMR value is 32.2. As expected rural values are higher (33.4 IMR) than urban (19.5 IMR) values. Values are very high for ST (37.7) and SC (33.0) social groups.

There are differentials in density of hemoglobin in blood – an indicator of nutrition – anaemia among children. Anaemia children constitute 26.7 per cent among general population while the values for SC and ST – Moderate range – are 32.3 and 35.7 per cent. Incidence of ‘severe’ anaemia is also considerable among SC/ST – values being 1.5 and 1.0 per cent while it is 0.4 per cent among general population. Provision of milk and wholesome lunch, with pulses and vegetables, will reduce the incidence of anaemia and contribute to sound health of children. The MDM/Milk scheme is expected to elevate the health/nutrition status of children. These two parameters also constitute the end goals of the programme. Is this happening? Is it happening everywhere? There is a need to examine this with valid and reliable data from the field, from schools and children. Hence this study.

Incidentally it is noted that ‘Good Health and Well Being’ happened to be Goal 3 among Sustainable Development Goals, SDG, of the UN. Rank of India among States of the union is 5, while the difference in Index score between India average (52) and Karnataka (69) is 17. Karnataka is a ‘performer’ and is doing well, in a relative frame, even though there are gaps in the absolute sense.

Food Security: Of all the deprivations that affect education, health and nutrition, the strongest impact is from food insecurity. It is intensely associated with poverty and social identity. No poverty by 2022/2030 is the first goal of SDG/UN. Karnataka has logged a lower SDG Index score (52) than all India average score (54) on poverty. The bright spot in this dark cloud scenario is that the State has done better on SDG Goal 2 – ‘Zero Hunger’. The SDG Index score of Karnataka on Goal 2 is 54 while the all India score is 48. Still the rank of the State in an all-India frame is 8. (Note: For all SDG values and Index scores, the reference date is September 2015; Date of publication from NITI Ayog is 2018).

Poverty Ratios for Karnataka: Income data is not available anywhere. As a proxy MPCE, Monthly Per Capita Consumer Expenditure, data is used. Latest data available refers to 2011-12, NSSO.

Table 1: MPCE across Social Groups (in Rs.)

Category	All	SC	ST	OBC	Others
Rural I	1430	1252	1122	1439	1719
K	1561	1396	1278	1626	1632
% Gap	8.40	10.32	12.20	11.50	-5.33
Urban I	2630	2028	2193	2275	3242
K	3026	2258	1875	3598	4378
% Gap	13.09	10.19	-16.96	12.43	25.95
% Gap SC/ST/OBC with Others					
		SC	ST	OBC	
(I) Rural	-	27.17	34.72	16.29	-
(K) Rural	-	14.46	21.69	0.37	-
(I) Urban	-	37.44	32.36	29.83	-
(K) Urban	-	48.42	57.17	40.65	-

Source: Primary Data

I: India

K: Karnataka

- (a) It is only in case of ‘Others’ that is non SC/ST/OBC, that MPCE in Karnataka (Rural) is lower than the all India average MPCE. In case of SC/ST/OBC, MPCE in the State is higher than the All India Average, at least by 10 per cent value.
- (b) However, in urban areas, MPCE among STs is lower by 16.96 per cent than the All India Average MPCE. Urban MPCE in the State is 25 per cent plus higher than All India average among ‘Others’.
- (c) Gaps across SC/ST and others in MPCE is quite high in urban areas in Karnataka. This

may be because of ‘Others’ participation in IT/BT/BPO and other sectors of the economy. It is also noted that 46.84 per cent of SC households are in manual occupation/casual labour/domestic service. [‘Handbook on Social Welfare Statistics’, Ministry of Social Justice and Empowerment, Statistics Division, GoI, 2016].

There are very wide inter-district variations in poverty ratios of the State. 12 out of 27 districts (2011-12) revealed lower than State average (21.1 per cent) poverty ratio. 3 districts, namely, Koppal, Bellary and Chitradurga reveal more than 40 per cent poverty ratios.

Even though Karnataka is in a better position than the all India average position, in regard to poverty ratio, the Food Security Index values are not in a comfortable position across several regions of the State. Here is data:

FSI Values and Ranks

5 Front Runner Districts:	Dharwad (0.695), Dakshina Kannada (0.694), Udupi (0.664) Bangalore Urban (0.589) and Bidar (0.569).
5 Aspring Districts:	Chikkaballapura (0.216), Raichur (0.266), Koppal (0.269), Bangalore Rural (0.280) and Chitradurga (0.301.)

Source: “Human Development: Performance of Districts, Taluks and ULBs in Karnataka, 2014 – A Snapshot”, from ES/GoK, 2018].

Bottom-line of these data is that children/family members do not have the wherewithal to provide adequate food for themselves/children. This will affect the work-efficiency of adults. In case of children, it may affect the academic performance, nutrition levels of children. Hence, there is a need to know the place and significance of MDM/Milk in providing food security to school-going children and its role in their academic performance, as perceived by students and their parents. Regional differences in such perceptions will also be a useful information. Valid and reliable data on food security through MDM/Milk and its role in children’s education and well-being are worthy of pursuit.

Analysis based on status and performance under preceding sub-sections provide the rationale and justification for this study. Mid-Course corrections and refinements for the MDM/Milk programme would be possible on the basis of a scientific study.

1.1.5 Norms for Healthcare

‘Every child is in school and is learning’ is the motto of SSA/GoK. One of the most significant incentive programmes of the State is to supply hot cooked meal to school children from 1 to 10 standards. The purpose is to step up enrolments, attendance, retention, transition and learning through better food, health and nutrition.

The MDM scheme, in co-ordination with HFW Department, provides nutrients to students of 1 to 7 standards in Government/Aided Schools. Details are as follows:

Table 2: Norms for Healthcare

Tablets	Specifications	Quantities	Supplying Department
Vitamin A	2 Lakh IU	2 Tablets /year	Education Department
Iron and Folic Acid (for 1 st to 5 th Std children) (for 6 th to 10 th Std)	45 mg (Pink Colour) 100 mg (Blue Colour)	One tablet per week on every Monday	Health Department
Albendozal (deworming tablets)	400 mg	Twice a year 2 tablets	Health Department

Source: SSA, GoK

IU: International Units

The State government introduced the Rashtriya Bala Swasthya Programme; earlier called Suvarna Arogya Chaitanya Programme, for the benefit of children of 1 to 10 standards of Government / Aided / Unaided schools. Under the scheme two member medical teams – a medical officer and a nurse – are located in every taluk. They conduct health check-up of all students under NRHM.

1.1.6 Norms for Nutrition care:

There is severe malnutrition (children) in India and it is in 42 percent of children in Karnataka. It is more pronounced in NEK region, dry taluks and tribal areas. In order to fight malnutrition GoK launched ‘Ksheera Bhagya Scheme’ in August 2013. Karnataka Milk Producers Federation is collaborating for this scheme. Every child of Karnataka from 1st to 10th standard gets 150 ml milk on five days in a week. Eradication of anemia, eradication of malnutrition through balanced food and enhancement of learning ability are the objectives of Ksheera Bhagya scheme. The scheme was already being implemented in all Anganwadis of the State.

Table 3: Norms for Nutrition care

Sl. No.	Details	Schools	Anganwadi
1	Schools / Anganwadi covered	55,683 Nos.	64,000 Nos
2	No. of School/ Anganwadi Children	64 Lakhs	40 Lakhs
3	Beneficiaries	1 st to 10 th standard in government and government aided schools all over Karnataka	Children from 6 months to 6 years
4	Milk Powder required	WMP required per child is 18 gms, i.e., equivalent to serving 150 ml of Milk (given five times a week)	SMP required per child is 18 gms, i.e., equivalent to serving 150 ml of Milk. (given five times a week)

Source: KMF Website

Note: Cost of milk powder /sugar/fuel/others per child is Rs.5.18. Honorarium to CCH / month is Rs.100/-.

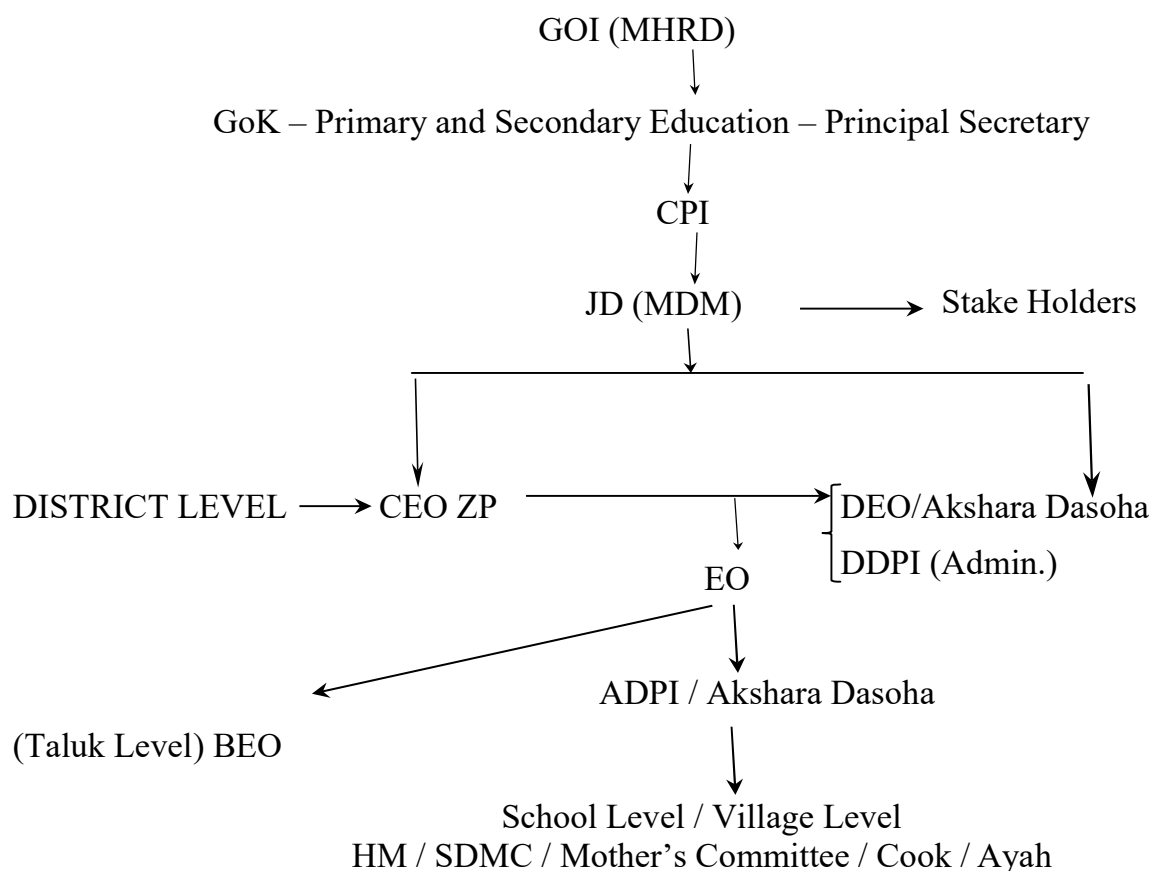
1.2 Matrix of Stakeholders

Sl.No.	Stakeholders	Functions/Duties/Responsibilities
1	Department of Education (DoE) - JD (MDM)	‘Nodal’ agency for planning and implementation of Milk/MDM scheme in the state in all government sector schools
2	KFCSC-CA: Karnataka Food and Civil Supplies Corporation and Consumer Affairs.	This is an agency of PDS-Public Distribution system for service (essentially) of BPL-Below Poverty Line families. It is assisted by FCS-Food and Civil Supplies Department who have chain of warehouses to store food grains as well as Fair price shops for distribution. KFCSC supplies rice, pulses, oil, salt to schools for MDM through ZP/TP (Zilla/Taluk Panchayaths)

3	RDPR/ ZP/TP (Zilla/ Taluk Panchayath's) CEO/EO	<p>CEO/ZP and EO/TP are responsible for logistic support to DoE in implementation of MDM. A 'group B' officer from DoE at the taluk level coordinates with them.</p> <p>The ZP pays KFCSC/CA for the MDM provisions along with transportation costs; ZP pays processing cost of MDM to schools through the BEO-a contingency grant. TP pays honorarium of cooks and cook-cum-helpers (CCH) and Ayahs; gives contingency grants to schools for purchase of MDM supplements – Vegetables, sambar powder, gas cylinders.</p>
4	Karnataka Milk Federation (KMF)	<p>Supplies milk (powder) to all schools under Ksheera Bhagya Scheme. District Milk Unions help them in this work. Supply is through the BEO. Perfumed milk (Chocolate/Cardamom) is supplied in Raichur/Mysore districts on a trial basis.</p>
5	KDLWS (Karnataka Drugs, Logistics and Warehousing Society- health department /DHO	<p>The Health Department supplies Folic Acid, Vitamin A tablets and Deworming tablets through KDLWS/DHO/BEO to schools as per norms of use. It also conducts health camps for annual medical checkup of children; helps schools to maintain health cards; conducts health checkup of cooking staff/helpers.</p>
6	National Informatics Centre (NIC)	<p>NIC has created a dedicated web-site for M & S of MDM since 2016- Automated Monitoring system as per MHRD directives. Annual plans, budget, maintenance, management of grants, day's attendance for MDM with details of students from school level upwards, upto state level are monitored by NIC. A dedicated toll free number, 15544, is used for these purposes. HTs send SMS. MIS is maintained at the taluk level.</p>
7	NGOs	<p>7 NGOs across 14 districts of the State assist DoE in implementation of MDM. They serve 17 percent of total MDM beneficiaries</p>

8	(i) SCPCR-State council for protection of child rights a (ii) State grievances cell	The SCPCR, a wing of state level NCPCR/GoI, receives grievances, if any, from stakeholders in regard to the management of MDM anywhere in the State. There is a toll free number: 1800-25-2507.
9	Schools	Schools are the basic units/instituins for implementation and micro management of Milk/MDM programme. Planning and Management of Milk/MDM begins at the school level.
10	Parents	Parents are the primary stakeholders. Their perceptions/feedback on adequacy, quality, taste, smell of milk/MDM, on health, nutrition, food security and scholastic pursuits of their wards are of highest significance.
11	Students	They are also the foremost/primary stakeholders. All the objectives of milk/MDM programme gyrates around them. Outcomes of the programme centres around them
12	SDMC	SDMC is in charge of all the activities in the school including Milk/MDM programme.
13	MC Mothers Committee	MC members are expected to oversee MDM programme in regard to hygiene, taste of food, adequacy of service and quality of food apart from kitchen hygiene.

1.3 MDM Programme Implementation and Management



1.3.1 Convergence Status

(a) NIC – Monitoring Implementation through a soft-ware. Data captured from each school on SMS. HT response.

HTs send statistics of beneficiaries to a toll free No.15544. Public can view it on Website <http://dasoha.karnataka.gov.in-dashboard>

MIS maintained at Taluk level by BEO after consolidation at CRC/BRC levels; later at District level and State level – online.

(b) 71 NGOs in 14 districts of the State (5545 schools / 8,86,842 children)

(c) **Grievance Redress Cell** – Toll free No. – 1800 – + 25 – 20007

(d) **CEO / ZP** assisted by a class I officer. **EO / TP** assisted by a class II officer.

(e) **Health Department**–Nutritional Tablets, in collaboration with KDLWS. Supplied upto Taluk level. From BEO / ADPI to schools through BRCs / CRCs

(f) **KMF** in collaboration with District Milk Unions; CPI / JD (MDM) Convergence across (a) / (b) / (c) / (d) / (e) / (f)

1.3.2 Objectives of the Study:

Objectives of Evaluation are given in the ToR for the study which is in Annexure No. 8.

1.4 Scope of the Study:

Scope of the findings/implications of the study will extend to 55289 schools and 58.16 lakh children who are MDM beneficiaries, as of 2017-18. 55.08 lakh children consume milk.

The MDM programme is spread across government schools and private aided schools from 1 to 10 standards as well as Madrasas and NCLP schools. This study is confined only to regular schools. All the children in 1 to 10 standards are covered without any social, economic or regional considerations. All the districts of the State, 34 educational districts, are covered in the study. Non- government organizations, NGOs are also included in the study.

MDM is a multi-agency management scheme. Apart from the Education and Health Departments, other agencies involved are KSCFC and CA, KMF, Grievance Redressed Cell, KCPCR, NIC/MIS, the SDMCs/Mothers Committees. The ZP/TP are involved. The primary stakeholders are the schools, teachers, parents and their wards who attend schools. They are all part of the study.

This is a comprehensive and extensive, in-depth study which addresses variety of parameters. Schools, students, parents, officers directly involved in management of the scheme, SDMC/MC, Cooks/Ayachs, supporting agencies like KCPCR, KMF, Health Department, ZP/TP, educational officers such as CRPs, BRP/BEOs, DDPI, JDPI (MDM), EO/ADPI (MDM), NGOs, NIC are all located within the canvas of the study.

Infrastructure facilities for the MDM at school level, maintenance of hygiene, attention to nutrition and health care, students/parents perceptions, Standard Operating Procedures (SoP), participation and performance of students in curricular/co-curricular activities of the school, food security for students at home, M & S of the programme at various levels of administration, co-ordination in functioning across agencies, NGO participation, enrolments, attendance, MDM participation feedback, retention and, significantly, social mixing of children with a focus on discriminating practices, if any, are the variety of variables that fall within the scope of the study.

Secondary data analysis will be confined to 2013-14 to 2017-18, a five year update, on various parameters with which Milk/MDM scheme may have a bearing.

1.5 Monitoring Status (Mechanism)

1.5.1 Existing process of Monitoring Mechanisms

MDM is rich with multi-sectoral and multi-dimensional monitoring and supervision system. Monitoring is essentially an ‘efficiency’ checking function while supervision is essentially a ‘quality’ control activity.

1.5.2 School Level: At the beginning of the school day, when children arrive to school, head count of children is taken for supply of milk and preparation of MDM so that there is no wastage of food/milk. Cooks are informed about the effective attendance of the day. In case of NGOs also, they would be informed. This information is also shared by every school through SMS to NIS for monitoring at Taluk/District/State levels.

1.5.3 Procedure: HT is in charge of overall supervision. One school teacher is nominated as a ‘NODAL TEACHER’ for monitoring and supervision of the MDM scheme. Nodal officers are rotated for this responsibility on a day-to-day basis. Responsibilities and duties of the nodal teachers are enunciated in a ‘Do’s and Don’ts’ stricture-like guidelines known as ‘SOP’ – Standard Operating Procedures which has 30 components, they are classified under three stages – what needs to be done;

(a) before food is cooked, (b) during the service/ distribution of MDM and (c) after the food is served. This is part of a point rating scale that is used every day for M and S at the school. Nodal teachers taste the food before it is served to children. Cleanliness of the premises when food is served is ensured before and after MDM distribution. All these functions are performed in such a way that teaching-learning time, school working hours are not disturbed, as per norms of procedure.

1.5.4 Documentation: Day-to-day MDM management information and feedback is documented by the school. Following registers are maintained for this function. Visiting Officers will be able to assess the quality of M and S in the school when they peruse these registers/records: registers for attendance, taste, stock, tablets distribution, SOP compliance, SDMC supervision, 5 Point Rating Scale and Video Clippings of M and S work.

1.5.5 Taluk Level: Assistant Commissioner of the Revenue Sub Division heads the monitoring activities at Taluk level. There is a Taluk Level Panchayat M & S Committee which meets every quarter to review progress, including MDM. An Assistant Director of

Public Instruction (Akshara Dasoha) facilitates their work. At the taluk/block level, the BEO/BRP/ECO/CRP along with ADPI (Akshara Dasoha) collect and consolidate information on schools about demand and utilization certificates as per number of beneficiaries which will be forwarded to DDPI (Administration) along with data on attendance of children. An additional responsibility is to collect tablets from Karnataka State Drugs Logistics and Warehousing Corporation for onward supply to schools through CRPs.

1.5.6 District Level: A District Level Steering and Review Committee is set up under the Chairmanship of the Chief Executive Officer (CEO), which meets every quarter to review the progress in the district, including MDM. The District Committee collects and consolidates monthly data on utilization of food materials, grants and utilization certificates from every taluk in the district and forwards it to office of the JD/MDM. All the circulars of the State Office will be sent to the CEOs who ensure their compliance in the taluks and schools.

1.5.7 State Level: Steering and Review Committee set up under the Additional Chief Secretary meets twice in a year and reviews progress of MDM.

1.5.8 Other Concerns: A one-time grant is released to schools to maintain a kitchen garden, if they have access to water facility. In collaboration with the Agriculture and Forestry Department, vegetables/leafy (plants) seeds, herbal plants, flower plants will be supplied to schools. Schools are facilitated to develop organic compost pits and use organic fertilizers for growing vegetables useful for MDM in the school. All schools cannot be covered due to logistic problems.

35154 out of 54830 schools, 64.11 per cent schools, maintain a kitchen garden in the State.

Only a few districts have more than 2000 schools, government plus aided, under MDM scheme. They are Chitradurga, Shimoga, Kolar, Tumkur, Mysore, Mandya, Hassan, Belagavi (Chikkodi), Vijayapura and Kalburgi. 7 out of these 10 districts are in old Mysore region.

Display Board indicating the expenses on MDM, information on cleanliness, safety care, tablets distribution, prudence in spending as well as data on attendance for MDM for the day. Norm is to write the logo of MHRD/MDM on the board.

It is expected of every school to maintain a fire extinguisher as per a Supreme Court mandate dated 13.04.2009, and also keep it in a safe place, so as to be prepared for exigencies

of fire. It is reported that 99.8% of schools have fire extinguishers.

NGOs are working in 14 districts. They have their own M & S for schools. Work of NGOs is monitored by Taluk/District Officers, on the same lines as for all districts.

There are 9 out of 34 educational districts where more than 80 per cent schools maintain kitchen gardens. Out of these 9 districts, 3 districts viz., Mandya, Mysore and Hassan carry more than 2000 schools each. Not even 5 per cent share in 5 districts of the State maintain kitchen gardens. Bangalore City, 2 districts, may not have land space as they are highly urbanized. The other three districts, viz., Bellary, Koppal and Yadgir may have problem of access to water.

Department may publicise 'good' work (cases) done by schools in maintenance of Kitchen garden in 'Shikshana Vaarthe'.

1.5.9 Testing of Food Quality: A pilot programme on testing of food is initiated in Mandya and Kolar districts. 56 food samples from 28 schools were sent to Public Health Institute during 2017-18. Food was reported to be of satisfactory standards.

The Government issued a circular on 26.06.2006 directing every district to constitute a Joint Inspection Committee under the Chairmanship of Deputy Director (FCS). There are 6 members in this Committee, including the Chairman, viz., Deputy Director (FCI), District Organizer (KFCSC), DDPI (Admn.), DHO and DDPI (MDM). They are empowered to check on the quality of food grains supplied to schools every month. This Committee is held responsible for supply of sub- standard food grains.

1.5.10 Final Word: The Department has located all checks and balances in place for the MDM/Milk scheme. This research study will provide a feed-back on the compliance of these M and S checks and balances, on the status of implementation and the realization of objectives of the MDM/Milk scheme. It will address all the concerns stated in regard to objectives of evaluation as well as Evaluation Questions outlined in detail in the ToR for the study. Evaluation Questions and ToR are given in annexure VII and VIII.

1.6 Limitations of the Study

1. MDM is intended to promote health and nutrition, more importantly, it is conceived to ensure attendance and learning in schools – elementary and secondary levels. As a consequence, it will lead to higher levels of confidence and personality development.
2. So far, so good. However, improvements in health, education, nutrition and personality development cannot be exclusively attributed to MDM and Milk provisions. They are the products of variety of visible and invisible factors/ variables which get orchestrated in reality. Home care and quality time with parents, family background- education, occupation and social background of parents, cumulative effects of pre-natal/ antenatal care for kids in the past, quality of school academic/teaching-learning transactions, peer group influence, type of food consumed at home (no junk food), quantity of food given at home, child's body constitution, efforts/interest/internal motivation of students- like this, variety of factors function in unison to promote health, nutrition, education and personality development. 'MDM/Milk' at school is one of the variables.
3. Social Science researchers dissect REALITY, pick and choose, one or more variables and study their effects on phenomena. This is true of MDM and Milk also. This is true of all empirical or descriptive research, all over social universe. Controlling extraneous variables and studying the effect of one/ couple of variables is Experimental Design. Experimental design for MDM/Milk is not possible given the large and diverse coverage (sample) in this study; small sample will not facilitate policy interventions in diverse regional contexts. Hence, empirical studies engage in statistical control of variables and study the effect of given variables (MDM/Milk) on intended outcomes (Health/ Nutrition/Education/Personality). (See Campbell: "Quasi Experimental Designs" for detailed discussion)
4. Even in this study, there will be both qualitative and quantitative (statistical control of variables) analysis. Exclusive, singular effect of MDM/Milk is not/cannot be studied. This is a systemic information of the study, thrown up by reality of life.
5. Parents Self- Report on Food Security for their children at home cannot be directly checked.
6. Alternatively, same questions were posed to students. Responses were cross-checked with parents' responses for their veracity, and analyzed.

7. NGO data on central kitchen, food transport arrangements, relations with schools could not be cross checked. NGOs get food prepared very early in the morning .
8. Attention to Milk/MDM in meetings for BEO (BRC) with CRPs, meetings of DDPIs/ADPI (MDM) with CEOs are reported as received from officers. This cannot be cross checked.
9. Field Investigators data collection may have a few limitations. Hence, Field Supervisions had been asked to cross check the same data and report to PI, specifically veracity of IDI/FGD data.
10. It has the same limitations just as any other empirical study.

2. Theory of Change & Methodology

Components	Project Summary	Indicators	Means of Verification	Assumption Risks
GOALS	<ol style="list-style-type: none"> 1. Health, Nutrition, Education are the overall goals of MDM 2. To improve HDI in the State 3. To provide Food Security to children 6 to 16 years, 1 to 10th standards 4. To realize UEE, USE, RTE Goals 5. To realize '<i>Health for All</i>' goal 	<ol style="list-style-type: none"> 1. Balanced BMI 2. Zero Stunting 3. No Anaemia 4. Full (100%) Attendance 5. Full age – adjusted Enrolments 6. Smooth Transition – 5 to 6, 7 to 8, 8 to 9 7. Full Retention and Completion 	<ol style="list-style-type: none"> 1. Regular Health Register Check-up – 2. Attendance, Admission, Registers 3. Interviews of HT/Teachers / Parents / Students / Officers 	<ol style="list-style-type: none"> 1. Health Camps have been organized 2. Records are maintained and updated
Activities	<ol style="list-style-type: none"> 1. Supply of Rice, Edible Oil, Tur Dhal, Salt through KFCSC 2. Supply of WMP (SMP) from KMF / District Milk Unions, 3. Supply of – Folic Acid (Iron Tablets) Vitamin A tablets, De-worming Tablets 4. Provision of contingency grant to buy vegetables, Gas 5. One time grant each for – purchase of 	<ol style="list-style-type: none"> 1. Food Materials in stock 2. Health / Nutrition Tablets in Stock 3. Kitchen-ware purchased from one-time grant 4. Maintenance of Kitchen garden (selected schools) 5. Compliance to SoP 6. Cooks / Ayahs in place 7. SMS to NIC from HT 	<ol style="list-style-type: none"> 1. Observation of Kitchen, Kitchen-ware 2. Stock checking for FEFO arrangements of food materials 3. Display Board 4. Cleanliness Maintenance – observation; 5. Checking 	<ol style="list-style-type: none"> 1. Mobile networks are working 2. No absenteeism among Cooks / Ayahs 3. MDM / Kitchen management is good.

	<p>kitchen-ware; Maintenance of kitchen garden (selected schools)</p> <p>6. Issue of SoP for MDM</p> <p>7. Mobiles for SMS on daily coverage to NIC</p> <p>8. Appointment of cooks / Ayahs as per norms</p> <p>9. M&S provision from SDMC/MC</p>		<p>Taste/SDMC/MC/Nodal Teachers, Registers'</p> <p>6. Mobile SMS verification</p>	
OUTPUTS	<p>1. Full Enrolment/No OOSC;</p> <p>2. Regular Attendance</p> <p>3. Quality Schooling for all</p> <p>4. Inclusive Schooling</p> <p>5. Balanced BMI, No gender gap</p> <p>6. No Anemia</p> <p>7. No Health issues</p> <p>8. No stunting</p>	<p>1. GER / NER / GIR, 100 percent in 1 to 8 and 8</p> <p>2. No Drop-outs</p> <p>3. No OOSC – girls, SC / ST / OBC / Minorities</p> <p>4. 100 percent attendance – all students – girls, SC / ST / OBC / Minorities</p> <p>5. 100 percent Retention in 1 to 8 and 80 percent retention in 9 & 10</p> <p>6. 100% transition – 5 to 6, 7 to 8 and 8 to 9</p> <p>7. 80 percent; B, B+, A, A+ grades,</p>	<p>1. Checking</p> <p>2. Admission/Attendance</p> <p>3. MDM Registers</p> <p>4. Health Register</p> <p>5. Testing Learning using – LAT using ECO Test</p> <p>6. FGD with Parents</p> <p>7. FGD with Students</p> <p>8. Interview of HT / Teacher</p>	<p>1. Health Camp has been organized</p> <p>2. Health Card issued to children</p> <p>3. HT / Teachers / Parents are knowledgeable about children – health, learning nutrition</p> <p>4.</p>

		<p>1 to 8</p> <p>8. 90 percent pass in X</p> <p>9. Gender Gap in NER, GIR 8th, to be Zero</p> <p>10. SC / ST / OBC / Minorities gaps to be less than 5% in NER, GIR – 1 to 8 and 8th</p> <p>11. Parents’ reports</p> <p>12. Students</p> <p>13. HT / Teachers</p>		
OUTCOMES	<p>1. Healthy, fit, strong children</p> <p>2. Quality Learning / Schooling for Children</p> <p>3. Appreciation of HDI in State</p> <p>4. No gender gaps, No gaps across Social groups in HDI</p> <p>5. Inclusiveness in performance at Board Examination</p> <p>6. Social Integration through MDM / Milk</p>	<p>1. Good Performance on LAT / ECO</p> <p>2. Balanced BMI</p> <p>3. Haemoglobin level are optimal</p> <p>4. No Anaemia</p> <p>5. No Stunting</p> <p>6. X performance</p> <p>7. Sociability across social groups</p>	<p>1. Participation in sports /games/school activities by all children – Girls, Social Groups</p> <p>2. Test Results–ECO/LAT</p> <p>3. Health Cards</p> <p>4. Observation in School</p> <p>5. Parents</p> <p>6. Students HT / Teachers / Officers</p>	<p>1. Record Maintenance and updating is good</p> <p>2. There is participative culture in schools</p>

2.1. Indicators

A]. Education: (a) Coverage of students-enrolments; (b) Attendance; (c) Retention Rates; (d) Transition Rates; (e) Enrolments disaggregated for sex and social composition (f) Learning achievements of students in relation to attendance

*Social composition of students means –proportion of SC/ST/OBC/Minorities/others in enrolments.

B]. Nutrition; (a) Distribution of tablets- percentages across districts-Folic acid; Vitamin A tablets; De-worming tablets. Reduction in anaemia and severe anaemia malnutrition (SAM).

C]. Health: (a) Health Cards-Percentages of schools issuing the cards; (b) entries in health cards; (c) Cleanliness care and attention (Hygiene)

D]. Food Security: (a) Milk as a supplement/substitute for breakfast at home. (b) MDM as a supplement to food served at home. Percentages of homes giving food.

E]. MDM Services: (a) Adequacy, (b) Quality, (c) Taste, (d) smell

F]. Milk Services: (a) Adequacy, (b) Quality-thickness, (c) Taste, (d) smell, (e) Quality/Smell of perfumed milk

G]. Participative Management: Involvement of SDMC; Involvement of MC members; Discussion of Milk/MDM in monthly meeting of BEOs with CRPs; in ZP meetings.

H]. Compliance to SoP by proportion of schools/guidelines of the JD (MDM)/DoE.

I]. Satisfaction of Parents-Feedback on values of Milk/MDM.

J]. Satisfaction of students-Feedback on values of Milk /MDM.

K]. Summated scores/Ranks of 34 districts on MDM/Milk performance.

2.2 Methods and Sample (Outline)

1. Descriptive survey, Documentary analysis, observation and case studies are methods adopted.
2. Documentary analysis- Registers (Taste/stock/Tablets distribution/SoP/SDMC/MC Meeting, etc.); Secondary data analysis of JD (MDM) Office.
3. Observation-by FIs and supervisor-kitchen upkeep, hygiene of MDM service, FEFO compliance, quantity/adequacy of milk/MDM served, social mixing of children, nodal officers'/HT supervision practices, Infrastructure facilities, Taste of food, fire extinguisher, walls/ floors, etc,
4. Descriptive survey: questionnaire to HT/Nodal teacher, IDI/FGD of parents, students, NFOs educational officers
5. Case studies- well performing/problem school
6. Techniques and tools: (a) Questionnaire for HTs/Nodal Teacher, (b) Documentary techniques- FIs and Supervisors, (c) Observation Techniques (Questions) for FIs/ Supervisors, (d) Case study data sheets-supervisors, (e) IFI/FGD schedules – parents/students/officers/NGOs
7. SAMPLING
8. Volume of Work & SAMPLING FRAME
9. Stratified Random sampling is adopted
10. Strata: (1) LPS/HPS/HS, (2) Rural/urban (3) Govt./Private schools; (4) 1 to 7 and 1 to 8 HPS, (5) Medium of Instruction

Plan of analysis:

2.2.1 Descriptive/Normative Survey: is the main method adopted for the study. Such surveys describe 'status'. Status of implementation of Mid-Day Meal and Milk distribution schemes are addressed here. This method is supplemented by observation, case study methods and Documentary Analysis technique. Secondary data collected from the State JD/MDM Office and the sample schools of the study merit documentary analysis.

State level and District-wise data on coverage of schools and children, average MDM attendance status, sex and social composition of students and similar data are subjected to documentary analysis. At the school level, several types of data will be subjected to documentary analysis. Admission details, sex and social composition of admission and attendance of children, transition rates of children, MDM attendance, harmony across

sectoral and MDM attendance, relation between performance/academic progress and MDM attendance, levels of achievement of children, health care of students, inclusiveness in coverage of the MDM scheme are types of documentary data.

Primary data from sample schools, students, parents, teachers, head teachers, educational officers, NGOs and other stakeholders is collected through descriptive surveys. Questionnaire, interviews and FGDs are the techniques adopted for the purpose. Infrastructure facilities in schools (later cross checked with observation technique on many counts), information on CCH staff, utilization of one time grant (later cross checked with documentary analysis), maintenance of registers, bank and reimbursement details, health care, problems faced by school in management of MDM – water, security, hygiene, coordination with other stakeholders, suitability of service of CCH staff and interference of MDM with teaching duties; compliance with SOP; socio-economic background of parents, parents' perceptions of MDM/Milk distribution impact on students' growth and development, food security at time as reported by parents and independently from students, adequacy, quality, hygiene of MDM, imparting MDM on their school/general performance, discriminatory practices (if any) as perceived by students/parents, receipt and consumption of nutrition/health tablets, are all illustrative areas included under primary data.

Participation, problems and performance of NGOs in MDM, reimbursement details, balancing with unit costs specified by the Department, audit reports, disposal of solid waste (if any) are integral to the primary data survey. M and S information from education officers – CRP, BRP, BEO, ADPI, EO, DDPI, etc., cooperation from aided schools' NGOs, estimation of demand for food materials, coordination with other stakeholders, information on problem schools and those that merit showcasing are illustrative areas of concern in primary survey with officers and NGOs.

2.2.2 Variety of registers and JD (MDM) data: The school is expected to maintain variety of registers. Taste, stock and tablet distribution compliance, SOP, SDMC/MC meetings, 5 point Rating Scale entries, are the illustration of such registers that are maintained for MDM. They will be analyzed to generate the scenario of day-to-day functioning of the MDM scheme.

RBSK data, expenditures data (Milk/MDM), CCH staff data, Calorific value data (Milk/MDM), health care data maintained in the JD (MDM) Office are analysed.

2.2.3 Observation Techniques: This is a significant technique of the study. Field Investigators and Supervisors are guided in a formal way with areas located for observation on the days of school visit. Up-keep of the kitchen, uniform/apron wear habit of the kitchen staff, cleanliness of the kitchen and the serving place before, and after and at the time of MDM service, FEFO arrangement of MDM food materials, variety of food processing materials, kitchen ware purchased out of one-time grant/NGO contributions, kitchen garden (if maintained), quantity of milk given, adequacy of MDM served, most significantly the social mixing of children during MDM service, nodal/other teachers,/HT supervision of MDM, availability and access to infrastructure facilities – Computer Laboratory., Science Laboratory, rooms, playground, sports materials etc., rapport of teachers/HT with students, presence of Members of MC at the time of service, loss (if any) of teaching/learning time because of MDM service, quality of/taste of food/thickness of milk served to children (by tasting it and (viewing it – quality), location of fire place/cooking place (safety), location of fire extinguisher/water/sand buckets (away/at a distance) from cooking place, cleanliness of walls (no lizard), ceilings (no Cob-Webs) and floor (no cockroaches) are all the variety of contents/items/ areas of observation of MDM implementation, using observation technique.

2.2.4 Case Studies: After the primary survey is completed and initial stage of analysis is completed, schools with problems and exemplary performance in MDM are identified for intensive scrutiny, analysis and review using case study analysis.

2.3 Techniques and Tools:

Questionnaire and Interview are the two main techniques adopted for the study [Tool is a measuring instrument of variables and their inter-play in reality contexts. Technique is the skill involved in using tools]. These techniques are supplemented by In-Depth Interviews (IDI), FGD, Case Study, observation and documentary techniques.

Questionnaire is a multi-purpose tool. A questionnaire is used in this study. It comprises of variety of sections. General information, district-wise, about sample schools and students, coverage of beneficiaries, infrastructure facilities in schools, flow of funds, standard operating procedures – SOP compliance, health care, problems of implementation, students' information on enrolments, attendance, MDM attendance, transition rates, progress and performance in studies, performance on LAT/CEO, inclusiveness of the scheme, are all

covered in the Tool 1 of the questionnaire. Tool 2 is for capturing parents' perception of benefits to their children through MDM/Milk, food security at home, and other details which will be examined against their background for which data is collected. Tool 3 is focused on students' perceptions of the scheme, discriminatory practices (if any)/social mixing, consumption of nutrient/health tablets, food security at home. Tool 4 is directed to collect information from NGOs and their coverage of schools, problems they may face, details of reimbursement, NGO contributions for the scheme. Tools 5/6/7 are for officers of the Department. Information on their M and S practices, Coordination problems, Communication procedures are collected in these tools. Tool 8 is for Field Supervisors of the project.

FGD is adopted for parents, students and MC members/SMDC members. Areas of observation are indicated to the FIs and Supervisors. Cases of Best Practices/problem schools are obtained from the M & S officers which will also be cross-checked with field-level questionnaire data so as to choose cases for case studies. Secondary data collected at schools from registers/records are subjected to documentary analysis, part of this data being time-series. IDI is of Educational officers.

2.4 Sampling Frame:

The universe of study is heterogeneous. Hence, stratified random sampling technique is adopted for the study. Stratification of the Universe is as follows.

At the second stage, type of schools – LPS, HPS and HS are considered as basis of strata. Nearly 16 per cent of HPS have been upgraded to 8th standard. As such both 1 to 7 HPS and 1 to 8 HPS are considered. Likewise, there is a small chunk of 9 to 10 HS and a large proportion of 8 to 10 HS considered. At the third stage, medium of instruction is considered as strata. While majority of schools continue to be Kannada medium schools, there are Urdu medium schools in the Kalburgi division and Marathi medium schools in Belgaum division. There are also English medium schools – Government (less) and Private aided schools. They are also distinctly considered. Size of the village automatically gets reflected in the sample. LPS, 1 to 5 standards, are normally located in small villages. HPS 1 to 7 are located in medium sized and big villages/Hobli headquarters. Normally high schools are located in Hobli headquarters/Taluks/District headquarters.

This study is comprehensive in terms of sample spread. It is spread across all the 34 educational districts. 3 taluks are selected in each taluk. Hence, the study has been conducted in 102 out of 224 taluks in the State.

2.5 Volume of Work

2.5.1 The study / field work design is guided by the following parameters.

15 schools/ District

RURAL

Govt. Schools=8	Aided Schools 2
High School – 2 Higher Primary School – 5 Lower Primary School -1	High School – 1 Higher Primary School – 1
Total 8 Schools	Total 2 Schools
URBAN	
High School – 1 Higher Primary School – 3	High School – 1
Total 4 School	Total 1 School

Note: Marathi schools in Belgaum Division

1 District (7 + 8) = 15 schools

Rural–40 LPS +211 HPS + 100 HS

Urban – 5 LPS + 89 HPS + 65 HS

Total 510 Schools

2.5.2 Documentary Analysis:

Secondary Data – NIC, JD (MDM), 15 Schools in 1 district– Registers, Records

2.5.3 Observation/ Interviews

15 Schools – Observation data

Interviews per school–5 girls, 5 Boys, parents–10 persons 1 District–150 Interviews/FGDs

Plus Interviews of ADPI / BEO/BRP/CRP / Others –

MDM Assistant / CRC / BRC / HT / SDMC / MC / NGOs (as applicable)

2.5.4 Meetings with (by PD / Supervisors)

Health Department (Nutrition / Other tablets); KMF (Ksheera Bhagya Scheme) / Dt. Milk Unions;

KFCSC – Edible oil / salt / Tur Dhal / etc;

DDPI / others – Supply chain for Rice / Pulses / Oil /

Gas / Salt / Milk / Tablets; Dry taluks, coverage if any, during summer – 9 districts –

Akshaya Patra Yojane – NGOs as applicable

2.5.5 Taluk Visit:

Sample was drawn in collaboration with KEA and with help of MDM officer/BRC. Field work – 1, Dt – 16 to 18 days–1FI

3 Taluks – 1 Districts – 1 month – same FI. Sample has 3 taluks in each district.

FI needed for 34 Districts / 102 taluks – 34 FIs including Bangalore City, Supervisors: 4 Divisions – 4 Supervisors appointed Cross Check – (i) FIs work in sample schools – Records / Documents; Social Category reporting Health Card; Tablets register;

Supervisor – (ii) Health Care in schools

(iii) Conduct FGDs – 1 School in each Taluk – SDMC /Parents/MC/Teachers / GP Members

(iv) Interview – 2 or 3 Officers / district (Total 68 Officers); 5 State Level Officers (PD had been done).

Total 76 Officers have been interviewed.

2.6 Plan of Data Analysis

1. Based on the primary data collected and sample size appropriate analytical tools have been adopted to draw valuable scientific conclusions:
2. Analysis have been both qualitative and quantitative. There is district-wise and division-wise analysis of data relating to all **Evaluation Questions** in the **ToR**. Simple percentage analysis has been engaged in. Enrolments, attendance and achievements data are subjected to quantitative analysis. Other primary data are subjected to qualitative analysis.
3. There is a district update on comparable parameters. Likewise, there is a division-wise update and a consolidated State update on all variables.
4. Districts are ranked on discrete and composite scores of MDM performance.

2.6.1 Details of analysis

1. Qualitative/Quantitative; Simple percentage analysis
2. Correlation between MDM attendance and achievements of students-LAT, X public examinations
3. t-test analysis across divisions in MDM Performance.
4. Ranking of Districts on MDM performance

3. Review of Literature and Review of Studies

3.1. Introduction:

Review of literature and review of previous evaluation studies enable the current research/evaluation study to identify the variables of a reality (MDM Programme and Performance), interplay of variables/dynamics of relationships across all variables and sub-variables of the given reality. An appraisal of the methods and techniques adopted by previous researchers, the plans and techniques of analysis engaged in is possible through a review of studies. All these understandings facilitate the formulation of hypotheses (stated or unstated), delineation of objectives of the study in the context of the hypotheses (if objectives of the study are not already given in the ToR for a study). Identification of indicators of the study and their interactive relationships, formulation of tools (questionnaire, IDI/FGD schedules, Observation data sheets, checklists for verification of compliance to expected behaviours, case study data sheets) are done within the framework of objectives/hypotheses. They may also need to conform to evaluation questions and log frame theory of change as approved by the agency that issues the ToR. Plan of analysis is tailored to the nature of data collected (eg: secondary data – documentary analysis), type of tools used and techniques adopted for data collection. Hence, it is observed that Review of Literature has a bearing on all stages of research on a current evaluation study in a sequential/chain-effect manner.

Interpretation of data has to be faithful to the quantified data-base and the theory of change, theoretical framework of the study. Findings have to be stated in precise and succinct style. Conclusions are to be based on findings and analysis of results. Recommendations for policy changes (if any) need to be based on evidences discovered in the study. Policy shifts that need immediate attention (short term) and that may be done in a phased way (long term) are to be differentiated.

In sum, review of studies and literature will throw open understandings of the past that shed light on the present and provide a beacon for the future. It will be wise to go with the adage: “If one does not learn from the past, one will be compelled to suffer from the same mistakes that had been committed by earlier generations and expose the future generations to a life of risk and hazards.” This will be a social sin and an unethical behaviour. Such an understanding applies to the study of MDM programme also.

3.2. History of Evaluation of MDM Programme

MDM is an age old programme, more than a century old. In its present form, it is 2 decades old. Looking back at the correctness of one's trodden path is essential human nature. This has happened in case of MDM programme also in the form evaluation studies, concurrent/formative evaluations, M and S reports by national/state level bodies, Annual work plan and Budget observations on the programme, Social Audits of the programme, sample surveys and the like.

This study gives a highlight of a few of these methods adopted in the past.

3.3. M and S Reports of the National Level Initiatives (MHRD)

The MHRD (GoI) started 2 flagship programmes in 2001. They are SSA and MDM. Within a year, State Level Monitoring initiatives in a phased manner were launched.

Institute for Social and Economic Change (ISEC), Bangalore and Regional Institute of English (RIE), Mysore, were identified by the MHRD for conduct and submission of periodical evaluation reports to MHRD on (SSA and) MDM performance. Out of 20 districts, ISEC was entrusted with 13 and RIE with 7 districts. A State Report was to be given by the team leader at ISEC. The present researcher was the team leader for this assignment (honorary work) from 2002 to 2006. Copies of the Reports are with SSA, State Office, ISEC and MHRD.

3.4. Joint Review Missions:

The MHRD/GoI is mandated to constitute JRMs periodically. Foreign funding agencies, State level senior most officers of SSA/MDM, Senior Consultants in States (present researcher – twice), Ed.CIL Officers/GoI, experts, constituted review teams. Based on sample surveys, the JRM submitted reports to MHRD that would guide funding support to MDM/SSA. Reports are available (Karnataka) with State Office of SSA/SPD, CPI/JD (MDM) and MHRD. Reference is made to 4th JRM observations in the current report, with reference to NGOs performance.

Government of India Review Mission on MDM comprising of representatives from MHRD, State Education Departments, UNICEF and representative of Office of the Supreme Court Commissioner in its half yearly reviews have observed the following concerns. Consolidated concerns are presented here (2014):

1. MDM scheme has several potential benefits, especially on girls, dalits and adivasis – enrolments, attendance, nutrition, socialization.
2. Studies reviewed by MHRD teams have revealed positive effects on all these variables.
3. Caste based discrimination is observed in some regions.
4. There have been instances of irregularity in supply, corruption, lack of hygiene, though incidences are low. (Source: MDM Scheme: Wikipedia).
5. [Article 24 (2C) of, ‘Convention on the Rights of the Child’, India has committed to provision of adequate nutrition for children. It is covered by the National Food Security Act, 2013 in India]

3.5. Concurrent Evaluation Reports:

The Joint Director (MDM), Karnataka commissions concurrent evaluation of MDM organization, conduct and performance periodically, the present evaluation being one such exercise. There was such an evaluation in 2009 completed by Price Water Coopers Ltd. Another such evaluation was completed by STEM, Karnataka in 2014. That was the last evaluation in this genre. Highlights of the STEM evaluation are presented here.

Source: “Concurrent Evaluation of MDM Programme of Karnataka State”, by STEM, Bangalore, 2012, Report in 2014.

Executive Summary: Descriptive only

FINDINGS

1. MDM helps to ward off children’s hunger. It is served in adequate quantity.
2. Nutrition content in MDM is sub-optimal.
3. Severe under-nutrition (22% students), mild under-nutrition (31%). Mysore district is better than Bangalore North. Severe incidence is in Koppal in both sexes.
4. Severe under-weight 21%, Mild underweight 22%, normal weight (BMI) 51%, overweight 3.3%, obese 1.9%. Girls outnumber boys in underweight. Gulbarga has highest underweight kids.
5. Anaemia is 57% as per IAP standards.
6. 30% students wash hands before food and 39% wash with soap after food.
7. Parents report that MDM has facilitated better nutrition and attendance in their wards.

3.6. Social Audit of MDM in Karnataka State

The Department of Education, JD/MDM, commissions ‘Social Audit’ of MDM as per a mandated policy of the GoK for all Departments of Government. The Social Audit is conducted periodically. Highlights of the Social Audit report of MDM programme in the State for the year 2016-17 is presented here, the latest year for which such a report is available.

SOCIAL AUDIT OF MDM, 2016-17

Context: The Social Audit Directorate of MNREGA/RDPR, Bangalore conducted the Social Audit of MDM scheme during the year 2016-17 in 20 schools each of Bengaluru and Belagavi districts. Concerns of social audit (objects) are stated to be transparency and accountability, fairness (equality) in implementation, identification of positive and negative aspects in implementation as well as effects on attendance of students, arresting drop-outs, improving children’s health and school studies. All these 40 schools are served by NGOs. Duration of the social audit was 6 days, in each district. The team comprised of ADPI (MDM), 2 parents, 2 village resource persons, headed by a member of the Social Audit Directorate. Apart from schools, the team interviewed DDPI, senior officers of DoE in the districts, HTs of sample schools, JD of division and staff therein, the NGOs, cooks, school children and their parents/guardians.

Findings: Findings are classified under positive and negative factors.

Positive Factors:

1. Coverage of MDM is 93.8 percent in Bengaluru district, while it is 90.2 percent in Belagavi district.
2. MDM is served without any discrimination.
3. 92.5 percent schools had got medical check-up done and distributed folic acid.
4. 55% schools maintain registers.
5. 58% schools provide drinking water.
6. In a few schools in Belagavi, sweets are served to children twice a month (Gokak taluk).
7. In 97.5% schools children wash their hands before food.
8. 97.5% schools receive food well within time.
9. Cooking Centres (Kitchens) are observed to be clean and hygienic.
10. Water used for cooking is clean.
11. By and large, food is served in clean places.

12. Toilet facility is there in 82.5% schools.
13. 92.5% schools wash cookware and maintain hygiene.

Negative Factors

1. Number of schools in both districts are not observing the positive factors. The incidence is reported to be high and relatively higher in Belagavi district schools. However, though insignificant in incidence, number of violations appear to be 18 out of 20 factors in Bengaluru division while it is 10 out of 20 in Belagavi divisions. On three such violations, Belagavi's record is very poor.
2. Problem of supply of drinking water, non-compliance in maintenance of registers, non-involvement of community – SDMC/MC, shortage of toilets, short supply of food grains/cooking staff are some of the notable negative factors.
3. Average enrolments have declined during reference years 2010-11 to 2012-13, attendance percentage also has declined, retention has gone up, transition rate from 5th to 6th has declined.
4. Teaching time is affected due to MDM in 4% schools.
5. MDM has promoted social integration.
6. 88% students have health card.
7. 97% schools report on shortage of contingency amount.
8. MC details are there in only 33% schools.
9. In 95% schools teachers monitor MDM.
10. 11% schools have kitchen garden.
11. M & S by educational officers, of MDM, is weak.
12. NGOs travel long distances to supply food. SWOT analysis has been made of MDM.

Recommendations:

Variety needs to be ensured in MDM menu; FEFO for tablets needs to be monitored; Drinking water at school itself needs to be provided; M & S needs to be strengthened; CCTV needs to be installed; Community involvement – SDMC/MC needs to be increased.

Suggestions Given

Involve SDMC in MDM supervision; Create awareness among public about MDM; Distribute nutrition tablets regularly; Constitute a school-wise committee to oversee MDM

implementation; Ensure children's attendance who take MDM; Ensure adequate supply of quality food grains; Discourage food preparation in Central Kitchens and encourage school-based kitchens; Give training to schools/teachers in maintenance of records/registers.

3.7. MDM Evaluation Studies

In the present review, all the studies completed before 2010, by and large during the period 1980 to 2010 are treated as a bunch. They are very briefly mentioned/identified in this report. There are 43 studies in this section/bunch. Insights from these studies are presented here.

3.7.1. Insights from Studies upto 2010

(a) All India studies, including several States are extremely few in incidence. A study by NCERT (1981-82) and ORG (2004) are exceptions. It was the earliest comparative study.

(b) (i) Comparative studies of 2 or 3 States have been completed. Illustrations are those of Centre for Equity: Comparisons of Chattisgarh/ Rajasthan/ Karnataka. Karnataka was observed to be the best among the 3 States (2003); (ii) another study was by UNICEF (Baroda) which was a study in 10 States including Karnataka (2004). Positive impact on enrolments, attendance and retention, especially among girls was observed in Karnataka. (iii) Indian Institute of Dalit Studies completed a comparative study of MDM in UP and Bihar (2005).

(c) Quite a few studies have been completed on diverse components/ objectives of MDM. Holistic, comprehensive studies are not available. Concentration is on health or nutrition or education. Food security has not been in focus. A Brief mention of these studies is given in annexure IX.

3.7.2. Studies During and After 2010

a) Studies on Karnataka: There are four studies on Karnataka. They are presented here.

(1) Ranjita Sapkota: "Value Chain Analysis of MDM Scheme in Karnataka"; M A Thesis; TERI University, Delhi, May, 2015, Foci of Study: Supply Chain, Funds Flow, Information Flow, M & S – VCA technique.

Conclusion: Supply chain is systematically organised from State to ground level with involvement of private organizations (NGOs), community members by the Government.

- Cooking, food grains distribution, storage, transportation, fund transfer, information flow M & S. There are still bottlenecks, bottlenecks – over production of food, unnecessary inventories, waiting for food, lack of infrastructure facilities, underutilization of meals.

Recommendations:

- Procure food materials from local farmers.
- Use SHGs for community kitchen
- Maintain kitchen garden.

(2) Dr K Srinivas: “A Study of Best Practices in the Implementation of MDM Programme in Karnataka”, NUPEA, New Delhi, 2006.

Objectives: Present brief history and rationale, document best practices, give profile of schools with best practices.

Best Practices:

SDMCs play a major role (Mothers); Display Board, Teachers’ Involvement, Kitchen garden; Specific – 1 Cook/every centre/(SC/ST); Preference to widows/single mothers/destitute woman; Rain-water harvesting, Mixing of children for MDM service

(3) The National Programme of Nutritional Support to Primary Education [NPNS] – [MDM Scheme] – AWP & B, 2013-14, Karnataka

Section 2.8> In case of deficit in supplies (MDM), HMs are empowered to purchase out of MDM or other available (contingency) funds/SDMC account.

Findings:

Small schools (1 to 50) – Interruption when cooks go on leave (illness); Recommend steam-based cooking if strength is > 300; Give dining hall if the strength is > 500; Labour problem – Cooks/Stability of service observed; MDM coordination per Hobli needed. District level MDM training centre needed; Massive training under Food Safety and Standards, 2006, needed.

(4) Dr (Mrs.) Rama K Naik: “Evaluation of Akshara Dasoha Scheme in Karnataka”, College of Home Science, UAS, Dharwad, Karnataka, November 2010.

Objectives: Impact of MDM on enrolment and attendance (especially girls), retention rate, health and nutrition as well as learning abilities are the objectives of evaluation.

Findings:

Marginal increases in enrolments were observed across the years 2001 to 2005. It was higher at classes 6 and 7. MDM was attributed value in increasing enrolments by the stakeholders; Enrolments were substantial from poorer families; Reports of sickness had reduced and stunting had reduced; Rations used to be received during school hours disturbing academic functions; Absenteeism got reduced and attendance increased; Teachers felt MDM as a ‘burden’.

Recommendation: Study recommended the involvement of SHG groups in villages and Mahila Mandals in urban areas for management of MDM – cooking, learning and monitoring.

(5) Bharathi Mirajker and Usha Ravindra, “MDM Scheme in Rural Government Schools of Hassan District – Beneficiary Perceptions”, in “International Journal of Home Science”, Vol.17, Issue 3(1), pp.450-454, 2016.

Findings:

100 percent children are satisfied with MDM programme; Food served is tasty, sufficient and improved their health; Students sit with their regular friends; MDM is served without any partiality; MDM does not affect their learning time (99% children); Teachers supervise MDM with dedication; 6.25 percent parents were not happy with MDM food; Parents are satisfied with Central Kitchen management, but preferred wheat based food on some days.

b) Studies in North Eastern States of India

There are 2 studies from the North Eastern States of India – Meghalaya and Sikkim.

(6) Manju Singh, N Mishra: “Evaluation Study of MDM in Meghalaya”, Council for Social Development, Hyderabad, 2010, (70 schools, Survey Design).

Findings:

SMCs unhappy over volume of contingency amount to process food, including cooks honorarium/salary; Part of ration sold to purchase kitchenware; Pre-primary classes in same building at same time. MDM did not cover pre-primary children (5 days a week); Limit teachers’ involvement. Need to deliver ration at school point.

(7) Savitha Mishra: “Monitoring and Evaluation of MDM scheme in Sikkim”, “International Journal of Humanities and Social Sciences”, ISSN: 2319-7722, www.ijhssi.org, Vol.2, Issue 51, May 2013, pp.58-63.

Findings:

Coverage of schools under MDM is marginally higher than that was planned in 2010-11. This was the case in case of students during all the three years, 2008-2011. Even the MDM served on working days was more than that planned for the purpose. However, utilization of food materials was less than the allotment.

c) Comparative Studies in Other States (2 States only) of India

There are studies in States in a Comparative framework as well as in only one State contexts of the country.

Comparative studies are there by Anbarasan and Ahuja of Uttarkhand and Tamil Nadu and by Sridhar Sitaraman of UP and Rajasthan. They are presented here.

(8) V. Anbarasan and A Ahuja: “MDM: A Comparative Study between Uttarakhand and Tamil Nadu”, TISS, 2011, The Indian Journal of Social Work, Vol.72, Issue 1, January 2011.

Findings:

Implementation in TN is good and far better than that in Uttarkhand. TN adopted Activities Based Learning (LPS) (ABL) and Active Learning Methodology (ALM) along with MDM. This had a spillover effect on positive attitudes towards MDM; MDM implementation in Uttarkhand was a casual affair; Significant proportions of children attend school without breakfast; Parents in both States are pleased with free benefits; Officers/staff in Uttarkhand recommended privatization of MDM management; Scheme management is structured/organised in Tamil Nadu. A dedicated ‘organizer’ was appointed to oversee MDM in every block; The study recommended involvement of GPs, VECs, SHGs and retired school teachers in running of MDM programme.

(9) Sridhar Sitharaman: “Impact of MDM on Nutritional Status of School Going Children”, NIRD, Hyderabad, 2014.

Findings:

Nutritional status of urban children better than rural children; Gradual increase with age in calorie intake. Boys intake more than that of girls; High correlation with parents income

and nutritional status of children; Educational achievement highly correlated with nutritional intake, home environment, physical development and physical health; MDM had a better effect on retention rates than nutritional status; Performance of UP was better than that of Rajasthan; Awareness building among parents through adult education on nutrition and health of children, regular health checkup and maintenance of proper health records were recommended.

d) Studies in Other Cities and States

Studies in Delhi, Kolkata, Punjab (Medak), Andhra Pradesh, UP, Haryana, Orissa, Chattisgarh and Bihar are included herein (9 States of India).

(10) S Sembiah, et.al., “Safety of food served in MDM programme: An in-depth study in Upper Primary Schools in Kolkata”. “Journal of Family Medicine and Family Care”, Vol.16, Issue 2, March 2019.

Findings:

Headgear, aprons, gloves not given to cooks; Display board on dos and don'ts not observed everywhere, in local language/ Bengali; Hygiene maintenance is below par.

(11) Manpreet Kaur: “MDM scheme evaluation in Punjab” (Jalandher district), ‘International Journal of Applied Research’, Vol.2 (No.5), 2016, pp.14-17.

Whole study is based on secondary data/media reports/government websites.

Findings:

Scheme is for 200 days, one meal a day. One meal for 5 days a week is not adequate to provide needed nutritional support; Average enrolments did not increase; drop-out rates fell; MDM is not the only factor in quality schooling.

(12) Swathi, N, Umadevi K and Suchiritha Devi, S: “Children’s acceptability of MDM food supplied from Central Kitchens” - A Study of Akshaya Patra in Medak district of Andhra Pradesh; JT Agricultural University, AP., 2018, in “International Journal of Current Microbiology and Applied Sciences” ISSN 2319-7706, Vol.7, No.7, 2018, <http://www.ijcmas.com>>

Findings:

99% rated ‘adequacy’ as good; 35% quality; 88% taste; 85% texture; 89% flavour; 91% appearance; Quality was rated as ‘not good’ (65%) because it was ‘less spicy’. Students did not like ‘plastic cans’ used to supply ‘butter milk’; Individual items served on different

dates were rated. Fruits were of 'poor' quality; Parents were happy with the programme, but many preferred service of 'eggs'. Food used to get 'cold' at the time of service.

(13) Shailaja Singh, Nisha Gupta: "An Evaluation of Effectiveness of MDM with special reference to reduction of malnutrition: A comparative study in districts of Uttar Pradesh", "International Journal of Health Sciences and Research", www.ijhsr.org. ISSN: 2249-9571, 2016.

Findings: MDM has helped in improving nutritional status of children.

(14) Wazir Singh Dhankar: "Evaluating the National MDM programme w.s.r.t. Haryana" [Rohtak District] in 'International Journal of Advanced Research in Management and Social Sciences', ISSN: 2278-6236; May 2015.

Findings:

Parents are allowed access to check on the quality of MDM; Records are not properly maintained; Wages to be revised periodically for cooks; SWOT analysis through TQM is recommended.

(15) Ambarish Datta et.al: "Assessment of fortification of MDM programme in Dhenkanal district), Orissa (2016-2018)", IIPH, Bhubaneshwar, September 2019. [Commissioned by WFP, India]. Published May 2020.

Findings:

FRK (Fortified Rice Kernel); MNP (Multi Micronutrient Powder); Both are used to fortify MDM curries – for provision of Micronutrients to children – experimental try outs in Dhenkanal district; This evaluation study is adopted both for formative/concurrent purposes; 597 students for FRK trial, 578 students for MNP trial and 589 students as control group – neither of them.

Folic acid was also given –

90 percent students consumed MDM for all 6 days. 60 percent parents were aware of the experiment. They liked the fortified MDM, as per their children's feedback; 70 percent children liked the taste of fortified MDM; 50 percent reported it to be beneficial; Both FRK and MNP are equally effective methods of fortification of MDM; FRK is operationally more feasible than MNP,

(16) SCERT, Chattisgarh: “Study of Impact of MDM programme on School Enrolment and Retention”, Raipur, Chattisgarh, August 2014.

Findings:

Kitchen sheds in rural schools are located in schools. In urban areas, Central Kitchens are used; MDM grains are stored in a separate store room in 40 percent schools, while this is done in GP member’s houses in 33 percent (villages) schools; Eatables were not kept exposed anywhere; 80 percent schools had sufficient cookware; Students’ liking for MDM food ranged between 50 to 70 percent across the districts; 80 percent students are satisfied with the quantity of MDM served to them; Menu was felt to be monotonous with heavy use of potatoes or bottle gourd; Students preferred salad, roti and sweets.

(17) Vineet Mishra et.al., “Assessment of MDM scheme in PLAN intervention districts of Bihar”. ACVIDA [Alliance to Covert Vision in Development Action], Bihar, 2014.

Findings:

Schools terminate classes after serving MDM, in most of the places; Time management for MDM is inefficient. Normally, one hour is taken to conduct MDM programme; MDM planning leaves much to be desired; SMCs function as obstacles to MDM rather than lending positive support; More than 50 percent schools do not possess sufficient infrastructure for MDM. Soaps are not there for washing hands in 99 percent schools; MDM food is reported to be of average quality.

e) Studies Across Several States of India

(18) (i) The Planning Commission of India (now NITI AYOOG) conducted a study on ‘Performance Evaluation of Cooked MDM’ across 17 States, 48 districts and 480 schools (May 2010). Two Blocks had been chosen from each district. Primary and secondary data were collected from State/District/Block/Village/ School/Parents/Students. Reference period was for 2000 to 2006. Study was launched in 2006 and completed in 2007. [This study is before 2010. Still, it is included for its national level significance. Karnataka was one of the 17 States studied].

Findings:

MDM coverage was pro-poor everywhere. There were 40 percent OBC, 23% SC, 12% ST and 25% others among MDM consumers. 33% parents were non-literates; Majority of schools did not involve Gram Panchayats in MDM management; There was no

linkage between education and health departments, except in Andhra Pradesh and Karnataka.

(19) ii) ‘Sigma Research and Consulting’ Organisation conducted an “Assessment of MDM programme” in 8 States of India (2014).

Findings:

Findings on adequacy of MDM (every day) served, service of additional food/second service, attendance/coverage of students and social equity during MDM (similar variables) have been expressed in percentage terms. Overall performance across 8 States in percentage terms is as follows:

States	Karnataka	AP	Odisha	Gujarath	Rajasthan	UP	Assam	Chattisgarh
Performance Score/Values	9.57	9.57	9.29	10	9.86	9.43	8.71	9.86

Values/scores are out of a maximum of 10. The order of performance of States from highest to lowest values are Gujarath, Chattisgarh, Rajasthan, Karnataka, AP, UP, Odisha and Assam. The first 5 States scored over 9.5 out of 10.

MDM was observed to bear positive impact on all health/education/social equity parameters.

3.8. Summary Insights of Review of Studies (all studies under reference).

a) All the studies have addressed (covered) one or the other objectives of MDM. There has been no comprehensive study that has addressed all the concerns/objects/values of MDM. Health and Nutrition have been addressed by some studies: Education Variables are addressed in a few studies; Food Security is almost left out in the studies reviewed so far.

b) Only one or two studies are completed on a large scale covering all States or covering all districts in State-specific studies.

c) Invariably, positive effects/impact/values of MDM have been discovered/highlighted by all the studies.

1. Community involvement is either not addressed or non-existent in MDM management – SDMC/MC/Mahila Sanghas/SHGs etc.
2. Samples are quite small in most of the studies.

3.9. Distinctiveness of the Present Study

1. The present study is comprehensive in all respects. It touches all the stated objectives of MDM and the dynamics of management therein. Education, health, nutrition, food security, social equity are the objects covered. Relevance, efficiency, effectiveness, sustainability and impact are the parameters addressed. Customer satisfactions, value for money, transparency, accountability and in sum 'good governance' are the concerns in this exercise.
2. Sample is highly representative of the diversities in operation of the programme. Sample covers the whole State.
3. Districts are ranked on performance indicators. Compliance to Standard operating Procedures – SoP guidelines are not only examined but also the districts are ranked on their degree of compliance to SoP both in discrete and holistic terms.
4. Unique Cases of schools are analysed and highlighted through case studies.
5. Schools managed by both NGOs and the Department are covered.
6. Foci is both on micro management at school level and macro management at State/District/Block level.
7. Validity of field data are examined through Supervisory checks and 'Deviant' analyses.

In sum, the present study is distinctive on several counts.

4. Results and Discussions

4.0 Scope of Field work

There are 515 schools-LPS/HPS/HS, 5158 students at a minimum of 10 students served by all NGOs and 76 educational officers-28 CRPs, 23 BRP/BEOs, 25 ADPI (MDM) Coverage in State is 53.48 Lakh students from 54839 government sector schools.

4.1. Profile of Schools covered in this Study:

LPS/HPS/HS are in proportion of 8.54, 59.22 and 32.33 percent respectively. 81.36 percent are government schools. Rest are private aided. 69.23 percent are rural schools. 40 percent schools have anganwadis attached with them. 91 percent are coeducation schools. 66 percent schools are from post independence period. 80 percent are in GP villages. 91 percent are well connected by roads and public transport (85 percent). MDM supplies will not be difficult to almost all schools.

4.2 Implementation of Milk/MDM in Schools

4.2.0. Calorific Values of Milk/MDM

Milk/MDM carry several nutritional and health benefits apart from addressing food security concerns and promoting attendance and learning. Normative values of calories, protein, carbs, minerals, etc., are discussed and annexed to this report [See Annexure No. XIX].

4.2.1 Management Concerns

Table 4: Milk/ MDM School Facilities in Schools

Divisions	Bangalore		Belgaum		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
Sufficient Utensils	145	87.88	115	82.73	84	93.33	109	90.08	453	88.54
Fire Extinguisher	153	92.72	116	82.45	72	80	102	84.30	443	86.02
Eating Plates	117	70.90	120	86.33	78	86.66	78	66.46	393	76.31
Drinking glasses	113	68.48	114	82.01	78	86.66	79	65.23	384	74.56
Children bring	47	28.48	32	23.02	18	20	59	48.76	156	30.29
Total Schools	165		139		90		121		515	

Source: Primary data

1. 88.54% schools have reported that they have sufficient utensils. Kalburgi division districts are relatively better in this regard.
2. Fire extinguisher is mandated by the Supreme Court after a fire accident in a school in Tamil Nadu (Coimbatore) during MDM cooking, a few years ago (2010). All schools, all over the country were directed to install fire extinguishers. Government schools were funded (including Karnataka) for the purpose. Still 13.98% schools, 72 out of 515 schools, report that they do not have a fire extinguisher. Alternatively, they may maintain a bucket of sand/ water near the kitchen. This arrangement will be discussed at a later section. Lowest incidence relatively is in Kalburgi district where 20% schools do not have a fire extinguisher.
3. Around 25% schools report that they do not have sufficient eating plates/ drinking glasses. Children bring them from over 30% homes. Such an incidence is highest in Mysuru division/ districts where 48.76% children bring them from homes.
4. This arrangement is highly unfair to children, in schools where they have to bring from homes. This imbalance in facilitation of MDM needs redressal.

Position across districts: Districts where problems of shortage of eating plates/ drinking glasses need attention are Kolar, Bellary, Chamarajanagar, Mysuru, Haveri, Vijayapura, Kalburgi and Yadgir (8 districts schools- Incidence in more than 8 schools- out of sample 15 schools, Haveri, 18 schools).

4.2.2 Display of Menu

Data presented here is based on Observation of Field Investigators/ Supervisors of the study.

Table 4.1: Display of Menu

Divisions	Bangalore		Belgaum		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
Menu on display	152	92.12	115	82.74	73	81.11	94	77.68	434	84.27
Date/ Day/ Menu details written	140	84.85	101	72.66	68	75.55	82	67.77	391	75.92
Total Schools	165		139		90		121		515	

Source: Primary data

84.27% schools in the State display day's menu. However, only 75.92% schools mention details of the day, date and menu. These practices are relatively better in Bangalore Division districts while practice is of relatively low incidence in Mysuru district.

Position across districts: Districts which need to be better monitored are: Bagalkote (6), Dharwad (9), Bellary (6), Chamarajanagar (10), Chikmangalur (10) (6 and more than 6 out of 15 schools do not observe this directive)

4.2.3 Persons engaged in cleaning duties of the Kitchen

Table 4.2: Persons engaged in Cleaning duties of the Kitchen

Divisions	Bangalore		Belgaum		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
Ayah	26	15.76	26	19.71	7	7.78	6	5.96	65	12.62
Cooks	139	84.24	113	81.29	83	92.22	115	95.04	450	87.38
Total	165	100	139	100	90	100	121	100	515	100

Source: Primary data

1. A large proportion of schools do not have Ayahs- Kitchen Assistants.
2. JD with MDM office has issued guidelines/ norms for engagement of cooks/ ayahs on contract basis.
3. By and large, cooks clean the kitchen, even in large schools.

Position across districts: Districts which have Ayahs (7 and more than 7 schools out of 15) are Bangalore North (9), Bagalkote (7), Bangalore South (9) and Bidar.

4.2.4 Cleaning of eating place and eating plates: Persons who cleans plates:

Table 4.3: Cleaning work : Persons who cleans plates

Division	Bengaluru		Belgaum		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
Ayah	33	-	50	-	19	-	13	-	115	-
Students	119	72.12	75	53.95	45	50	102	84.29	341	66.21
Others	13	-	14	-	26	-	6	-	59	-
TOTAL	165	-	139	-	90	-	121	-	515	-

Source: Primary data

Norms for cleaning work: there is no norm with regard to cleaning of eating plates. The norm for cleaning kitchen and eating places is that ayahs should clean kitchen and eating places. Cooks need to help ayahs in cleaning kitchen. Kitchen cleaning is done as per norms. However, cleaning of eating places is not done by ayahs everywhere. There are no ayahs in most of the schools. Children (girls) do it. **This is sex-typing practice.**

1. Students clean eating plates in 66.21% schools in the State
2. It is quite high in Mysuru Division, 84.29% and only over 50% in Belgaum and Kalburgi Divisions.

Position across districts: In majority of schools (8 and more than 8 out of 15) students' clean plates in the following districts:

1. Bangalore Division: Bangalore Rural (12), Chikkaballapura (14), Chitradurga (12), Davanagere (9), Kolar (14), Madhugiri (14), Ramanagara (10), Shivamogga (9) and Tumkuru (12). Total 9 out of 11 districts. In Bangalore North/ South or two urban districts it is not so.
2. Belgaum Division: Belagavi (8), Chikkodi (9), Uttara Kannada (8) and Vijayapura (10). Total 4 out of 9 districts.
3. Kalburgi Division: Bellary (13), Koppal (11), Raichur (10), Total 3 out of 6 districts.
4. Mysuru Division: All 8 districts in the range of 11 (1 district), 12 (3 districts), 13 (1 district) and 14 (3 districts).

Concern: Should students clean their own plates or should Ayahs/ others clean it? This is a value loaded question. Self- discipline proponents would welcome it. Spokespersons for small kids may not approve of it. Let children learn personal hygiene, may get more votes.

4.2.5 Water Facility for MDM

Water is needed for cooking, drinking, cleaning the kitchen and washing utensils, for the MDM programme. Do the schools get sufficient water? Here is data.

Table 4.4: Water Facility for MDM

Divisions	Bangalore		Belgaum		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
Available	144	87.27	125	89.92	77	85.55	113	93.38	459	89.12
Total	165		139		90		121		515	

Source: Primary data

At least 11% of schools in the state (sample schools) report that they do not get sufficient water at the school- through- piped water supply, bore wells, wells, ground wells. Problem is maximum in Kalburgi division. Mysuru division is relatively in a better position.

Position across districts: Districts which have higher than 20% schools reporting shortage (3 or more than 3 out of 15 schools) in the sample are: It is recalled that every district carries 15 schools means 20 percent.

1. Bangalore Division: Kolar (4), Ramanagara (3), Chikkaballapura (6)
2. Belgaum Division: Haveri (3), Sirsi (3)
3. Kalburgi Division: Bellary (3), Bidar (4)

Table No. 4.5: Management of water in schools with water scarcity.

Divisions	Bangalore	Belgaum	Kalburgi	Mysuru	State
Villagers supply	2	3	1	-	6
Bring it from a distance	4	3	5	-	12
Tank supply (others)	4	5	3	3	15
No response	11	3	4	5	23
TOTAL	21	14	13	8	56

Source: Primary data

Schools get water from private suppliers (water tankers) or travel distances to get water. Water is transported either by tankers/bullock carts, or ayahs/cooks bring them from village / local wells when distance is short. Norminal praymets, if any, are made through contingency funds. HT/Nodal teachers' upervise this work.

4.2.6: Maintenance of kitchen garden in schools

Both land space and water facilities are needed for maintaining a kitchen garden. Hence, all schools cannot maintain. Wherever they are maintained, there are a few advantages for MDM- vegetable supplements for MDM, fruits, participatory activities between students and teachers. Here is data.

1. 150 out of 515 schools maintain a kitchen garden, 29.19%. Other schools cannot do so as they are constrained by access to land or water or both. Most of them grow vegetables and fruits. Only 34/150, 22.66% report that the kitchen garden satisfies their vegetables requirements. For 77.34% (of 150 schools), it is only a supplement. Majority of these schools, 105/150 purchase vegetables from the market, just like other 365 schools (out of 515) who do not have a kitchen garden. Vegetables from kitchen garden will not be available throughout the year. HTs cannot recall the number of days of support from kitchen garden.

2. The Department had given a onetime grant of Rs. 3500/- to schools, based on feasibility criteria, to maintain a kitchen garden. 30 schools (out of 150 who maintain a kitchen garden) had received this grant (as reported). 41/150 schools use contingency funds for maintaining a kitchen garden, for 23/150 schools, SDMC meets the costs. In a few cases, Mothers Committees/ Philanthropists/ Others have been meeting the kitchen garden maintenance costs.
3. **Concern:** Kitchen garden cannot be maintained everywhere. It is noted that the UNICEF had promoted bio-intensive gardens in selected blocks/ taluks of the State. Gandhiji's model of Basic Schools mandated maintenance of kitchen gardens. Even in China, under the 'Responsibility System' (since 1984), kitchen gardens in homes/ schools were intensively and extensively promoted. China today is a leader in Horticulture exports in the world. It is advisable for promoting kitchen/ bio-intensive gardens under MDM, in a systematic way.
4. **State update:** A detailed account of maintenance of kitchen gardens in the State, using secondary data (MDM), is presented in section 2.4.5, Chapter 2.

4.2.7 Contribution of NGOs in kind

NGOs/others are contributors to MDM. A district-wise list of NGOs who have contributed in kind to MDM is appended to this report. Here is a State/ Division/ District wise data.

1. 40% schools have received NGO/ Others' support for MDM. It is high in Belgaum and Mysuru divisions while it is quite low (18.88%) in Kalburgi division. Their support is mainly for supply of eating plates/ in drinking glasses. In a few instances, even utensils have been received by schools. This is also true of steady supply of vegetables and fruits.
2. **Position across districts:** Districts where NGO contributions are relatively better are:
 - a) **Bangalore Division:** Bangalore North, Madhugiri, Shivamogga, Tumkuru
 - b) **Belgaum Division:** Chikkodi and Sirsi
 - c) **Kalburgi Division:** No incidence (count is for 8 and more than 8 districts)
 - d) **Mysuru Division:** Kodagu and Udupi districts (Total 8 districts out of 34)

3. Sathya Sai Annapoorna Trust

The case of the NGO, SAI, needs special mention. It is a non-profit NGO located at Muddenahalli HQ and serves morning breakfast to 26,489 needy children of 301 Government schools across 6 districts of the State, viz., Chikkaballapur, Kalburgi, Bengaluru Urban, Bengaluru Rural, Dakshina Kannada and Mandya districts.

Further, it contributes to the Nutrition programme of the State wherein milk is served to children. A nutrition/health milk supplement powder known as **SAISURE** is served to 3,34,799 students of 4,715 government schools across 17 districts of the State.

A pilot research study of the impact of the scheme – Saisure nutrition powder – mix in milk – showed that haemoglobin levels increased in the range of 6 to 13 per cent in the experimental group.

SAI has also shown that it is feasible and desirable to serve morning breakfast to all needy government school children.

A detailed note on Sathya Sai institution, SAI, is annexed in this report (Annexure No.XVIII.)

4.2.8. Receipt of Contingency Grant: Department gives one time grant of Rs.5,000/- for purchase of cook-ware to schools. 70.87% schools in the State have received this grant. There is not much difference across divisions in receipt of this grant by the school (proportion of schools). Schools have purchased gas stove and cook-ware from this grant.

4.3 Documentation Practices

4.3.1 Maintenance of Registers.

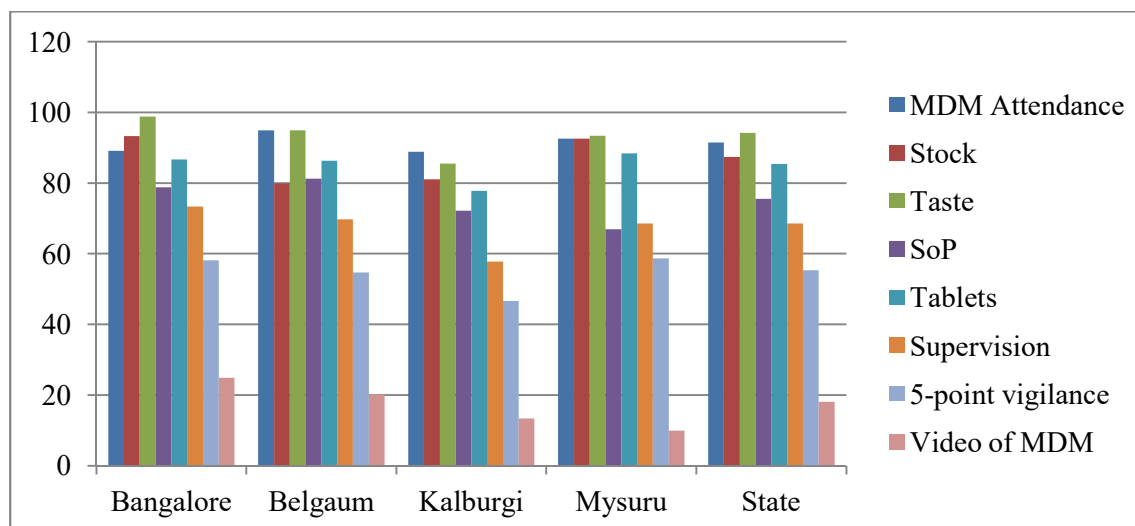
Following registers are expected by the department, to be maintained by schools: MDM Attendance, stock, taste, SoP, tablet distribution, supervision, five-point vigilance as well as a video coverage of conduct of MDM. 6 registers and a video. Trained Field Investigators examine maintenance as well as check for entries in registers. Register maintenance ensures transparency in functioning and facilitates easier monitoring by officers. Here is data.

Table 5: REGISTERS

Divisions	Bangalore		Belgaum		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
MDM Attendance	147	89.09	132	94.96	80	88.88	112	92.56	471	91.45
Stock	154	93.33	111	79.86	73	81.11	112	92.56	450	87.38
Taste	163	98.79	132	94.96	77	85.55	113	93.39	485	94.17
SoP	130	78.79	113	81.29	65	72.22	81	66.94	389	75.54
Tablets	143	86.67	120	86.33	70	77.77	107	88.43	440	85.44
Supervision	121	73.33	97	69.78	52	57.77	83	68.60	353	68.54
5-point vigilance	96	58.18	76	54.68	42	46.66	71	58.68	285	55.33
Video of MDM	41	24.85	28	20.14	12	13.33	12	9.92	93	18.06
Entries Observed										
Taste (YES)	121	73.33	98	70.50	50	55.55	77	63.64	346	67.18
Stock (YES)	119	72.12	88	63.31	52	57.77	78	64.46	337	65.44
SDMC monitoring (entries observed)	99	60	83	59.71	46	51.11	65	53.72	293	56.89
TOTAL SCHOOLS	165		139		90		121		515	

Source: Primary data

Graph 01: Maintenance of Registers



Register maintenance practices in schools.

1. A few schools across all divisions and the state as a whole do not maintain one or the other registers. Two of the seven registers are highly significant as non maintenance of these registers, viz; MDM attendance and stock registers, may lead to an impression that the programme is maintained without any transparency. Hence, there is scope for corruption and misappropriation of MDM provisions.

This may not be true for the following reasons:

- (i) There are a large number of LPS in the State which are located in satellite villages. These 1 to 5 standard schools are referred to as ‘Small schools’. There are schools with 10 or 15 students in 1 to 5 students; even bigger LPS may have 20 to 25 children which are all feeder schools to the nearby HPS schools. Distribution of ‘Small schools’/LPS schools and data on non –maintenance of registers are juxtaposed here

Table 5.1: Number of LPS and non-Maintenance of Registers

Divisions	Bengaluru	Belagavi	Kalburgi	Mysuru	State
Total schools	165	139	90	121	515
No. of LPS	15	12	05	12	44
MDM attendance Registers	18	07	10	09	44
Stock Register	11	28	17	09	65

Source: Primary data

Small schools with a few students do not/may not need to maintain a separate MDM attendance register. They can manage MDM with regular school attendance register.

In Belagavi and Kalburgi divisions, number of schools who do not maintain stock register is higher than total LPS. It is, possible that there are ‘small schools’ even among HPS schools which have 25 to 30 children in 1 to 7 standards.

There are many LPS, 1 to 5 standards which are maintained by only 2 teachers and HPS with 3 teachers. Workload may demotivate them in maintenance of registers. Outside the MDM programme, all schools in the state are expected to maintain around 25 registers, apart from teaching work, physical education, craft classes, Nali-kali arrangements at standards 1 and 2, visiting houses of long absentees to get them back to schools, enrolment campaigns [in May, June, December/CPE work], attending monthly meetings of CRPs, and a variety of other significant and sundry jobs. A ‘good’ school as per RTE Act standards need to have 5 teachers for a LPS [small schools] at 1 teacher per standard. Merger of small schools in the state has become a highly sensitive political issue.

This is not a justification for non-maintenance of MDM Stock Register. They need to maintain it. HTs point of view is presented here.

- (ii) Some schools do not like to share certain registers with outsiders-field investigators. They may simply say-‘we do not have it’. Hence, it is incorrect to infer that there is ‘misappropriation just because certain registers are not maintained.
2. 91.45% schools in the State maintain MDM attendance register. It is possible that small/ LPS schools may not maintain. All schools are required to send days MDM attendance to NIC/ BEO/ DDPI by MMS (SMS). Small schools may observe the practice without any register maintenance. There is not much difference across the 4 divisions in maintenance of MDM attendance registers.
 3. Schools are expected to maintain Stock Register. 87.38% schools in the State maintain it. Lower level of compliance, 79.86% is in Belgaum division.
 4. Taste register of the day’s food needs to be maintained. Nodal teacher/ HT are expected to taste food and record feedback. 94.17% of schools in State observe this. A little lower compliance is observed In Kalburgi division (85.55%).
 5. However, entries are observed in Stock register for only 65.44% schools. It is quite low in Kalburgi division (57.77%)
 6. The FIs report, as per observation and checking, that entries are found in only 67.18% schools. 26.99% schools’ entries are not there in Taste Register. Nodal teachers might have given oral feedback to cooks (HT also). However, entries should have been made. Very low compliance is observed in Kalburgi division (55.55%).
 7. Office of the Joint Director (MDM) has issued guidelines for management of MDM called as Standard Operating Procedures (SoP). Compliance to SoP is different from maintaining a SoP register. SoP register is a sort of Ready Reckoner of how the MDM is managed. This register is maintained in 75.54% schools. Another 24.46% schools need to fall in line. SoP register maintenance compliance is lowest in Mysuru Division (66.94%).
 8. Schools need to issue 3 kinds of tablets: iron tablets, once a week, vitamin tablets and de-worming tablets- once in 6 months and record the issue of tablets. 85.44% schools maintain a Tablets Distribution Register. Compliance is low in Kalburgi Division (77.77%).
 9. HT and Nodal teachers are required to supervise MDM operations- cleanliness, hygiene, caution exercised by cooks, storage of materials and similar concerns, as well as, record

their feedback. 68.54% schools in the State maintain a Supervision Register. Compliance is low in Kalburgi division (57.77%).

10. A 5-point vigilance register on care to be taken before food is prepared, during the processing of food and after food is served needs to be ensured and recorded by the HT/nodal teachers. 53.33% schools maintain these registers. Low maintenance (46.66%) is in Kalburgi district.

11. A video (few minutes) of daily MDM management needs to be maintained by the schools. Hardly 18.06% schools maintain a video coverage of MDM in their schools. It is low all over, lower still in Mysuru and Kalburgi divisions.

12. SDMC, in its regular (monthly) meetings, reviews the functioning of the school, including MDM. HT has to record proceedings in register. Meeting notice, agenda for discussion, proceedings, action taken report, members in attendance are to be recorded in the register. MDM review will find a place here. Nearly 57% schools maintain SDMC registers. There is not much difference across divisions. Entries are observed in registers of all schools.

13. District-wise analysis is in Basic Tables.

4.3.2 Explanation for difference between Registers maintained and entries observed:

Two examples are taken to analyze data on maintenance of registers and entries in the registers-Taste and stock registers. While 94.17 percent schools maintain taste register, only 67.18 percent schools reveal entries in them. The respective figures for stock register are 87.38 percent and 65.44 percent.

It is the duty of nodal teachers to taste the day's food and enter their feedback in the register. In case of stock register, this is the duty of either Head Teacher or Nodal teacher of the day. Lapses in regard to entries are due to laxity or attention deficit in regard to these duties. This is also substantiated by results of **case studies of 'good' and 'other' schools.** Here is abstract of results of these two types of schools on these two areas of concern.

There are 16 areas of concern analyzed from data of case study schools. Percent compliance of all schools under 'Good' schools category and 'other' schools category is analyzed on all these 16 areas of concern. Depending upon percent compliance, performance

of both types of schools are ranked on the basis of descending order of percent scores. Examples of ‘good’ and ‘other’ schools on 3 common areas of concerns which are related to maintenance of stock and taste registers are presented in a comparative frame of analysis.

Table 5.2: Comparative analysis of maintenance of stock and taste registers

Sl. No	Area of Concern	Percent Compliance and Rank in Performance			
		Good schools		Other schools	
		% score	Rank	% score	Rank
1	Rotation system	100	1	75	7
2	Management of Registers	90	6	61	15
3	M & S by HT/Nodal Teachers	89	7	64	12

Source: Primary data

16 ranks are possible for 16 areas of concern. However, areas with same percentage of performance are given same ranks. If 4 areas have 100 percent compliance, each of them is given rank 1. (Details in ‘Case study’ section, in analysis).

Rotation teachers need to ‘taste’ food and enter feedback. In ‘good’ schools there is 100 percent compliance to rotation system. In ‘other’ schools it is 75 percent. In ‘Good’ schools, this area gets Rank 1, while in ‘other’ schools it gets rank 7. Likewise, there are differentials in M & S by HT/Nodal teachers, and Management of Registers. Low performance of ‘other’ schools in the sample brings down average performance of the State.

Position across districts on Maintenance of Registers: Districts which need attention in maintenance of Registers are identified here. Districts with 3 and more than 3 schools **not maintaining** registers are **identified** here (out of 15). (See soft copy for table)

4.3.3 A note on classification of Districts

There are 34 districts. Every district has a minimum of 15 schools. Schools of every district have to maintain 9 registers for M & S of MDM. Districts differ in the number of registers they maintain. All the districts need to maintain all registers. This is the ideal position. However, as of now, as schools do not comply with this expectation, there is a need for greater vigilance by CRPs/BRPs/ADPs (MDM) in regard to maintenance of registers, during their regular school visits. The state JD (MDM) office needs to monitor this on priority basis, beginning with districts whose compliance is very low. For this purpose, this evaluation has classified districts on the basis of number of registers maintained by their schools (in the

sample). District average is considered here. If 7 to 8 (Out of 9) registers are not maintained by at least 3 out of 15 schools, these districts are considered to be ‘Lagging’; they need ‘serious attention’. Likewise if non maintenance is in regard to 4 to 6 registers, such districts are called ‘Average’: they are considered ‘ok’. Ok does not mean, do not bother. It means, botheration is in lesser degree. Likewise, if only 2 to 3 registers are not maintained by a minimum of 3 out of 15 schools, it is called ‘satisfactory’ –botheration is very less. OK, average, lagging are not declarative value judgments. They are subjective classifications for purposes of understanding and monitoring.

Bangalore Rural, Uttara Kannada, Gadag, Hassan (2 out of 9 maintained) and Chikkaballapura, Belgaum, Chitradurga, Shimoga, Sirsi, Bangalore south, Mysuru and Ramanagara (3 out of, 9 maintained) are considered to be ‘Satisfactory’ on performance in regard to documentation.

Bellary, Raichur, Bagalkote (7 out 9 not maintained) are considered to be ‘lagging’ districts, need intensive care.

Other districts, not mention here are considered to be ‘average’ in performance (4 to 6 registers not maintained).

Bangalore does not maintain MDM attendance register, even while it is in satisfactory list. this is not a satisfactory position

4.3.4 A brief note on SATS/MDM adoption in MDM schools

Department of Education, Government of Karnataka, has launched a new website called satsmdmhelp@gmail.com since 2018. SATs means Students Achievement Tracking System. This is a multi-purpose website which also facilitates web-management of MDM. Students MDM attendance is being maintained through NI website for a long time. It is now possible to do it through SATS platform. MDM stock register can be also be maintained through SATS. There is provision for this. Students learning Attainments tracking as per continuous comprehensive evaluation (CCE) is also provided in SATS.

Maintenance of Hard copies of Multiple MDM registers can be avoided through the use of SATS website. This will be highly efficient arrangement. Further, Demand estimation of MDM food materials, demand for tablets can also be through online processes.

Coordination with all stakeholders agencies, M & S of Milk/MDM from Schools through clusters/blocks/TP/ ZP and strata can be managed through SATS/MDM web-site.

For this purpose, massive scale training of stakeholders/functionaries at various levels from schools/CRCs/BRCs/DDP/DIETs/DSERT/JD/DoE offices, TP/ZP, DHO, KSCFC/FCI/FPs, KSDLW, and KMF is needed.

This can be done with the help of the department of IT/BT in the Government. hardware support is also needed

4.4 School receiving contingency amount and mode of transfer

Government/Department gives contingency amount/ funds for all schools to replace gas cylinder, buy firewood (if needed), buy sambar powder, vegetables etc. Rice, pulses, oil and salt are supplied (in kind). Feedback from HTs on contingency amount is given here. (See soft copy for table)

1. 85.24% schools receive contingency amount to purchase fuel, replace gas cylinders, and buy vegetables/sambar powder. Lowest proportion of schools receiving amount is in Belgaum Division. 84.07% schools have opened bank account (percent for all schools). Lowest incidence is in Belgaum Division. Majority of schools 258/433, nearly 60% have opened account in Nationalized Banks. 83.10% schools receive the amount through DBT-Direct Benefit Transfer method (percent for all schools). 28.50% percent schools report delay in DBT receipts. Delay is highest in Bangalore Division schools 41.30% and lowest (13.88%) in Mysuru Division.
2. 83.71% schools report that amount received is sufficient (of those who receive the amount), 375 out of 448 schools.
3. **Position across districts: Receipt** of grants- update for districts with 8 or more than 8 schools not receiving grants (out of 15 schools). Districts are Bangalore North (11 schools) and Dharwad (13 schools).
4. Delay in receipt: 8 and more than 8 schools- Bangalore South (15), Davanagere (10), Ramanagara (13), Shivamogga (10), Chikkodi (12), Gadag (8), Haveri (13), Uttara Kannada (15), Koppal (13), Raichur (13), Yadgir (15), Chikmangalur (15), Dakshina Kannada (13), Hassan (13), Kodagu (13), Mandya (11), Mysuru (12) and Udupi (13). 18 out of 34 districts.

5. Contingency amount sufficient: Update for districts where 7 and more than 7 schools report 'No'.
6. Only Kalburgi (7) and Kodagu (7) report insufficiency.
7. Schools that report delay or inadequacy manage through other sources- SDMC (15 schools), spend from 'own' sources (12 schools), get items on loan basis (5 schools). In a few schools (5) in the state, parents meet deficit.

Table No 6: Number of schools receiving contingency amount

Divisions	Bengaluru	Belagavi	Kalburgi	Mysuru	State.
Total schools	165	139	90	121	515
Receive contingency amount	145	100	81	113	439
Do not receive	20	39	9	08	76
No. of private aided schools	32	27	20	27	106
Though DBT receipt	132	95	65	111	403
By cash	02	-	01	-	03
No response	11	05	15	02	33
Total tally	145	100	81	113	439

Source: Primary data

4.4.1 Reasons for not receiving contingency amount and not opening Bank account:

Following is the reason for not getting contingency amount for MDM: there are many private aided schools which may be able to manage vegetables/gas cylinder and minor supplements. It may be noted that out of 515 sample schools, 106 are private aided schools, in this study sample.

Reason for not opening bank account, in case of a few schools, is that they may be located in urban areas, near the BEO office/Taluk EO office. They go and bring cash.

If any school does not open a bank account for receiving contingency amount or does not need it, as may be the case with some private aided schools, or do not use it after receipt, then remove them from the list for issue of contingency grant. This will avoid confusion in regard to issue, receipt and utilization data of contingency grants for MDM.

SoP: Standard Operating Procedures

4.5 Compliance to SoP of DoE: Quality Analysis

4.5.0 Nomination of Teachers under Rotation System.

Table 07: Rotation System

Divisions	Bangalore		Belgaum		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
Yes	149	90.30	121	87.05	81	90	111	91.74	462	89.70
Total	165		139		90		121		515	

Source: Primary data

1. Rotation System, of appointing school teachers as ‘Nodal’ persons for supervision of MDM, on a daily rotation is practised in nearly 90% schools. It is uniformly observed all over the state.
2. **Position across districts:** Districts where this is not followed (districts which have 3 and >3 schools- 20% of sample schools in a district) are identified here. They are: Davangere, Kolar, Madhugiri, Bagalkote, Gadag, Sirsi, Bellary, Koppal and Chamarajanagar (Total 9 out of 34 districts)

4.5.1 Rotation Time- Table availability

Table 7.1: Rotation Time- Table availability

Divisions	Bangalore		Belgaum		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
Rotation time table is there	134	89.3	107	88.43	74	91.36	86	77.48	401	86.60
Total	149		121		81		111		462	

Source: Primary data

1. While nearly 90% schools report that they practice rotation system for supervision of MDM (Nodal teacher was present on day of field work as observed by FIs), not all schools maintain a rotation time-table. 86.60% of those schools who have this system (77.86% of all schools) maintain a time-table. Incidence is low in Mysuru Division/ Districts.
2. **Position across districts:** Districts which do not maintain a time-table (3 and more than 3 schools, 20%) are identified here: Kolar, Tumkur, Haveri, Bellary, Chikmangalur, Dakshina Kannada and Kodagu-7 districts.

Table 8: M & S functions of MDM affect classroom management and teaching [Observation by FIs]

Divisions	Bangalore		Belgaum		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
MDM affects Teaching	41	24.85	42	30.22	15	16.66	29	23.97	127	24.66
TOTAL	165		139		90		121		515	

Source: Primary data

4.5.2: Presence of Teachers in Kitchen during school teaching hours

Table 8.1: Teachers present in Kitchen during school teaching hours

Divisions	Bangalore	Belgaum	Kalburgi	Mysuru	State
Yes	5	11	3	12	31

Source: Primary data

1. Nearly 25% schools in State lose teaching time. It affects school academic work. It is lowest in Kalburgi Division at 16.66% (15 out of total 90) schools.
2. **Position across districts:** Teachers were present during school academic time/ teaching hours in Chitradurga (5 schools), Dharwad (2), Haveri (4), Vijayapura (5), Kalburgi (3), Mysuru (5) and Udipi (7)- total 31 schools across 7 districts.
3. 9 out of 34 districts report (as observed) that MDM duties affect teaching work (minimum 6 out of 15 schools). They are Udipi, Mysuru, Mandya, Vijayapura, Gadag, Belgaum, Bagalkote, Bangalore South and Bangalore Rural districts.

Resons for data of 4.5.0, 4.5.1 and 4.5.2:

1. There are quite a few 'small' LPS schools (enrolments less than 15) in 1 to 5 standards with only 2 teachers. They may not need to maintain rotation system and rotation Time – Table. There are 44 LPS schools in this sample.
2. Teachers have leisure hours during a working day at school. it is possible that teachers visit kitchen during leisure hours

4.6 Concerns of Hygiene in MDM

4.6.1 Visible skin problems (hand, face) in MDM cooking staff

Table 8.2: Visible skin problems (hand, face) in MDM cooking staff

Divisions	Bangalore		Belgaum		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
Yes	14	8.48	4	2.88	13	14.44	9	7.44	40	7.77
Total	165		139		90		121		515	
Medical Check-up (Yes)	119	72.12	120	86.33	74	82.22	92	76.03	405	78.64
School maintains health register (Yes)	74	44.85	91	65.47	56	62.22	58	47.93	279	54.17

Source: Primary data

1. Cooks (Ayahs) are not expected to carry any health problems. Still, it is observed that in 40 out of 515 schools they have dermatological problems. Incidence is high in Kalburgi district. Not all skin problems may be of equally undesirable potential. Still it is better to be careful in this regard. 78.64% schools have got the MDM staff medically examined. This is good. There is a need for others to fill in line. In fact, it is expected or desired of every school to maintain a health register of MDM staff. 54.17% schools in the State comply with this guidance. Compliance is low in Mysuru division and lower still in Bangalore division.
2. **Position across districts:** Districts which are low in hygiene concerns of MDM staff, do not comply with SoP guidelines are as follows: This is for Cooks/Ayahs
3. **Districts where medical check-up was done:** No is counted in a minimum of 6 schools. Bangalore North, Madhugiri, Ramanagar, Haveri, Bellary, Chikmangalur and Dakshina Kannada (total 7 districts)
4. **Districts where Health Register was not maintained:** Minimum 6 schools out of 15 in a district. Bangalore Rural, Bangalore South (11), Chikkaballapura, Davangere (10), Kolar (10), Tumkuru (11), Bagalkote (13), Belgaum (10), Chikkodi (10), Dharwad (14), Sirsi, Uttara Kannada, Bellary, Bidar, Kalburgi (11), Koppal, Raichur, Yadgir (11), Dakshina Kannada, Hassan (11), Kodagu (13), Mysuru (8) and Udupi (14). (Total 23/34)
5. **Districts where incidence of dermological problems was seen:** Minimum 3 schools out of 15. (Minimum everywhere is arrived at on the basis of State averages). Bangalore Rural, Chitradurga, Davangere, Madhugiri, (None in Kalburgi division with minimum 3), Bellary (7), Bidar and Chikmangalur (total 7 districts).

Table 8.3: Monitoring of cooking place by Rotation Teachers

Divisions	Bangalore		Belgaum		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
Yes	146	88.48	130	93.53	73	81.11	108	89.26	457	88.74
Attendance information given to cooks (Yes)	149	90.30	118	84.89	79	87.78	110	90.91	456	88.54
TOTAL	165		139		90		121		515	

Source: Primary data

- As per SoP Guidelines, teachers on rotation basis, have to monitor the hygiene in the MDM kitchen in the morning and give the day's student attendance information to cooks so that they match the food of the day to attendance and no wastage. In 88.74% schools, Rotation Teachers are circumspect about kitchen hygiene and an equal proportion inform the cooks about day's attendance. Practice of circumspection is slightly lower in Kalburgi division.
- Position across districts:** Districts which do not comply with SoP guidelines are identified here:
 - Hygiene supervision by Rotating Teachers (NO): (Minimum 3/15 schools)- Bangalore North, Bangalore Rural, Chikkaballapura, Davangere, Bagalkote, Bellary (9), Raichur, Dakshina Kannada and Chikmangalur-9 districts.
 - Information on Attendance to cooks: (Minimum 3 'No')- Bangalore North (7), Davangere, Kolar, Bagalkote, Dharwad (12), Uttara Kannada, Bellary (8), Chikmangalur and Dakshina Kannada-9 districts.

4.6.2 Location of Fire Extinguisher

Table 8.4: Fire Extinguisher/sand in a bucket/water in a bucket, placed near kitchen (Observation)

Divisions	Bangalore		Belgaum		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
Yes	144	87.27	117	84.17	63	90	96	79.34	420	81.55
Total	165		139		90		121		515	

Source: Primary data

- There is judicial mandate for safety standards in schools. Keeping a ready to use fire extinguisher, sand buckets, water bucket is one of them. 81.55% schools in the State comply with this directive of SoP. Compliance is quite low (90%) in Kalburgi division districts. It is high in Bangalore Division districts.
- Position across districts:** [Minimum 4 schools, districts where SoP were violated are] Bangalore Rural, Madhugiri, Bagalkote (9), Dharwad (8), Gadag, Bellary (7), Bidar, Kalburgi, Yadgir (8) and Chikmangalur (8) (Total 10 districts).

4.7 Cleanliness Practices (Observation)

Following items of daily use in the kitchen need to be cleaned regularly (daily). Here is analysis on cleanliness practices.

4.7.0 Cleaning of Kitchenware (Table in softcopy)

Cleanliness standards in kitchen hygiene management is par excellence even though not perfect (100%). It is above 90% compliance across all divisions on all 9 parameters with a solitary exception of cleaning of plates in Bangalore Division which is slightly lower than 90% compliance. Parameters considered are: Cleaning of cookware, gas stoves, plates, glasses, shelves, storing places, walls equipment and floors.

Position across districts: As the compliance to SoP cleanliness guidelines is quite high, it is considered appropriate to identify districts which do not comply with SoP Guidelines so that warning bell can be more focused and on target. **(Table in softcopy)**

1. Districts which need M&S attention (minimum 3 schools who do not comply with SoP Guidelines)
2. Cooking utensils: Bangalore Rural, Shivamogga (7), Belagavi (4), Yadgiri (5), Haveri, Dakshina Kannada (total 6 districts)
3. Equipments: Shivamogga (7 schools), Belagavi, Haveri, Udupi (Total 4 districts)
4. Plates: Bangalore Rural, Shivamogga (8 out of 15), Belagavi, Haveri, Yadgiri and Udupi (Total 6 districts)
5. Glasses: Bangalore Rural, Shivamogga (8), Belagavi (3 districts)
6. Shelves: Bangalore Rural, Shivamogga, Belgaum, Haveri (4 Districts)
7. Gas Stoves: Shivamogga (8), Belagavi, Haveri, Yadgir, Udupi (5 districts)
8. Floor: Shivamogga (6), Belagavi, Yadgir, Udupi (4 districts)
9. Storing places: Bangalore North, Shivamogga (6), Belgaum, Haveri, Yadgir, Udupi (6 districts)
10. Walls: Shivamogga (5), Belagavi (2 districts)

Shivamogga and Belgaum, specifically Shivamogga (as noted in the number of schools not complying with SoP guidelines in the range of 6-8 schools out of 15 sample on all parameters) need intensive care in M&S. They are followed by Udupi, Haveri and Yadgiri who do not comply with 6 out of 9 parameters. Even Bangalore North (storing places) and Dakshina Kannada (cookware cleaning) need to be alerted.

Cookware, cleaning of plates and of storing places are observed to be short of attention (6 districts). This is followed by gas stove cleaning and cleaning of glasses (5 districts). floor, shelves and equipments (knives, grating plates etc.) are not complied with in 4 districts (minimum 3 schools).

If data on incidence of even 1 or 2 districts not complying with any of the 9 parameters- cleaning concerns are needed they are available in the basic tables, given as Volume 2 of this report.

4.7.1 Cleaning of Kitchen

The analysis is based on the following concerns:

1. Periodicity of cleaning of kitchen
2. Dirty walls, cob-webs on the ceiling, lizards on walls, cockroaches on the floor should not be there.
3. Cleanliness of the water storing place and periodicity of cleaning
4. Submission: Every district has 15 schools sample. If a sub-variable is observed at least in 3 schools, that is 20 percent sample, That district is considered. Less than 3, left of deeper analysis.
5. Kitchen needs to be cleaned daily. 88.93% schools in the State do so. High percentage is in Mysuru and lowest proportion is in Kalburgi.
6. Cobwebs are observed on ceiling in 6.21% schools/ walls dirty in 11.84% schools while lizards are observed in 2.52% (13 schools) schools. This is quite a serious matter as time and again media reports pour in regarding children consuming MDM run into gastric problems, get hospitalized and brings a bad name to the concerned Department (JD/MDM) is shown in undesirable frame.
7. Cockroaches are observed on floor in 9 schools, needs to brought down totally.
8. Water storing place in kitchen is observed to be unclean in 20.58% schools. Low incidence (8.89%) is in Kalburgi division.
9. Position across districts (Minimum 3 schools); Number of Schools is given in brackets
(Table in softcopy)

At the outset, it is noted that minimum 3 out of the 6 parameters in the district-wise analysis, the norms are not followed, like presence of lizards and cockroaches. Even if one school (out of 15 in the sample) is observed to show them, a tick mark is noted in the box

against the district, as these are very serious concerns. Otherwise, for the other 4 concerns, minimum 3 schools' incidence is followed.

1. Districts where lizards/ cockroaches are observed on walls/ floor are:
 - a. Both lizards/ cockroaches: Bagalkote, Belgaum, Bellary, Gadag, Chamarajanagara
 - b. Lizards only: Bangalore North, Haveri, Davangere, Ramnagara, Dharwad
 - c. Cockroaches only: Sirsi, Mysuru
2. In 8 districts kitchen is not cleaned daily (Minimum 3 schools)
 - a. In 4 districts, cobwebs are observed in ceiling. 9 districts have schools with dirty walls. Water storing place is wet in 14 districts, in 6 out of these 14 districts, it is also swampy.
3. M&S officers of JD (MDM, specifically ADPI (MDM) needs to focus on these concerns and carry team of officers in charge of MDM, with him, in these respects.
4. Bagalkote is a defaulter on 5 out of 6 counts. Belgaum and Bellary default on 4 counts. Bangalore North, Haveri, Gadag and Chamarajanagara default on 3 counts. Table on districts update will indicate basis for focused guideline (see basic tables).
5. Reasons for non-compliance in regard to guidelines under 4.6, 4.7-Concerns of Hygiene, cleanliness practices: Maintenance of hygiene, observance of cleanliness practices is a product of family upbringing, family culture, a personality construct. Whenever it is missing, way out is to give specific instructions in regard to them and monitor compliance. Instructions are given to cooks/ayahs, nodal teachers/HTs in MDM training. They may not be effective. Everyday monitoring by nodal teachers/HT of compliance by cooks/ helpers would be value. Even CRPs/BRPs/ADPIs need to monitor during their visits. This is not happening at a few places.

Discussion: Wherever Ayahs are not appointed as per Departmental norms, or there is a shortage of Ayahs, existing CCH staff can be given an incentive, upto extra Rs.200/- per person per month, for maintenance of hygiene at eating places. Girl students can be spared of this ordeal.

4.8 Management of Store Room FEFO Compliance

Provisions of daily use for MDM need to be stored as per SoP Guidelines- the FEFO method, First Expiry (date), first out. Here is data on schools of the Division/ Districts in this regard.

Table 9: Management of Store Room

Divisions	Bangalore		Belgaum		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
(Yes) FEFO observed	146	88.48	116	83.45	75	83.33	109	90.08	446	86.60
For Oil (Yes)	146	All	116	All	75	All	109	All	446	All
For Salt (Yes)	140	84.85	88	63.31	64	71.11	101	83.47	393	76.31
For Milk Powder	136	82.42	94	67.63	63	70	99	81.82	392	76.12
Other Items	11	6.67	24	17.27	1	-	8	6.61	44	8.54
Dates marked with marker pens (Yes)	102	61.82	84	60.43	56	62.22	64	52.89	306	59.42
Food/ cookware separated/ cleaning powder/ soaps	60	36.36	48	34.53	30	33.33	38	31.40	176	34.17
Tablets FEFO (Yes)	142	86.06	96	69.06	69	76.66	86	71.07	393	76.31
TOTAL	165		139		90		121		515	

Source: Primary data

1. Safety of children is involved in observance of FEFO methods in storage of MDM cooking materials as incorporated in SoP guidelines. 86.60% percent schools comply with these guidelines. It is not that all schools follow this guideline for all items. There is variation in compliance across items. However, FEFO compliance for storage of cooking medium- 'oil' is there from all the schools who follow FEFO method (86.60% schools).
2. FEFO is followed by 76.31% schools in case of salt. Shelf life of salt is also high. But, still FEFO method needs to be observed.
3. FEFO for milk powder is followed by 76.12% schools.
4. Compliance for other items is quite low- Sāmbhar powder, vegetables, etc. as low as 8.54%. This is true of all division schools and especially Kalburgi division.

5. Expiry dates are to be marked along with Item name (if it is closed boxes) on every box. Nearly 60% schools only observed this guideline. Mysuru division has a lower record herein.
6. Highly significant health concern is in regard to storage of tablets as per FEFO method, especially Iron tablets, which are given once a week to children. 76.31% schools comply with this SoP Guideline.
7. **Concerns:** Small schools (LPS in rural areas) may not be able to strictly adhere to SoP Guidelines on FEFO due to space problems in the kitchen as well as usage of low quantity/ volume of MDM materials. They cannot be exempted, though tolerated. However, other schools cannot be tolerated as concerns of safety of children is involved. This is very much true of tablets also. Extra care needs to be exercised by HT/ Nodal teachers, as well as M&S officers in this regard (all items and tablets).
8. Districts which do not comply with SoP guidelines on FEFO policy are identified here, item wise:
 1. 32 out of 34 districts have not complied with the SoP Guidelines to separately keep cleaning powders from cookware and MDM food grains/ oil/ salt etc., analysis for at least 3 schools in a district. Bangalore Rural, Koppal districts are the exceptions.
 2. Salt is not stored as per FEFO in 19 districts, milk powder in 23 districts and tablets in 16 districts.
 3. Food boxes are not marked with marker pens in 30 districts. Kodagu, Sirsi, Bangalore South and Davangere are the exceptions.
 4. Salt has long shelf life. Storing milk powder as per FEFO is done in Bangalore South, Davangere, Chikmangalur, Gadag, Kalburgi, Mandya, Uttara Kannada, Bidar, Gadag, Ramanagara, Shivamogga, Chitradurga and Bellary districts.
 5. Concern: M&S officers need to attend to this SoP Compliance. HTs need to be reoriented in CRP/ BEO meetings about the importance of FEFO compliance.

4.8.1 Reasons for noncompliance to FEFO (Section 4.8)

FEFO compliance is subject to (i) habit of neatness in work, which is a part of family culture, (ii) concerns of hygiene and safety, (iii) sensitivity to training on FEFO practices, (iv) paucity of storing space. A large size almirah/cup-board can be given to all schools for storing MDM/Milk materials. It can be a steel one to ward off termites. There should be glass cases to facilitate transparency of storage. Schools can be guided to store (a) salt, cereals/pulses, (b) oil, (c) milk powder, sugar, (d) tablets, (e) sambhar powder, (f) health cards – filled/empty,

(g) other miscellaneous items like serving spoons, cutlery etc; separately using FEFO method. Larger schools can be given more than one cup-board as per need. In the absence of i, ii, iii, M&S by HT/Nodal teachers of kitchen upkeep will work. In turn, CRPs also need to oversee FEFO compliance. Supply of pigeon-holed almirah, customized to size of school for use in MDM kitchen would also be useful for compliance to FEFO.

4.9 Monitoring by (Nodal) Teachers

1. A variety of activities under MDM organization and execution need to be monitored by (Nodal) teachers. How are these functions executed, as per SoP Guidelines is discussed in this sub-section?
2. Teachers have to oversee that cooks wear apron while performing their duties. As observed, 80.39% schools across all districts (515 schools) wear apron. Compliance is low (63.33%) in Kalburgi division schools.
3. In Hassan, Mandya, Shivamogga, Tumkur, Chikkodi, Mysuru and Udupi districts (7 districts), all 15 schools comply with this directive. Otherwise 1 or 2 schools in 12 districts (names of districts may be mentioned) do not comply. In the next 16 districts, a minimum 3 schools do not comply. High frequency of non-compliance is in Kalburgi (13), Chikkaballapura (9) and Bellary (9).
4. Kitchen windows need to be kept open during cooking time. 93% schools in State are observed to do so. Districts where a few schools do not keep it open are: Chikkaballapura, Davangere, Belgaum, Chikkodi, Gadag, Sirsi, Bidar, Kalburgi, ChamaraJanagara, Dakshina Kannada (1 school each), Kodagu, Koppal, Kolar (2 schools each), Bagalkote (3 schools), Bangalore North and Dharwad (4 schools each).
5. Gas cylinder needs to be kept at a distance from the cooking place. This is a SoP Guideline. 90.49% schools adhere to this guideline. Districts which do not adhere to (minimum of 3 schools) are: Bangalore North, Dharwad (7), Gadag (3), Bellary (6) and Koppal (3).
6. Teachers need to oversee that all food materials have adequate shelf life. As observed 81.94% schools comply. Districts where this is not so are: (minimum 6 schools) Bangalore South, Chikkaballapura, Dharwad, Bellary (9) and Raichur.
7. Teachers have to taste (Nodal Teachers) the day's food before it is served to children and record their opinion in Taste Register. Records are observed in 85.63% schools. Districts where such observations are not noted (or No Taste Register at all) are: (Minimum 3

- schools) Kodagu, Yadgir, Chikmangalur (7), Bidar, Bellary (11), Bagalkote, Haveri, Kolar and Chikkaballapura.
8. Teachers have to ensure that students wash hands before and after MDM is served. 91.84% schools' practice this. Districts where this practice is not observed are: (minimum 3 schools) Gadag, Bellary (9) and Kodagu.
 9. No child should be observed to be near kitchen is a SoP Guideline. 78.06% schools do not allow children near kitchen. Districts where they are allowed (Minimum 6 schools) are: Bangalore Rural, Chikkaballapura, Tumkur, Belgaum (8), Gadag (10) and Haveri (8) (6 districts).
 10. Kitchen should be cleaned before and after cooking- SoP Guidelines (Preparatory Activity). 89.13% school's clean kitchen before cooking, but only 70.87% clean after cooking. Cleaning means swiping and not just sweeping. Districts where post cooking cleaning does not happen are (Minimum 6 schools): Bangalore Rural, Bangalore South, Madhugiri, Dharwad, Uttara Kannada, Vijayapura, Bellary (8), Kalburgi, Raichur, Chikmangalur and Kodagu (9).
 11. Bellary is in both lists (minimum 6 schools not cleaning before and after)
 12. Cooks need to clean rice/ pulses/ other items before use (Ayahs to do it wherever they are there). In 91.07% schools it is done. Districts where it is not done are: (Minimum 3 schools) Bangalore North, Bagalkote, Dharwad, Bellary (8) and Chikmangalur.
 13. Cooking equipment- knives, vegetable cutter, coconut graters need to be washed before use. 87.57% schools do it. Districts where it is not observed are (minimum 6 schools): Bangalore South, Dharwad and Bellary (9).
 14. Vegetables need to be washed with salted or turmeric water before use. 76.50% schools do it. Districts where it is not done (minimum 6 schools) are: Bangalore North (8), Bagalkote, Dharwad, Gadag (9), Bellary (10), Chamarajanagara (9), Chikmangalur (8), Dakshina Kannada and Kodagu (8).
 15. While cooking containers need to be closed with lids, even the food before it is served, water also. 84.27% schools do this. Districts where this is not done (minimum 6 schools) are: Dharwad, Bellary (10), Koppal and Kodagu.
 16. Districts tally on number of violations:
 17. 1 violation only: Davangere, Sirsi, Chikkodi, Uttara Kannada, Tumkur, Madhugiri, Vijayapura and Yadgiri
2 violations: Belgaum, Bidar, Chamarajanagara, Dakshina Kannada, Kolar, Bagalkote, Raichur, Haveri and Bangalore Rural.

3 violations: Kalburgi, Bagalkote, Bangalore North, Koppal, Bellary and Chikmangalur

4 violations: No entries

5 violations: Chikkaballapura, Bellary, Gadag and Kodagu

6 violations (out of 13): Dharwad

18. Basic tables will give the type of violations across districts.

4.10 Cleanliness during cooking time

Table 10: Foam gathered while cooking rice/ pulses should be removed/ decanted using steel plates/as observed by FI

Divisions	Bangalore		Belgaum		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
Foam cleaned	154	93.33	119	85.61	73	81.11	113	93.39	459	89.13
Food served in small containers	158	95.76	129	92.80	76	84.44	112	92.56	475	92.23
Drinking water clean	156	94.55	131	94.24	77	85.56	114	94.21	478	92.82
Clean sitting place	136	82.42	129	92.81	70	77.77	108	89.26	443	86.05
Teachers monitor	154	93.33	128	92.09	69	76.67	112	92.56	463	89.90
Notes observed M&S 5-point scale	110	66.67	106	76.26	60	66.67	81	66.94	357	69.32
Rice examined before supply	94	56.97	102	73.38	55	61.11	71	58.68	322	62.52
Total	165		139		90		121		515	

Source: Primary data

1. 89.13% schools clean foam generated while cooking RICE/ PULSES. Low compliance is in Kalburgi Division (81.11).
2. Food is served in small, washed, manageable containers in 92.23% of schools. Low compliance is seen in Kalburgi Division.
3. In 92.82% schools the drinking water is clean. It is so in 92.82% per schools.
4. Children sit in cleaned places to consume MDM food; it is so in 86.05 percent schools. Again, compliance is low (77.77%) in Kalburgi division schools.
5. Teachers are observed to monitor children during MDM service. This is observed in 89.96% schools. Kalburgi division record (76.67%) is low.
6. Schools are expected to maintain a register of preparatory activities, processing and service of MDM food, in a 5-point scale. 69.33% of schools are observed to maintain

this registers and meetings are there. Low level of non-compliance is observed in all 4 divisions, throughout State.

7. Rice is examined (for its quality) before it is supplied to cooks. This is so in 62.52% schools. Low compliance is observed all over the State, in all divisions.
8. Position across districts. (Minimum 6 schools)[‘No’ Responses counted]. Every district has 15 schools. 6 schools out of 15 means 40 Percent. District where minimum 6 schools comply are counted.
 - (a) Foam is not cleaned in 3 districts- Bangalore North, Dharwad and Bellary.
 - (b) Food is served in small/ manageable/ water containers in all districts.
 - (c) Potable water is not satisfactory in Bangalore South, Bellary,
 - (d) Clean sitting place not satisfactory in Bellary, Bangalore South, Chikmagaluru and Raichur.
 - (e) 5-point scale is not maintained in 11 districts (See table).
 - (f) Quality of rice not examined before issue to cooks in 15 districts. (See table)
 - (g) Violations: SoP Guidelines on MDM service is not observed by 4 districts on 3 counts (see table), by 9 districts on 2 counts (see table) and 10 districts on 1 count. Out of 34 districts, violation one or the other, is observed in 23 districts.

4.11 MONITORING ACTIVITIES

HTs Sending SMS on MDM attendance to NIC

There is a multi-level monitoring of daily MDM service- coverage of students, number of children in the State to whom MDM is served. For doing this, the Head Teacher of every school has to inform cooks in the morning regarding the days’ attendance of students to the cooks so that they prepare food accordingly and prevent wastage. Later, the HT has to send SMS to NIC (National Informatics Centre), to BEO/ ADPI (MDM) office and to JD (MDM). NIC consolidates days’ attendance at State Level. SMS is for a Toll-Free Number 15,544. HT is expected to remember this toll-free number as he uses it daily. Mothers Committee (MC) members are expected/ encouraged allowed visiting the school during MDM time and supervising MDM services. HT should oversee that MDM service does not affect teaching time. MDM attendance should match with days’ school attendance of students. Here is data on all these concerns based on field/ primary data.

87.57% HTs send SMS daily on MDM attendance. Low compliance is in Belgaum Division (82.74%), followed by Kalburgi Division (84.44%). Both Bangalore and Mysuru Divisions record more than 90% compliance. However, 8.54% HTs do not remember the toll-free number. (44 out of 515 who send SMS). Highest recall figure is from Bangalore Division HTs (86.06%). In all the other three divisions, it is lower than State average figure. 92.34% of HTs had informed cooks about days' attendance in the morning.

The incidence/ reporting is uniformly of same proportion in all divisions. In 93% schools of the State MDM attendance and School attendance match with each other. This is commendable, even though 100% match is desirable. All 4 divisions reveal more than 90% harmony in this respect. Participation/ visits of MC members to school at the time of MDM service is low at 66.60%. It is high in Bangalore and low in Mysuru divisions. In 80.19% schools MDM is observed to be within lunch time. It does not affect teaching time. Schools in Kalburgi followed by Mysuru division take more time and teaching work gets affected in slightly higher proportion of schools.

1. schools which do not comply, minimum 3 out of schools, 20 percent not complying – such districts are counted –‘✓’In 16 out of 34 districts MDM is not being/ cannot be managed during allotted time/ lunch break. (count is for minimum 3 schools in every district).
2. In 24 out of 34 schools MC members do not visit schools at MDM time (see table for districts).
3. In 24 out of 34 districts HTs send SMS. In 10 districts like: Belgaum, Dharwad, Bellary, Bangalore North, Ramnagara, Bagalkote, Sirsi, Uttara Kannada, Koppal and Chikmangalur, they do not send SMS (minimum 3 schools). In 4 districts, they do not remember Toll-free number. The districts are Chikmangalur, Bidar, Dakshina Kannada and Kodagu.
4. Students days attendance information is not given to cooks in the morning by HT in Belgaum, Dharwad, Bellary, Koppal, Dakshina Kannada, Kodagu.
5. **Position across districts:** Chikmangalur does not do well on 5 out of the 6 variables considered here. Dharwad, Bellary and Koppal are sub-optimal on 4 variables. Bagalkote, Sirsi, Dakshina Kannada, Kodagu are sub-optimal on 3 variables. 11 districts are sub-optimal on 2 variables and another 11 districts are sub-optimal on 1 variable. For less than 3 schools in districts performance, see basic tables.

4.12 HEALTH CARE UNDER MDM

Table 11: MDM includes Health care of children. Iron tablets, Vitamin A tablets and De-worming tablets given to children. data on schools follows:

Divisions	Bangalore		Belgaum		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
Health Cards issued (Yes)	157	96.36	122	87.77	81	90	115	95.04	475	92.23
Entries in health card: This year (Yes)	73	46.50	48	39.34	31	38.27	44	38.26	196	41.26
1 year ago (Yes)	59	37.60	48	39.34	37	45.68	63	54.78	207	43.58
2 years ago (Yes)	16		17		8		7		48	
>2 years (Yes)	9		9		5		1		24	
Folic acid issued (Yes)	145	87.88	118	84.89	75	83.33	115	95.04	453	87.96
Vitamin A issued (Yes)	144	87.27	113	81.29	83	92.22	96	79.34	436	84.66
De-worming tablets issued (Yes)	160	96.97	118	84.89	75	83.33	113	93.39	466	90.49
Total	165		139		90		121		515	

Source: Primary data

Table 11.1 : Frequency of Issue

Divisions		Bangalore		Belgaum		Kalburgi		Mysuru		State	
		No.	%	No.	%	No.	%	No.	%	No.	%
Folic Acid	Once a week	79	54.48	48	40.68	31	41.33	98	85.22	256	56.51
	Once a fortnight	22		16		13		7		58	
	Once a month	18		18		7		5		48	
	> a month	26		36		24		5		91	
Vitamin A	2 times a year	90	62.50	62	54.87	47	56.63	48	50.75	247	56.65
	Other responses	54		51		36		48		189	
De-worming tablets	2 times a year	127	79.38	80	52.54	51	68	90	79.65	348	74.68
	Other responses	33		38		24		23		118	

Source: Primary data

1. 92.23% schools have issued health cards to children. This is uniformly (not identically) issued in all divisions. If 'latest' entries are interpreted to be this year and also last year (because a few months were left to schools to get health check-ups after the date of field work of this study), then the total entries sum up to 84.84% out of 92.23% cards issued. Effective date for considering value of health card is 84.84%. Figures of nominal and

effective dates for Bangalore, Belgaum, Kalburgi and Mysuru Divisions: 96.36 vs. 84.10%, 87.77 vs. 78.68%, 90 vs. 84.15% and 95 vs. 93.04% respectively. Mysuru division schools are relatively better while Kalburgi Division schools have a lower record.

2. Issue of Tablets: 87.96% schools issue Iron tablets/ Folic Acid. Out of them only 56.51% follow the norms of distribution, once a week. Another 31.45% schools violate the norm. Violation of norms in regard to distribution of Vitamin A tablets is given here:

Bangalore Division: 87.27-62.50 = 24.77%; Belgaum Division: 81.29-54.87 = 26.42%; Kalburgi Division: 92.22-56.63 = 35.59%; Mysuru Division: 79.34-50.75 = 28.59%; Karnataka: 84.66-56.65 = 28.01%

3. Violation of norms in regard to issue of de-worming is as follows:

Bangalore Division: 96.97-79.38 = 17.59%; Belgaum Division: 84.89-52.54 = 32.35%; Kalburgi Division: 83.33-68 = 15.33%; Mysuru Division: 93.39-79.65 = 13.74%; Karnataka: 90.49-74.68 = 15.81%

First percentage (figure) refers to issue and second figure refers to issued as per norms.

Difference between issue and issued as per norms is also given.

Table 11.2: Percentage of violation of norms with regard to issue of de-worming

Divisions	Bangalore	Belgaum	Kalburgi	Mysuru	State
Folic acid issued	87.88	84.89	83.33	95.04	87.96
Issued as per norms	54.48	40.68	41.33	85.22	56.5
Vitamin A issued	87.27	81.29	92.22	79.34	84.66
Issued as per norms	62.50	54.87	56.63	50.70	56.65
De-worming tablets issued	96.97	84.89	83.33	93.39	90.49
Issued as per norms	79.38	52.54	68.00	79.65	74.68
Percent Violation of Norms					
Folic Acid	33.40	44.21	42.00	9.82	31.45
Vitamin A	24.77	26.42	35.59	28.64	28.01
De-worming tablets	17.59	32.35	15.33	14.34	15.81
Not Issued at all Plus No Norms					
Folic Acid	45.52	59.32	58.67	14.78	43.49
Vitamin A	37.50	45.13	43.37	49.30	43.35
De-worming tablets	20.62	47.46	32.00	20.95	25.32

Source: Primary data

CONCERNS: Sum and substance of this analysis is that 50.00% of children in the State are deprived of Iron tablets/ Folic Acid, either in absolute terms or as per norms. In case of Vitamin A tablets, the proportion is 43.35%. In case of de-worming tables, it is low at 25.32%. Among the 4 divisions, performance of Mysuru Division is relatively good in regard to (weekly) distribution of iron tablets.

A reorientation or refresher training, for one day in a cascade mode (even more or two sessions in a day) at CRP monthly meetings of Head Teachers or Teachers may be of value.

4.12.1 Reasons for noncompliance of M & S duties by nodal teachers/HTs (4.9 to 4.12)

HTs and teacher, by and large, carry a feeling that MDM management is an ‘additionality’ for the functions, duties and responsibilities for which they were appointed as teachers. Job of teachers is ‘to teach’; this is their mind-set.

Redressal of this situation is possible through harsh or soft methods. soft method is to institute best nodal teacher/best HT for MDM governance award at taluk level

4.13 COMPLIANCE TO SoP GUIDELINES IN IMPLEMENTATION OF MDM – Consolidated account (Birds Eye View)

Summary Insights: A quantitative analysis has been made of compliance to SoP guidelines in the Divisions and at the State level. Methodology of analysis and the analysis proper are given in **Annexure No. II**. Highlights are given here.

SoP guidelines carry 62 variables/sub-variables. At the state level, percentage compliance to SoP guidelines in 76.77 percent. This is the average compliance. Range is 74 to 82 percent. Compliance is highest, higher than state average in Mysuru division at 81.61 percent. It is followed by Bengaluru at 80.96 percent.

Compliance is lower than state average in Belgaum division at 74.83 percent followed by Kalaburgi division at 74.19 percent. Highest and lowest degree of compliance in State is 7.42 percent even the highest performing Mysuru district is 18.39 percent short of perfect compliance (100 percent)

For qualitative analysis of noncompliance or compliance, on 62 discrete variables/sub variables-Rotation system, Health concerns of MDM staff, safety measures, Kitchen Hygiene, Management of Store Room, Monitoring by Nodal Teachers, Precautions during cooking/Serving and Health care of students across districts/divisions and the state have been done.

Table No 12: Compliance to SoP Guidelines: A Bird's Eye-view

Sl. No	SoP Guidelines	Percentage of schools complying with guidelines in state
A	Rotation system	
1	Rotation system is to be followed,	89.7
2	Rotation time table is to be maintained	86.8
3	Nodal teacher should supervise cooking place,	88.7
4	Cooks need to be informed about day's attendance	88.5
B	Healthcare concerns of cooking staff	
5	Cooks/ ayahs should not have any visible health problem (eg skin related),	92.2
6	Medical checkup of cooking staff has to be done	78.6
7	Maintain Health Register of cooks	54.2
C	Safety Measures/ Hygiene concerns	
8	Keep fire extinguisher at a safe distance,	81.6
9	Clean cookware before use,	91.1
10	Clean equipments (knife, Grater) before use	91.8
11	Clean eating plates before use,	91.8
12	Clean glasses before use	93.0
13	Kitchen shelves should be clean	93.6
14	Clean gas stove before use	91.8
15	Clean kitchen floor before / after use	93.2
16	Clean storage spaces for MDM materials/food	91.8
D	Upkeep of kitchen	
17	Clean kitchen walls everyday	95.00
18	Clean/wash the kitchen daily	89.0
19	Ceilings should not shelter cobwebs	93.79
20	Ensure that there are no lizards in kitchen,	97.50
21	Kitchen walls should be clean, no dark patches	88.20
22	Keep water at a dry place in kitchen	80.50
23	There should be no cockroaches in kitchen	98.30
E	Management of Store Room	
24	FEFO is to be observed for MDM materials	86.6

25	FEFO to be observed for oil	100.00
26	FEFO to be observed for iodised salt	76.3
27	FEFO to be observed for Milk Powder	76.3
28	Observe FEFO for other interms (e.g Samber powder)	91.5
29	Mark shelf life-date of expiry for all MDM consumable materials-using a marker pen	59.4
30	Keep food material and washing powder at separate places,	31.4
31	Maintain FEFO methods for tablets	76.3
F	Monitoring duties of Nodal Teachers	
32	Ensure that cooks wear apron	80.4
33	Ensure kitchen windows are kept open	93.0
34	Ensure that gas cylinder is kept at a distance	90.5
35	Ensure that food materials have sufficient shelf life	82.0
36	As nodal techers, taste the day's food,	85.7
37	Ensure that studetns wash their hands before/after they take food	91.8
38	Do not allow any child near the kitchen	78.1
39	Oversee that food grains are cleaned before cooking	70.9
40	Oversee that kitchen is cleaned before cooking	89.1
41	Oversee that kitchen is cleaned after cooking	70.9
42	Oversee that kitchen equipments are cleaned before use	87.6
43	Oversee that vegetables are washed in salt water/turmeric before use	76.5
44	Oversee that containers are closed with lids during /after cooking	84.3
G	Hygine during cooking/serving MDM	
45	Foam gathered during cooking is to be cleaned	89.1
46	Food is to be served in small containers	92.2
47	Test potability of water	92.2
48	MDM serving places should be clean	86.0
49	Teachers should monitor MDM service	89.9
50	M and S notes in 5 points register should be recorded	69.3
51	HT/Nodal teacher need to examine quality of rice before supply to cooks	62.5
H	Duties of Head Teachers (HT)	
52	HT should send SMS daily to NIC on day's MDM attendance details	87.6

53	HT should keep in memory the toll free number of NIC	79.0
54	HT should inform cooks about day's attendance in the morning	79.0
55	HT should ensure that MDM and school attendance match with each other	92.4
56	HT should motivate MC (Mothers' Committee) members to visit during MDM time	66.6
57	HT should oversee that MDM does not cut into afternoon classes-teaching time	80.8
I	Health care of Students	
58	HT/School need to issue Health cards to students	92.2
59	There should be entries in Health cards (last year)	92.2
60	Folic acid should be issued as per norms	56.5
61	Vitamin A tablets should be issued as per norms	56.7
62	De-worming tablets should be issued as per norms	74.7

Source: Primary data

Analysis of data on Compliance of Schools of the State to SoP guidelines of DoE on MDM programme.

Overall, analysis of pooled data reveals that there is 76.77 percent compliance by schools at the state level for DoE guidelines on standard operating procedures (SoP) for MDM management.

There are 62 concerns on which SoP guidelines are there. there is 91 to 100 percent compliance on 22 prescriptions (Sl. Nos. 5, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 23, 25, 28, 33, 34, 37, 46, 47, 55, 58 and 59).

71 to 80 percent compliance on 11 prescriptions (Sl. Nos 06, 26, 27, 31, 38, 39, 41, 43, 53, 54 and 62), 61 to 70 percent compliance on 03 prescriptions (Sl. No 50, 51, 56) and below 60 percent compliance on 05 prescriptions (Sl. Nos 7, 29, 30, 60 and 61)

Assessment: Lowest compliance is for maintenance of health register of cooks, use of marker pens to mark shelf life of MDM materials, separating washing/cooking materials and distribution of health tablets.

4.14 PROBLEMS IN MDM IMPLEMENTATION

A. WATER

Schools were questioned about the problems they may face in organization and conduct of MDM programme. Some of the problems are related to water availability, security of MDM provisions/ materials, management of hygiene/ cleanliness and stability of service of cooks. Here is data on schools on the problems they face.

Water problems are experienced by 55 out of 515 schools, 10.68% of total. 38 out of 55 schools get water from tankers. In 12 cases, (maybe small schools), villagers provide- 5 schools get it from bullock carts. 18/54 (33.33% get water on a daily basis while rest get it on a weekly/ fortnightly basis. This problem is there in only a few summer months in 37/55 schools. By and large, 28 schools spend mostly up to Rs.3000/- per month, 23 out of 28 schools spend in a total of 55 schools. Department reimburses in 18 schools. Rest meet the expenditure from Contingency funds. In a few marginal cases, SDMC pays (9 schools). In 6 schools, staff pool, spend and share.

Water problems are experienced by 15 out of 225 schools across 8 out of 11 districts in Bangalore Division, 12 schools of 07 districts in Belgaum Division out of 105 schools of 8 districts, 7 schools of 3 districts out of a total of 6 districts and finally 3 schools of 2 districts out of 8 districts in Mysuru Division (Kodagu/ Udupi), in summer months.

Water access is a minor problem for MDM management that is solved locally by schools.

B. SECURITY PROBLEM

1. Theft of MDM materials is a serious problem. Seriousness cannot be judged on the basis of low incidence, 28 out of 515 schools, 5.35%. Almost all schools reported about thefts to police, filed FIR. 167 out of 515 schools, 32.42%, desire the services of a security guard on contract/ payment basis. It is to be noted that majority of schools do not have a compound wall, even though it is not a guarantee of prevention of theft. Compound wall of minimum 10 feet height with iron gates, expensive proportion, may help.
2. Districts which have experienced theft of MDM materials are: Bangalore Rural (4), Bangalore South (2), Chitradurga (2), Madhugiri (2), Chikkodi (3), Koppal (2), Hassan (2), Mandya (2) and Mysuru (2). A few districts, only once.

C. CLEANLINESS/ HYGIENE MANAGEMENT PROBLEM

1. Maintenance of hygiene/ cleanliness in MDM Management is a real, genuine and significant problem. It is somehow being managed all these years, is not a justification, but a feeling of consolation.
2. Still, nearly 30% of schools have explicitly expressed their opinion that this is a problem. 28.54% schools have been posted with the services of Ayahs, female attenders for MDM (not the same schools). They are uniformly posted across all divisions, even while it is slightly lower in Kalburgi Division.
3. In 38.36% schools, 199 out of 515, students engage in cleaning work for MDM service, before and after. In another 19.22% schools, both teachers and students jointly manage the hygienic duties of MDM services. Together under both types in 57.86% schools, 298 out of 515 schools, students/ teachers attend to maintenance of hygiene for MDM.
4. *CONCERN*: Proponents of self-discipline may approve of students doing cleaning work for MDM. Advocated of prevention of child labour would express their reservations on engaging students (a few students only, 6th/7th/8th standard students) to engage in MDM cleaning work. This will be child labor, sometimes may be on rotation basis; normally girls do it. It will also be discriminatory. Give incentives to existing CCH staff to clean eating places; spare the girls.

D. STABILITY OF SERVICE OF COOKS:

This is not a problem in schools. Only a few schools report on it. Almost all schools engage locally available persons (women) as cooks/ ayahs.

Reasons and way out: (Section 4.14)

There is shortage of Ayahs/helpers everywhere. GoK/Department needs to adhere to its own norms of provision of ayahs to MDM schools. This can be done on contract basis/hiring of local people with preference to SC/ST women for which contingency can be provided. Salaries of MDM staff need to be hiked. Adopt same procedure-local hiring for security staff-SC/ST men. Alternatively existing CCH staff can be given token cash incentives on monthly basis for Ayah work. Alternative suggested is easy adoption.

4.15 MONITORING AND SUPERVISION OF MILK/MDM PROGRAMME

A brief note on M and S as well as illustrations of differences between M & S in MDM is given in Annexure No. III

4.15.1 Adequacy/ Quality and Timeliness in Supply of MDM Materials, as well as Health Care Tablets

Less than 80% supply of these items is ruled out. Data also do not reveal such short supply. Hence, analysis is limited to 80-90% and 91-100% ranges.

Table 13: ADEQUACY IN SUPPLY OF MDM MATERIALS

ITEMS	Bangalore		Belgaum		Kalburgi		Mysuru		State	
	80-90	91-100	80-90	91-100	80-90	91-100	80-90	91-100	80-90	91-100
Rice	31	134	33	106	12	78	18	103	94	421
% Terms	18.79	81.21	23.74	76.26	13.33	86.67	14.88	85.12	18.25	81.75
Pulses	36	129	37	102	12	78	16	105	101	414
% Terms	21.82	78.18	26.62	73.38	13.33	86.67	13.22	86.78	19.61	80.34
Oil	31	134	38	101	14	76	18	103	101	414
% Terms	18.79	81.21	27.34	72.66	15.55	84.45	14.88	85.12	19.61	80.39
Iodized Salt	67	98	44	95	24	66	44	77	179	336
% Terms	40.60	59.39	31.65	68.35	26.66	63.34	36.36	63.64	34.76	63.24
Milk Powder	36	129	31	108	20	70	21	100	108	407
% Terms	21.82	78.18	18.78	81.22	22.22	77.78	17.36	82.64	20.97	79.03
Vitamin A	33	132	57	82	16	74	30	91	136	379
% Terms	20	80.00	41.55	59.45	17.78	82.22	24.79	75.21	26.40	73.60
De-worming tablets	31	134	44	95	20	70	14	107	109	406
% Terms	18.79	81.21	31.65	68.35	22.22	77.78	11.57	88.43	21.17	78.83
Iron Tablets	37	128	56	83	18	72	26	95	137	378
% Terms	22.42	77.58	40.29	59.71	20.00	80.00	21.49	78.51	26.60	73.40
Gas supply	56	109	48	91	14	76	21	100	139	376
% Terms	33.94	66.06	34.53	65.47	15.55	84.45	17.36	82.64	26.99	73.01
Firewood	91	74	71	68	43	47	69	52	274	241
% Terms	55.15	44.85	51.08	48.92	47.78	52.22	57.02	42.98	53.20	46.80
Total Schools	165	165	139	139	90	90	121	121	515	515

Source: Primary data

1. Around 20% schools report short supply of rice, pulses and oil by at least 10% of requirements, in 80-90% range. Short supplies is on the higher side in Belgaum Division and on the lower side in Kalburgi and Mysuru Divisions. This is true of all three items.
2. There is a very high short supply (34.76%) of Iodized Salt. It is high in Bangalore Division.
3. Over 20% schools report that there is short supply of milk powder also.
4. Tablets: All tablets, all over the State are in short supply. It is over 25% in case of Vitamin A and Folic Acid while it is over 20% in the case of de-worming tablets. Belgaum Division experiences high shortage of over 40% in case of both Vitamin A and Folic Acid tablets. Supply of de-worming tablets is better than that of the other two tablets. Folic acid is to be given every week. It should not be in short supply at all. Problems in healthcare are too many- tablets in short supply, after supply some schools do not distribute, if they distribute, some of them do not follow norms. After they supply, many children do not take them (Students' questionnaire analysis will reveal).
5. Concern: There is a need for a higher level of coordinated functioning across Education and Health Departments along with ZP/ TP/ DHO/ DDPI monitoring. JD (MDM) may re-activate this coordination. Health Department needs to be pro-active in its initiatives.
6. Gas or fuel: Schools also face problems in getting replacement of gas cylinders and as a supplement cooking fuel (firewood). This is a local problem. State Government may appeal to ONGC/ Karnataka Unit to treat schools on priority in regard to supply of/ replacement of gas cylinders.

Position across districts:

[Districts with short supply, 80 to 90 percentage range, examined. Data/Tables in Soft copy]

1. There is short supply of at least 10% of the requirements in all districts, of one or the other item.
2. FOOD ITEMS: There is short supply 80-90% range, of iodized salt in 27 out of 34 districts of the State. Milk powder, oil, rice and pulses are in short supply in 17,16,13 and 13 districts respectively (districts differ).
3. TABLETS: Vitamin A and Folic Acid are in short supply in 23 out of 34 districts. The figure for de-worming tablets is 21 districts:
4. Problem of replacement of cylinders is faced by 22 districts.
5. **Position across districts::** There are 5 districts which report on short supply of all 9 items listed in the table here. The districts are: Shivamogga, Vijayapura, Dakshina Kannada, Dharwad and Haveri. Out of these 5 districts, the cases of Shivamogga and Vijayapura are

quite serious. More than 8 schools, more than 50% schools, experience shortage on almost all the 9 items (Shivamogga, Vijayapura). Haveri sample is 18 schools.

6. Gadag experiences shortage on 8 items. It is comfortable only with milk powder, no shortage.
7. 3 districts face shortage on 7 items. They are Bangalore North, Chamarajanagara and Chitradurga.
8. 6 items are on shortage in 5 districts (See table), 5 items in 6 districts. Rest of the districts face shortage on 1/2/3/4 out of 9 items.
9. CONCERN: Information on shortage have to be built upwards from school level and get pooled at BRC/ BEO meetings, like this reach ZP/ CEO/ DDPI/ ADPI (MDM). Department has to follow with CEO/ ZP, FCI, DHO and other concerned service providers. Online information can also be collected from JD (MDM) office for follow-up action.

Table 13.1: QUALITY OF FOOD SUPPLIES

G means Good, S means Satisfactory, P means Poor

ITEMS	Bangalore			Belgaum			Kalburgi			Mysuru			State		
	G	S	P	G	S	P	G	S	P	G	S	P	G	S	P
Rice (Yes)	78	86	1	79	60	-	59	31	-	70	50	1	286	227	2
% G and S	99.39			100			100			99.17			99.61		
Pulses (Yes)	80	80	5	72	65	2	59	31	-	64	55	2	275	231	9
% G and S	96.97			98.56			100			98.35			98.25		
Oil (Yes)	85	79	1	75	64	-	58	32	-	72	48	1	290	223	2
% G and S	99.39			100			100			99.17			99.61		
Iodized Salt (Yes)	52	109	4	47	90	2	48	42	-	56	64	1	203	305	7
% G and S	97.58			97.84			100			99.17			98.64		
Milk Powder (Yes)	91	74	-	85	52	2	55	35	-	62	59	-	293	220	2
% G and S	100			98.56			100			100			99.61		
Firewood (Yes)	15	145	5	13	122	4	5	85	-	18	103	-	51	455	9
% G and S	96.97			97.12			100			100			98.25		
TOTAL	165	-	-	139	-	-	90	-	-	121	-	-	515	-	-

Source: Primary data

There is a need to explain how % G, % S and % P are calculated

1. Quality of food grains is reported to be good or satisfactory in more than 98% schools in all divisions. Those who have rated them 'Poor' are 'Exceptions'. There are 31 such exceptions across 6 items and 515 schools of 4 divisions on each item.
2. It is more comfortable to engage in an analysis of uncomfortable schools, by districts.
3. **Position across districts:** One school each in Chamarajanagara and Chitradurga are not happy with quality of rice (See Basic tables)
4. Bangalore Rural (1 school), Kolar (2), Shivamogga and Tumkur (1 each), Chikkodi (1), Vijayapur (1), Chamarajanagara (1), Kodagu (1) are not satisfied with quality of oil.
5. 2 schools in Kolar and 1 each in Chitradurga, Davangere, Dharwad and Gadag are not happy with the quality (color) of iodized salt supplied to them.
6. Only 2 out of 515 schools in Dharwad district are not comfortable with the quality of milk powder supplied to them.
7. Quality of firewood purchased by them is not good in case of Kolar and Dharwad (3 schools each), Chikkaballapura, Shivamogga and Gadag districts (1 school each).
8. Local attention by BEO/ ADPI (MDM) would be of value. State level action is not needed. Only a circular would be adequate.

TIMELINESS IN SUPPLY OF MDM MATERIALS

Three-fold classification of responses on timeliness of supply of MDM materials are coded, analyzed and interpreted in Table 13.2. They are:

- A. Supply is 'Always' timely
- B. By and large timely
- C. Not at all timely

Table 13.2: Timeliness in supply of MDM Materials

Divisions		Bangalore		Belgaum		Kalburgi		Mysuru		State	
		No.	%	No.	%	No.	%	No.	%	No.	%
Rice	A	118	71.52	93	66.91	69	76.67	96	79.34	376	73.01
	B	46	27.88	44	31.65	21	23.33	23	19.01	134	26.02
	C	1	0.61	2	1.44	-		2	1.65	5	0.97
Pulses	A	114	69.09	94	67.63	73	81.11	96	79.34	377	73.20
	B	49	29.70	43	30.94	17	18.89	22	18.18	131	25.44
	C	2	1.21	2	1.44	-		3	2.48	7	1.36
Oil	A	114	69.09	89	64.03	68	75.56	96	79.34	367	71.26
	B	50	30.30	48	34.53	22	24.44	23	19.01	143	27.77
	C	1	0.61	2	1.44	-		2	1.65	5	0.97
Iodized Salt	A	95	57.58	71	51.08	56	62.22	66	54.55	288	55.92
	B	67	40.61	62	44.60	33	36.67	51	42.15	213	41.36
	C	3	1.82	6	4.32	1	1.11	4	3.31	14	2.72
Milk Powder	A	103	62.42	95	68.35	62	68.89	88	72.73	348	67.57
	B	60	36.36	42	30.22	28	31.11	31	25.62	161	31.26
	C	2	1.21	2	1.44	-		2	1.65	6	1.17
Folic Acid	A	76	46.06	50	35.97	55	61.11	80	66.12	261	50.68
	B	85	51.52	87	62.59	35	38.89	59	48.76	266	51.65
	C	4	2.42	2	1.44	-		2	1.65	8	1.55
Vitamin A	A	87	52.73	63	45.32	60	66.67	61	50.41	271	52.62
	B	76	46.06	74	53.24	30	33.33	57	47.11	237	46.02
	C	2	1.21	2	1.44	-		3	2.48	7	1.36
De-worming tablets	A	88	53.33	69	49.64	59	65.56	69	57.02	285	55.34
	B	76	46.06	69	49.64	31	34.44	50	41.32	226	43.88
	C	1	0.61	1	0.72	-		2	1.65	4	0.78
Total Schools		165	100.00	139	100.00	90	100.00	121	100.00	515	100.00

Source: Primary data

1. More than 97% schools report that all 8 supplies are either 'Always' on time or 'By and large' on time. Those who have reported delay in supply of one or the other of the 8 items are hardly 56 out of 515 schools, 10.87% (considering all items).

2. Delay in State are for Iodized Salt (14 schools), Folic Acid (8), Pulses, Vitamin A (7 each), Milk Powder (6), Rice, Oil (5 each) and finally de-worming tablets (4 schools).

Table 13.3: District Tally for those reporting delay ‘always’. Number of schools in brackets.

DISTRICT/ ITEM	Rice	Pulse	Oil	Salt	Milk Powder	Folic Acid	Vitamin A	De-worming Tablets	TOTAL
Madhugiri	√ (1)	√ (2)	√ (1)	√ (2)	√ (1)	-	-	-	8
Bagalkote	√ (1)	√ (1)	√ (1)	√ (1)	√ (1)	√ (1)	√ (1)	√ (1)	8
Vijayapur	√ (1)	√ (1)	√ (1)	√ (3)	√ (1)	-	-	-	7
Chamarajanagara	√ (2)	√ (2)	√ (2)	√ (2)	√ (1)	√ (1)	√ (1)	√ (1)	12
Chikmangalur	-	√ (1)	-	√ (1)	√ (1)	-	-	-	3
Kolar	-	-	-	√ (1)	-	√ (1)	-	√ (1)	3
Gadag	-	-	-	√ (1)	-	√ (1)	√ (1)	-	3
Haveri	-	-	-	√ (1)	-	-	-	-	1
Bidar	-	-	-	√ (1)	-	-	-	-	1
Mandya	-	-	-	√ (1)	-	√ (1)	√ (1)	-	3
Bangalore North	-	-	-	-	√ (1)	√ (1)	√ (1)	-	3
Davangere	-	-	-	-	-	√ (1)	√ (1)	-	2
Kodagu	-	-	-	-	-	√ (1)	√ (1)	√ (1)	3
TOTAL	5	7	5	14	6	8	7	4	57

Source: Primary data

1. Delay for supply of salt has the highest frequency with 14 out of 515 schools reporting on this. It is followed by Folic Acid (8 schools), pulses, Vitamin A tablets (7 schools), Milk Powder (6 schools), rice and oil (5 schools) and de-worming tablets (4 schools). These incidences are negligible, however cannot be ignored.
2. Chamarajanagara and Bagalkote have reported delay on all 8 items, maybe remote rural schools. Vijayapura and Madhugiri report delay on 5 items. 6 districts report delay in 3 items (See table).

4.15.2 Personnel who supervise Food grains, Kitchen Hygiene and Cooking Staff

MDM Supervision Practices in Schools

1. HT is expected to supervise several aspects of management of MDM, such as quality of food grains, kitchen hygiene, water quality and duty performance of cooking staff. Even Nodal Teachers may do this. Involvement of MC members, participative management, is desirable. Others- SDMC members, parents are also welcome. HTs, by and large, check the quality of food grains, failing which, Nodal Teachers substitute them in this duty. This is complied with in all divisions. Involvement of cooks in this exercise is moderate at 46.21% (schools). Involvement of MC members and others is low everywhere and lowest in Kalburgi division schools.
2. Kitchen hygiene is jointly supervised by HT and Nodal Teachers. Even here, involvement of MC members is low in Kalburgi Division, even in Bangalore Division, and the whole state.
3. Potability of water is normally checked by HT and Nodal Teachers. Checking by cooks also is considerable as noted. Involvement of others is low.
4. Duties of cooking staff is supervised mostly by HTs. In large schools where there are more cooks (as per norms), the chief cook looks after the duties of other cooks.
5. It is better to involve the members of SDMC in some of these tasks unless/ otherwise they are considered as irritating characters/ have nuisance potential.

4.15.3 Concerns in MDM supplies: Inefficient demand estimation techniques. lack of horizontal (between BRCs/ADPIs) and vertical (EO/KSCFC and DHO) coordination, laxity in surveillance by a few TPs and ZPs (EO/CEO) are the reasons for the **marginal** concerns in short supply, timeliness of supply and **highly marginal** concerns of quality in supply.

Adoption of SATS/MDM software would redress this position

4.16 M and S by Educational officers

4.16.0 OFFICERS' FEEDBACK

Perceptions of 76 officers – 28 CRPs, 23 BRP/BEOs and 25 ADPI/MDM have been captured here. (Details in soft copy)

Plan of Analysis: There are several questions which are specific to CRPs, BRPs and ADPIs. They will be dealt with separately. There are other questions which are common to all three levels/types of officers.

Eg. Foci of observation differ across officers; diversity in foci is captured here. They will be treated/analyzed together so that diversity in perspectives can be captured – on the same concerns of MDM

[A] MDM – CRPs – IDI of 28 CRPs

4.16.1 Cluster Resource Persons (CRPs)

Table 14: Number of Schools under the jurisdiction of CRPs.

Divisions	Bengaluru	Belagavi	Kalburgi	Mysore	State
Government	40	147	64	87	338
Aided	02	29	16	25	72
Total	42	176	80	112	410
No. of Districts	4	7	5	4	20
% Government Schools per CRP	95	83	83	78	85
No. of CRPs	4	12	5	7	28
Average No. of Schools per CRP	10	15	16	16	15

Source: Primary data

1. On an average, there are 15 schools under the jurisdiction of a CRP in the State. It is low at 10 schools in Bengaluru Division and high at 16 schools in Kalburgi and Mysore divisions.
2. 85 per cent schools per CRP are Government schools.
3. Number of schools per CRP in Bangalore division is a little less because of distances to be travelled across schools and traffic problems.

Table 14.1: MDM Service in CRPs jurisdiction schools.

Divisions	Bengaluru	Belagavi	Kalburgi	Mysore	State
MDM (Yes)	3	8	2	6	19
MDM (No)	1	4	3	1	9
Total CRPs	4	12	5	7	28
Districts not giving (No. of Schools)	11	38	18	1	68
[No] No. of Districts	1	3	4	1	9

Source: Primary data

19 out of 28 CRPs report that all the schools under their jurisdiction get MDM. In 9 cases of CRPs, a few schools are not getting/accepting MDM. They are working in 9 districts, number of schools not serviced being 98. The districts are Belagavi (24), Bellary (20), Raichur (15), Yadgir (13), Vijayapura (12), Chitradurga (11), Bagalkote (02), and Udupi (01) – Total 68 schools, around 25 per cent schools.

Table 14.2: Milk service in CRPs jurisdiction schools.

Divisions	Bengaluru	Belagavi	Kalburgi	Mysore	Total
Milk is served	4	10	5	7	26
Milk is not served	0	2	0	0	2
Total	4	12	5	7	28

Source: Primary data

26 out of 28 CRPs report that all schools in their jurisdiction are served milk. 2 CRPs report that there are schools in their jurisdiction which do not get/accept milk.

Feedback Analysis: It is of interest to note that in this sample of 28 CRPs, 98 schools do not get/accept MDM. However, only 26 schools do not get milk service. It means there are 72 schools which do not get MDM but get milk out of 98 schools.

All the 28 CRPs report that they monitor the distribution of milk also when they visit schools. In case of 2 CRPs they had reported that milk is not being served in some schools under their jurisdiction. They monitor this in other schools where it is served.

The CRPs monitor milk distribution means that they will be at schools well before prayer/morning assembly time. Milk is distributed in schools immediately after morning assembly. What needs to be monitored is – Is there a system/discipline in distribution – served in their classes, in the assembly place in order of standards 1 to 5/8/10 beginning

from I standard and moving upwards; will all children get it?; who serves milk – cooks and Ayahs (if Ayahs are there), school staff, senior students?; Is milk served in adequate quantity – full glass; are all glasses of same size (note that unlike MDM all children are to be served same quantity of milk irrespective of age and standards studying); will there be wastage of milk – cups with milk left over after distribution – how is it disposed of; what will children do with the used glasses – who cleans them, whether they are kept at some place/places by all children; how do children wipe their mouth after drinking milk; will there be a glow on the faces of children (at least some children, younger ones) after they consume milk; are variety of concerns of monitoring. It is believed that all CRPs are aware of these concerns. It is a part of CRP training content on MDM/Milk Programme in schools.

Job of CRPs in M & S of schools is to provide connectivity between schools and the block office, conduct monthly meetings of teachers in their clusters, attend SDMC/MC meetings, assist the school in ensuring full enrolment and retention. There are variety of jobs like this. CRP has to visit schools for 15 days in a working month as there will be 15 schools in his/her jurisdiction. CRPs need to regularly visit BEO office for liaison work and attend meetings. Due to pressure of work, CRPs may give a ‘flying visit’ to a few schools in the morning. In that case they may not be able to monitor MDM management in schools. It is noted in this study that out of 6 of 28 CRPs do not stay in schools (may be some schools) for the whole day and monitor MDM management. Their inability to monitor MDM in no way affects the MDM activity/service. Programme is managed by HTs nodal teachers/cooks for the benefit of students. A large number of schools also keep records. M & S of CROs in such schools will not be there. Activity goes on.

Feedback analysis:

1. It is better if the CRPs stay in school for the whole day, monitor milk/MDM service, apart from engaging in other CRP functions during the day – functions such as records checking, attendance cross verification, tab on absentees, staff attendance and punctuality, discipline in school, receipt of expected stock of materials/equipments, upkeep of science labs, library and computer labs (if they are there), cleanliness in school/classrooms, compound (if it is there), issue register of library (books), newspapers upkeep, display board of MDM menu, MDM kitchen upkeep, MDM storage practices, MDM distribution; they are also expected to monitor classroom teaching and learning by children – specifically Nali-Kali classrooms, assist teachers to

transact topics in syllabus – different topics / concepts – higher classes in their subjects background; carry difficult concepts in other subjects to CRP monthly meetings; like this CRPs have full day work in a school if they have the mind-set to do it. This list is not exhaustive. CRPs job chart issued by the Department/SSA is useful in this regard.

2. The bottom-line of this analysis is that CRPs can monitor both milk/MDM distributions, apart from other full day functions in a school. ‘Flying Visits’ are not acceptable. Further, it is noted that BRPs/BEOs/ADPI cannot cover all schools. Even 20 to 30 per cent schools in a month is difficult for them. In the interest of comprehensive coverage of schools, CRPs should visit all schools in their jurisdiction in a month (15 to 18 schools in 25 Working days) and stay for the whole day. Block/District Officers/CEO of ZP should ensure this.
3. Educational Co-ordinators (ECOs) may also be directed to monitor and supervise Milk/MDM implementation during their regular school visits. They need to give a report to the DDPI, ADPI (MDM) on their M and S observations. This duty can be included in their job chart and included in their sensitization programmes or at monthly meetings. Give a soft/hard copy of their job chart to all Educational Officers.

Cooperation from Aided Schools

1. Data and table already presented. 18 out of 28 CRPs report that they get cooperation from all private aided schools in their monitoring functions. 2 CRPs report that ‘most of them’ give cooperation.
2. None of the CRPs (4 total) in Bangalore division – districts Bangalore Urban, Bangalore Rural, Chitradurga and Ramanagara – get cooperation from private aided schools, as per their report. DDPIs of districts/ concerned BEOs may speak to the concerned schools/managements/private aided schools association. Matters may improve failing which circular can be sent warning them, through proper channels.
3. 2 out of 28 CRPs do not visit High Schools for monitoring MDM. Many CRPs are of Elementary Teachers Cadre, may be just PUC with D Ed and feel shy to visit high schools where staff are graduates with B Ed., minimum. They should be motivated to overcome this shyness. There is no relationship between job responsibilities and qualifications. It is job-efficiency and sincerity that matters.

CRPs and Concerns of M and S in Milk/MDM Service in Schools

There are several concerns in Milk/MDM services that need attention of CRPs. Cross-verification of Milk/MDM attendance with school attendance; upkeep of cooks (ayahs) – hygiene, apron use, no illness or skin problems; location of nodal teachers for MDM in school – register of rotation; MDM display board; cleanliness in kitchen; MDM/milk taste; management of MDM materials/pills as per FEFO; social integration of students during MDM service are some concerns. Here is data on these concerns from 28 CRPs.

Table 14.3: MDM/Milk Monitoring Concerns of CRPs

Divisions	Bengaluru	Belagavi	Kalburgi	Mysore	State
(a) MDM/Milk Attendance (Yes)	4	11	3	7	25
(b) Upkeep of Cooks (Yes)	3	9	1	5	18
(c) Nodal Teachers System (Yes)	3	6	1	5	15
(d) MDM Display Board (Yes)	4	8	3	5	20
(e) Cleanliness of Kitchen (Yes)	4	10	3	6	23
(f) Taste of MDM (Yes)	4	8	3	5	20
(g) FEFO (Yes)	1	2	1	1	5
(h) Social Mixing at MDM (Yes)	4	6	1	6	17
Total CRPs in Study	4	12	5	7	28

Source: Primary data

There are 28 CRPs in this study. It is clear from reported data (self-reported) that not all CRPs observe/monitor all the 8 items listed here. Order of priorities of CRPs in M & S is given here.

Table 15: CRPs M and S Priorities

		Frequencies
a)	Attendance of Students in MDM Register and Class Attendance Register	25
b)	Cleanliness of Kitchen	23
c)	Taste of MDM Food	20
d)	MDM Display Board	20
e)	Upkeep of Cooks	18
f)	Social Integration during MDM time	17
g)	Nodal Teachers System	15
h)	FEFO Compliance	5
	Total CRPs	28

Source: Primary data

Attendance cross checking – MDM/Classroom is the top most priority of 25 out of a total 28 CRPs. This is good. This is a ‘Efficiency’ variable. Pilferage of food can be prevented through this measure. Next in order of priority is ‘cleanliness of kitchen’ reported by 23/28 CRPs, a health/hygiene variable. ‘Taste of MDM food’ is a quality concern chosen by 20/28 CRPs, just as ‘MDM Display Board’ checking which is an ‘Equity’ concern. Another ‘Efficiency’ concern is ‘location of nodal teachers in schools’ chosen by 15/28 CRPs. Last priority among CRPs is storing of MDM materials and tablets as per FEFO method which is an Efficiency concern, chosen by only 5/28 CRPs.

The foregoing analysis should; be useful to JD (MDM) and DSERT and DIETs in review of content of training of CRPs, in a cascade mode.

SMS Practices

The Department has given ‘SMART PHONES’ to all HTs for on-line monitoring of MDM attendance in the State. A dedicated web-site has been created at National Informatics Centre, NIC, Bangalore, and a toll-free number is provided to all HTs to communicate the day’s student attendance which will also be the attendance for MDM. A consolidated day-to-day feedback on attendance information from all schools of the State by NIC will ensure efficiency/no pilferage of not only MDM in the State but also the incidence of attendance/absenteeism in government sector schools. Attendance is a ‘necessary’ condition for learning; may not be a ‘sufficient’ condition. This information is already discussed under HT tool analysis.

HTs are expected to communicate to CRPs the day’s MDM attendance. CRPs have to consolidate this information and forward it to higher authorities – BEO/ADPI/NIC. This measure will facilitate cross-checking of HTs information on student attendance at block/district/State levels, cross-checking by CRPs during surprise visits (if any), identification of HTs who are not prompt/regular in sending SMS on MDM and follow-up on them. How is this practice on the ground? Hence is data.

SMS of MDM by HT's to CRPs

25 CRPs, out of 28 in sample, report that they receive SMS from HTs on day's attendance of MDM, daily. It is a report of 'once in a way' by 3 CRPs. These CRPs are from Haveri (1 CRP), Uttara Kannada (1 CRP) and Udupi (1 out of 4 CRPs).

23 CRPs report that they receive SMS on MDM daily from all schools in their jurisdiction. The 5 CRPs who do not receive from all schools are: Bagalkote (1 CRP), Chamarajnagar (1), Hassan (1), Mandya (1) and Uttara Kannada (1).

In total, there is a problem regarding SMS in 7 out of 34 districts identified herein – Irregular practice (3 districts), non-compliance of a few schools (4 + 1 districts). Uttara Kannada is appearing in both the lists.

CRP and Community Connect

CRPs are expected to attend SDMC/MC meetings, as per their convenience of work and commitments. It is a platform for them to enter into a dialogue with the functioning concerns of schools from community perspective, including MDM. CRPs are a bridge between higher level of administration and community connect for schools. How is this expectation getting compliance? Here is data.

CRP and Community Connect

1. 24 out of 28 CRPs have attended SDMC meetings, as per their self-report (IDI). Districts where CRPs have not attended SDMC meetings, so far, are: Belagavi (2 out of 4 CRPs, and Chikkodi (2).
2. 18 out of 28 CRPs have attended MC (Mothers Committee) meetings. Districts where they have not attended MC meetings are: Bellary (1), Bengaluru (1), Bengaluru Rural (1), Bidar (1), Chitradurga (1), Dharwad (1), Raichur (1), Uttara Kannada (1), Vijayapura (1) and Yadgir (1). All CRPs in Kalburgi division (5) and 3 out of 4 CRPs in Bengaluru division have not attended MC meetings, assuming that MC meetings have taken places everywhere which are expected to meet. HTs have to hold such meetings (MC). SDMC is a statutory body. MC is not.
3. To a question whether CRPs have received complaints regarding MDM/Milk from SDMCs/MCs, any time in the past, all the CRPs have unanimously responded 'No'.
4. To a question whether there are any problem schools in their district regarding MDM implementation, all the CRPs, in one voice, have said 'No'.

5. 19 out of 28 CRPs have reported on commendable practices in MDM implementation in schools of their jurisdiction. They are referred to as ‘Model’ schools. The 19 CRPs are from the following districts: Bagalkote (2), Bangalore (1), Bangalore Rural (1), Belagavi (2 out of 4), Bidar (1), Chamarajanagar (1), Dharwad (1), Hassan (1), Haveri (1), Kalburgi (1), Mandya (1), Raichur (1), Udupi (3 out of 4), Uttara Kannada (1) and Yadgir (1). This is quite a good list. [Useful for **CASE STUDY** selections.]

Note: The ‘model’ schools details, with their DISE code have been recorded by Supervisors during IDIs (as per training given to them before field work).

CRPs Self – reports [Voluntary reports]

CRPs were asked to report about MDM concerns that they carry in their mind-set, beyond structured questions. Here is an account of what they have said.

(A) Appreciations:

1. MDM is going on perfectly well (Achukattaagi Nadeyuthide) – 2 CRPs
2 CRPs
2. This is a good programme (12 CRP)
Houdu, olleyakaaryakrama.
3. MDM is going on in an excellent way in all schools – 2 CRPs
a. YellaShaalegallooUttamavaaginadeyuthide.
4. Attendance has improved – One CRP
HaajarathiyalliHecchala.
5. There is higher concentration in learning-teaching transactions – One CRP
Kalike/bodyaneka devi sheshagamanairutthadhe

(B) Problems Identified

1. Head Teachers feel extra load in managing MDM (3 CRPs from, one each from Bellari, Chitradurga and Vijayapura) –
2. Daily visits to markets for purchase of vegetables – teachers/HT get delayed to school – 3 CRPs – Bellari (1), Chitradurga (1), Vijayapura (1)

[C] Suggestions

Serve horse gram (hurulikaalu), green gram (hesarukaalu), black gram (kadalekaalu), - after sprouting them – in Saambhaar along with Tur Dhal (Thogaribele) – this will be good –

1. CRP from Hassan

1. Give Baadham powder with Milk – it will be good – 1 CRP from Hassan.
2. Appoint Ayahs and increase salaries of cooking staff – 1 CRP from Udupi.
3. Appoint clerks for MDM accounting to a cluster of schools – 1 CRP from Udupi.

4.16.2 Block Education Officer (BEO); Block Resource Person (BRP) Basic**Data**

23 BRPs/BEOs are covered in this study. While there will be 15 to 18 schools for a CRP in his jurisdiction, there will be 15 to 20 CRPs in a block/taluq, depending on geographical size/number of schools in the block. One BEO, a Class II Gazetted Officer, is assisted by a Block Resource Centre consisting of 6 Block Resource Persons spread equally across school subjects. 3 BRPs will be of High School Teachers' rank and the other 3 will be from the Cadre of Elementary School Teachers. BRC is also entrusted with M & S duties of schools including MDM supervision. Block Education Officer, BEO is in charge of all the schools in the taluk from 1 to 10 standards. CRPs and BRPs report to BEOs. BEOs have administrative powers.

1. Average number of schools for supervision of MDM for the BRC/BEO is given here. Average is for districts.
2. 23 BRPs/BEOs have been interviewed (IDI) in this study and taluk-specific data collected from them, in relation to their work.
3. Work load and MDM Supervision: There will be 6 BRPs in a taluk. On an average for the State (20 district count), a BRP has to be in charge of 37 schools for M & S work which includes MDM supervision during their school visits. It is 35 and 35 schools in Bangalore and Belagavi divisions, 36 in Kalburgi division and 42 in Mysore division.
4. BRPs do not move around the taluk every day. They have school visits for 15 days in a month (outside office work).
5. They strike balance between LPS, HPS and HS in State
6. The BRC/BEO staffs have 12 LPS, 16 HPS and 9 HS under their jurisdiction, on an average, for supervision at the State level. LPS are in remote places as compared to HPS

and HS, if they are independent LPS. It is easier to reach HPS than LPS, if they are independent HPS. HS are normally in Hobli Headquarters or Taluk Headquarters. Load of work for Block Officers is slightly higher in Mysore division.

7. In a few districts, viz., Bidar and Yadgir, independent private aided LPS are non-existent (zero incidence). Their presence is very low in other districts also – Bangalore (2 private aided LPS schools), Bangalore Rural (3), Dharwad (1), Haveri (1), Vijayapura (5), and Udupi (4). Private Aided Schools – LPS + HPS + HS are very low in Yadgir district (total 06) when State average is 98 schools. This is true of Haveri, Dharwad and Bangalore Rural districts also which have 23, 12 and 23 total private aided schools.
8. In M and S, even though from MDM perspective, both government and private aided schools are important (aided schools which receive MDM), still government schools (including Corporation Schools) need more attention as the poorest of the poor attend Government schools. Low middle class background children (not a generalization), normally attend private aided schools. M & S will be better and self-managed. Block Office can pay more attention to Government schools where private aided schools are less – Yadgir, Dharwad, Haveri and Bangalore Rural.
9. In order of incidence, private aided schools (LPS + HPS + HS) are 609, 532, 473 and 322 in Belagavi, Mysore, Bangalore and Kalburgi divisions respectively. There are historical/evolutionary reasons for growth and spread of private aided schools in the State.

Staff Position in Blocks for M & S Functions:

CRPs are the foot soldiers in school administration directly working under the BRC/BEO. BEO is the block level officer, Gazetted Class II, holding statutory powers and authority. BRC is an academic wing for M & S, training, administrative connect and other functions for educational management in the block. Vacancies of CRPs in block/BRPs at block level affects the efficiency of administration in a block. CRPs/BRPs are drawn from pool of teachers based on entrance tests and other criteria. Efficiency of M & S for MDM depends on full complement of staff at block level. Here is data from this study [Basic Data in Annexure No. III).

There are 23 BRPs in this sample from 20 districts. They represent the BEOs. Normally, there should be 120 BRPs from 20 districts. The 23 BRPs of this study (out of 120) report vacancies of CRPs in their jurisdiction. Every BRP will have around 10 to 12 CRPs under their jurisdiction. 3 districts from Bengaluru division (Bengaluru, Chitradurga,

Kolar), 3 from Belagavi (Belagavi, Chikkodi, Haveri), Yadgir from Kalburgi division and Chikmagalur from Mysuru division have reported full complement of CRPs under them. 12 districts have reported vacancies. They are Bengaluru (01), Bagalkote (02), Dharwad (01), Uttara Kannada (01) and Vijayapura (01) – Belgaum division; Bellary (01), Bidar (01), Raichur (01) from Kalburgi division; and Chamarajanagar (01), Mandya (01) and Udupi (02) from Mysore division. Number of vacancies indicated in brackets – a total of 13 clusters with vacancies across 12 districts.

They are managing with in-charge responsibility for nearby CRPs, entrusting CRP work to CWSN assistant or engaging one senior teacher in the cluster as CRP. Hence, vacancies of CRPs, though not acceptable still is not a big problem for M & S functions, specifically of MDM.

BRP Feedback from CRPs

BRPs get feedback from CRPs on several areas of concerns including MDM. How is this practice among CRPs/BRPs of this sample? Here is data.

19 BRPs regularly receive feedback on MDM/Milk from all the CRPs in their jurisdiction. 04 BRPs report that most of the CRPs send feedback. By and large, there is no major problem in feedback from CRPs to BRPs on MDM/Milk services.

15 out of 23 BRPs send consolidated reports on MDM/Milk programme from clusters/schools of their jurisdiction, every day. 2 of them send it once a week while 6 of them send it once a month. However, all of them send feedback irrespective of periodicity.

Table 15.1: CRP/BRP connect on Milk/MDM feedback

Division	Bengaluru	Belagavi	Kalburgi	Mysore	State
a. Receive Report from CRPs	0	2	1	3	6
Daily (Yes)					
Usually (Yes)	3	5	2	2	12
Once in a way (Yes)	1	0	0	0	1
b. Sent it to ADPI					
Daily (Yes)	0	1	1	2	4
Weekly (Yes)	4	6	2	3	15
Total BRPs	6	8	4	5	23

Source: Primary data

19 BRPs receive reports on Milk/MDM services. Out of them, only 6 of them receive it on daily basis. Another 12 send it ‘usually’. The BRPs send the reports/forward it after consolidation to ADPI/MDM. Only 4 of them do it on a daily basis. Others send it once a week. Districts where daily reports are forwarded are: Bagalkote (1), Bidar (1), Mandya (1) and Udupi (1).

Concern: If not daily, a weekly report from BRPs to NICs would be better from the perspective of consolidation and follow-up.

Table 15.2: Number of school visits for M & S of Milk / MDM

Division	[In Percentage of Schools]				
	Bengaluru	Belagavi	Kalburgi	Mysuru	State
21 to 30%	5	4	3	2	14
11 to 20%	0	4	1	3	8
10 and < 10%	1	0	0	0	1
Total BRPs	6	8	4	5	23

Source: Primary data

Majority of BRPs are able to visit 21 to 30 per cent of schools in their jurisdiction (14 out of 23). Another 8 BRPs visit 11 to 20 per cent schools. Only one BRP, from Ramanagara district can visit 10 or < 10 per cent schools.

BRPs and NGOs in MDM/Milk

NGOs are not under Departmental umbrella of school administration. They serve MDM/Milk. There is a need for satisfactory coordinated functioning between NGOs and BRPs. Is it there? Here is data.

Table 15.3: BRPs and NGOs in MDM/Milk

Division	Bengaluru	Belagavi	Kalburgi	Mysore	State
NGOs in BRP districts (Yes)	3	6	2	3	14
NGOs inform BRPs (Yes)	3	6	2	3	14
Total BRPs	6	8	4	5	23

Source: Primary data

1. In 12 out of 20 districts where 23 BRPs are subjected to IDIs, NGOs also serve MDM/Milk to school children. All the 14 BRPs report that NGOs keep them informed about the DISE codes of schools they serve, day’s attendance for Milk/MDM, problems (if any); regularly inform. No issues.

2. Out of 23 BRPs, 21 BRPs monitor Milk/MDM service also. Two BRPs, each from Haveri and Chikmagalur self-report that they do not monitor Milk/MDM service.
3. Out of these 21 BRPs, 16 BRPs do it 'always', 03 more 'usually', do it while 2 do it 'once a way'.

Concern: Job chart of BRP may include, in future, Milk/MDM monitoring as a mandated duty of BRPs.

Details of M & S of BRPs

This was not a structured question with answers to be chosen. Whatever they said has been classified and analyzed. Significant responses are: Attendance, upkeep of Cooks, location and presence of nodal teachers, MDM Display Board, Cleanliness of Kitchen – hygiene, Taste of food, FEFO compliance and social integration during milk/MDM service. Here is data of their responses. All 23 BRPs have responded even while 2 BRPs had said that they do not monitor Milk/MDM services. They said, once in a way, they have monitored in the past.

Table No 15.4: BRPs Monitoring of MILK/MDM services

	Division	Bengaluru	Belagavi	Kalburgi	Mysore	State
(a)	MDM Attendance (Yes)	6	7	4	4	21
(b)	Kitchen Hygiene (Yes)	5	5	3	4	17
(c)	MDM Display Board (Yes)	4	6	2	5	17
(d)	Taste of Food (Yes)	6	3	3	3	15
(e)	Social Integration (Yes)	4	4	2	3	13
(f)	Upkeep of Cooks (Yes)	4	3	3	3	13
(g)	Nodal Teachers Presence (Yes)	1	5	3	3	12
(h)	FEFO Compliance (Yes)	0	1	1	2	4
	Total BRPs	6	8	4	5	23

Source: Primary data

1. Most of the BRPs, 21/23 give utmost priority to monitoring student attendance; harmony across MDM Register and Classroom/school attendance register. This is the right practice. 2 districts where it is not of upmost priority are Chikmagalur and Haveri.
2. Next in order of priority is Kitchen Hygiene. It is tied up with MDM Display Board. 17/23 kitchen hygiene monitoring is of great value. Districts where it is not a top priority are – Chamarajanagar, Dharwad, Raichur, Ramanagara, Uttara Kannada and Vijayapura.

3. In lower order of priority, monitoring concerns among BRPs are Social Integration (13/23) and upkeep of Cooks (13/23) – equal attention to both.
4. Nodal Teachers presence has also been monitored by 12/23 BRPs.
5. Lowest and least priority in monitoring is given to FEFO compliance; only 4 out of 23 BRPs look into this. Districts to which they belong are – Bidar (1), Chikmagalur (1), Haveri (1) and Mandya (1). FEFO is to be applied for MDM materials, milk powder and tablets.

Concern: Monitoring priorities are left to the choices of BRPs. There is no standard practice. BRP training programmes, by Master Trainers of DSERT/ DIETs, may arrive at a consensus on monitoring priorities even while comprehensiveness, monitoring all concerns, is ideal. FEFO needs special attention.

BRP Attendance (if any) at SDMC/MC meetings

If BRPs attend SDMC/MC meetings they will get a firsthand experience/ understanding of ground level feelings and feedback on functioning of schools – Milk/MDM included. Only caveat is that there should be such meetings, by coincidence, when BRPs visit or CRPs should have informed them in advance. Here is data.

Table 15.5: BRP Attendance (if any) at SDMC/MC meetings

Division	Bengaluru	Belagavi	Kalburgi	Mysore	State
SDMC (Yes)	6	7	4	4	21
MC (Yes)	5	6	3	4	18
Received Complaint (Yes)	1	3	3	3	10
Total BRPs	6	8	4	5	23

Source: Primary data

1. Most of the Block officials attend SMDC/MC meetings. It is good. Districts where they have not attended SMDC meetings are – Bagalkote and Udupi (one BRP each); and MC meetings – Bagalkote (1), Dharwad (1), Raichur (1), Ramnagara (1) and Udupi (1).
2. 10 BRPs report that they had received grievances at these meetings. Out of them 4 BRPs mention it as related to selection and behaviour of cooks. Incidentally it is noted that the Government policy is to choose SC/ST cooks as far as possible.

Co-ordination of Supplies to Schools

1. BEO is in charge of this responsibility. But BRPs assist him/her.
2. Receipt of nutrition/health tablets in ‘adequate’ quantities for distribution to schools, from Health Department.

BRPs monitoring on Supplies to Schools

1. 20 out of 23 BRPs report that they get ‘adequate’ supplies of both health/nutrition tablets for distribution in schools. The 03 districts which have reported on short supply are: Belagavi (1 BRP), Chikmagalur (1) and Haveri (1). They were adequate for all schools in the 20 districts.
2. Adequate (20) or not (03), 21 districts received the tablets in proper time. Two districts which did not get them in right time are: Belagavi and Haveri. Chikmagalur district did not get the tablets both in adequate quantity and out of sync with time.
3. By and large, 21 out of 23 BRPs keep in touch with the District Health Officer (DHO) regarding adequacy, shelf life, timely supply of tablets.

Concern: CEO of ZP needs to direct the DHOs to be watchful in future regarding 3 aspects of health/nutrition tablets of MDM – adequacy, timeliness and shelf life. This should not be confined to problem districts identified in this study, but be a general guidance to all the districts for future corrective actions.

Method of Estimation of DEMAND of Materials/Milk power for Milk/MDM services to schools by BRPs

Estimation is mostly done by ADPI. BRPs were not clear cut in their responses (during IDI).

There were 2 options available for them – directly collect from schools or collect about schools from CRPs. Information given by BRPs, district-wise is given.

Multiple Response possible.

1. BRPs from 09 districts in List 1 have mentioned School-Based Information for estimation of Demand.
2. 14 districts in List 2 (Column 2) have mentioned CRP as source. Out of them 7 districts have mentioned both sources.
3. 5 districts have no information.
4. Further, 3 districts, namely, Dharwad, Chikkodi and Haveri have mentioned that they depend on ‘average attendance’ of schools that had been sent to them earlier by schools is their basis for estimation of demand. Among these 3 districts, Haveri is the only district which had not chosen earlier options. The other 2 districts had mentioned both the options.

On further probing, BRPs said that they will depend on all options, may be one or the other.

5. 4 BRPs from Bagalkote, Belagavi, Raichur and Udupi (one each) have reported that the ADPI of their district gives them this information.

6. This is how, the earlier observations are held on – BRPs are not clear in their response.

Concern: If the State Department of Education, JD/MDM, would like to depend on BRPs for estimation of demand for milk powder, MDM materials and tablets, even for cross-verification, BRPs should be given clear cut guidelines for estimation of demand.

Status of Milk/MDM as an agenda item in meeting of EO/BEOs with CRPs

21 out of 23 districts discuss Milk/MDM programmes as a part of agenda at BEO meetings with CRPs regularly (15 BRPs) or usually (8 BRPs). 2 BRPs report that Milk/MDM is discussed ‘once in a way’. Dharwad and Raichur are the two districts from where 2 BRPs – one from each district – have reported.

Concern:

This is a marginal issue. Districts may be reminded again about this concern.

Problem schools and Model schools where Milk/MDM concerns are identified by BRPs

BRPs were asked whether there are any model cases/schools in their blocks in Milk/MDM distribution.

Likewise, they were asked whether there are any nodal cases/schools that they would like to mention/showcase for their good practices which are worthy of emulation. These cases/schools/instances were noted by the supervisors of the project/study/evaluation, along with DISE codes of schools.

BRPs, one each from Dharwad and Raichur districts mentioned ‘problem schools’/

12 districts mentioned ‘good’ practices which can serve as ‘model’ for others. These districts are: Bagalkote (1), Bidar, Chamarajnar, Chikmagalur, Chitradurga, Haveri, Mandya, Ramanagara (1), Udupi (1), Uttara Kannada, Vijayapur and Yadgir.

Feedback: This information would be useful for selection of cases for case studies, along with complementary information from CRPs and ADPIs.

All the 23 BRPs were asked – whether they have any concerns/issues that they would like to pop up/discuss/mention which have not been discussed so far during their IDIs.

All of them said ‘No’.

4.16.3 In-Depth Interviews (IDI) of Assistant Directors of Public Instruction (MDM)/Block Level/ADPI

25 ADPIs have been contacted/agreed for In-Depth Interviews, IDIs. They are from 19 districts. ADPIs assist BEOs in MDM/Milk management.

MDM - Basic Data about ADPIs

Every district has an Assistant Director of Public Instruction) (BEO rank) in charge of MDM/Milk, working under the DDPI of the district but directly coordinating with JDPI/MDM, State Office. S/he assists the CEO/ZP through DDPI in planning, monitoring and review of MDM programme.

1 MDM – Work Load of ADPI (No. of Schools)

25 ADPIs have been interviewed (IDI) in this study.

2 There are 12 out of 25 ADPIs from Belgaum Division.

3 There is one ADPI each from Bangalore Division (3 districts) and Mysore Division (4 districts), and 2 ADPIs each from Belgaum and Kalburgi districts.

4 District-wise data of this table is in Basic Tables.

5 In the DDPI Office and the district, ADPI/MDM is supported for MDM, M & S work by other Officers/colleagues. These Officers, are as per normal staff structure is as follows:

DDPI (1), EOs (2), Subject Inspectors (6), DIET Faculty (14), ECOs (12). These staff are apart from BRP/BEO/CRPs. ADPI/MDM has main and exclusive responsibility for MDM while for others it is a supportive function. In sum, there will be around 35 persons at district level who may supervise MDM during their visits to schools and assist ADPIs.

Average number of schools per personnel in DDPI Office is not analyzed here as the sample schools are less than total number of MDM schools in districts (19 districts).

6 ADPI gets M & S reports from Head/Nodal Teachers (Day's MDM attendance), from CRPs, BRP/BEOs, other Officers who visit schools, from DIET faculty.

Table 16: Convergence of M and S Functions across CRP/BRP/BEO/ADPI (MDM)

Number of schools officers visit in a month for MDM monitoring and supervision function. CRP, BRP/BEO, ADPI (MDM) [In Percentages]

Officers	< 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 70	71 to 80	81 to 90	91 to 100	Total
CRPs	-	-	-	-	-	1	2	3	-	22	28
BRPs	1	8	14	-	-	-	-	-	-	-	23
ADPI	2	13	10	-	-	-	-	-	-	-	25
Total	3	21	24	-	-	1	2	3	-	22	76

Source: Primary data

By and large, it is the CRPs who carry out the M & S functions of schools, specifically the MDM supervision. They are the nearest officers, soldiers of the State administrative structure. Their reports on MDM are of highest significance to State/District MDM administration. Still it is observed that a few CRPs (6 CRPs) are not able to cover 91 to 100 per cent (all schools) schools in their cluster.

Concern: CRP monitoring of all schools for MDM management needs to be strictly enforced. BRP/BEO/ADPI monitoring can be directed towards quality cross checking of CRP reports as well as direct review of MDM implementation in schools, even though it is limited in coverage.

There are 16964 schools under the jurisdiction of 25 ADPIs interviewed here. It is possible that NGOs may also serve milk/MDM in schools. Here is data.

Table 17: NGOs Serving Milk/MDM to Schools in Districts

Division	NGOs	Numbers			Total ADPIs
		3 and < 3	4 to 7	8 and > 8	
Bangalore	✓	2	1	-	03
Belagavi	✓	6	-	1	07
Kalburgi	✓	2	2	-	04
Mysuru	✓	2	-	1	03
Total	✓	12	03	02	17

Source: Primary data

1. All 3 ADPIs from Bangalore Division report on the presence of NGOs under their jurisdiction. Their number is 3 or < 3 in two and 4 to 7 NGOs in another district.

2. 7 ADPIs from Belagavi division out of a total of 13 ADPIs report on NGOs presence in their jurisdiction. 6 of the 7 ADPIs report that there are 3 or < 3 NGOs while 1 ADPI reports that there are 8 or > 8 NGOs [Bangalore District].
3. 4 ADPIs from Kalburgi out of total 5 report on presence of NGOs. 2 ADPIs report on 3 or < 3 NGOs while 2 ADPI reports that there are 4 to 7 NGOs.
4. 03 out of 4 ADPIs in Mysuru report on presence of NGOs. 2 of them report that there are 3 or < 3 NGOs while 1 NGO reports that there are 8 or > 8 NGOs in Udupi district.
5. Districts where NGOs are not under the jurisdiction of ADPIs in this sample (of 25 ADPIs) are: Bidar, Dharwad, Mandya, Uttara Kannada (2 ADPIs) and Vijayapura. In Chikkodi (1 out of 3) and Haveri (1 out of 2) ADPIs report on absence of NGOs; total 8 ADPIs do not have NGOs.

Feedback: NGOs are spread all over the State in Milk/MDM service.

NGOs habit of informing (ADPIs) about the daily attendance of students and problems (if any) that they face.

- 1 17 ADPI had reported that there are NGOs serving Milk/MDM in their jurisdiction. Out of them, 14 ADPIs report that NGOs report to them on their routine activities – coverage of schools, students, and field problems (if any). 03 ADPIs do not get such reports – the districts are – Bellary (1), Chikkodi (1 out of 3) and Chitradurga.
- 2 To a question whether ADPIs get cooperation from NGOs, all the 17 ADPIs who have NGOs under their jurisdiction have said ‘yes’. No issues.

Concern: NGOs may be advised (Renewed circular for all) to keep in touch with ADPIs as a matter of routine.

M & S of Milk/MDM by ADPIs- No. of School visits and content of M & S.

Student Attendance, cooks, upkeep, location/presence of Nodal Teachers, MDM Display Board, Kitchen Hygiene, Taste of food, FEFO compliance and Social Integration among Children. Here is data from ADPIs.

ADPIs monitoring of MILK/MDM services

- 1 ADPIs have numerous and variety of responsibilities for (Milk)/MDM management in the Taluks. It is difficult for them to engage in monitoring work of MDM. They are hard pressed for time. Still, it is observed, as per their self-report, that all of them

monitor Milk/MDM during their visit to school. 21 out of 25 ADPIs, 'always' do it; another 04 ADPIs do it 'usually'. Some of them have said 'once in a way'.

- 2 However, only 10 per cent ADPIs are able to visit more schools, 21 to 30 per cent. This will also work out to around 130 schools (in a year) per ADPI. 13 ADPIs visit around 11 to 20 per cent schools, while 02 ADPIs visit 10 or < 10 per cent schools.
- 3 Foci of Monitoring: All ADPIs will not be able to monitor all aspects of Milk/MDM. None of them has been able to do it. They have 4 priorities of equal merit – attendance of children for MDM and its cross-verification with classroom/school attendance; 19 ADPIs have reported on this. Other 3 priorities are (19 ADPIs for each of them) – presence of nodal teachers, upkeep of cooks and social integration of children. Next in order of priority – with 17 ADPIs mentioning each of them are – Kitchen hygiene, Food Taste and MDM Display Board. Last priority is given to FEFO compliance as reported by 14 ADPIs. FEFO as a priority is better attended by ADPIs than CRPs and BRPs.

Concern: ADPIs can reduce the number of visits to schools, but should give attention to all concerns of MDM management, specifically to Attendance monitoring, taste of food and FEFO compliance.

They can rotate the schools of their visits and cover more schools during the year.

Feedback reports from BRPs to ADPI (MDM)

- 1 19 ADPIs get report on Milk/MDM services in schools of their jurisdiction. 12 out of 19 get it every day, 2 get it usually and 05 ADPIs get it once in a way. 06 ADPIs who do not get any reports are: Bangalore (1 ADPI), Chamarajanagara, Chikmagaluru, Kalburgi and Chikkodi (1 out of 3). Other districts – one each.
- 2 Even though 19 ADPIs get reports from BRCs, irrespective of periodicity, only 5 out of 19 get them from all schools of the concerned BRP jurisdiction. Another 14 BRPs do not send full information.

Concern: Lateral information from BRCs/BRPs to ADPIs needs to be systematized. Either there is no information or incomplete information. Consolidation, for purposes of cross checking becomes difficult.

Table18: Frequency of onward transmission of BRCs to higher officers by ADPI (MDM)

Division	Bengaluru	Belagavi	Kalburgi	Mysore	State
Send it Daily (Yes)	2	8	4	3	17
Send it once in 2 days (Yes)	1	5	1	1	08
No. of ADPIs	3	13	5	4	25

Source: Primary data

17 out of 25 ADPIs send the District's Milk/MDM information to JD/MDM Office daily.

The others send it once in 2 days.

Cooperation to ADPIs from private Aided schools:

Concerns: All the ADPIs have said that they get expected cooperation from private aided schools for implementation of Milk/MDM services. There are no issues. Hence table is not given.

ADPI (MDM) attendance at SDMC/MC meetings receipt of complaints (Milk/MDM), if any and nature of complaints.

Table 19: ADPIs attendance for SDMC, MC Meetings

	Divisions	Bengaluru	Belagavi	Kalburgi	Mysore	State
(a)	Attended SDMC Meetings (Yes)	2	12	3	4	21
(b)	Attended MC Meetings (Yes)	1	10	3	4	18
(c)	Received Grievances (Yes)	0	2	0	1	03
	Total ADPIs	3	13	5	4	25

Source: Primary data

By and large, ADPIs attend SDMC (21 out of 25) and MC (18 out of 25) meetings. They will get a ground level feedback on Milk/MDM services. However, it is noted that in only 3 cases of ADPIs, grievances from SDMC/MC Committees have been received. Districts from where such grievances are received are: Belagavi, Haveri and Mandya. One of these 3 grievances was regarding quality of food (Belagavi) and the other 2 were regarding cooking staff.

Concerns: By and large, there are no issues to attend to by ADPIs from SDMCs and MCs.

Coordination with STAKEHOLDER agencies. Which are the stakeholder agencies with whom ADPIs coordinate their work:

Table 20: Coordination with STAKE HOLDER agencies

Divisions	Bengaluru	Belagavi	Kalburgi	Mysore	State
KMF (Yes)	2	13	4	4	23
KSCFC	2	11	3	3	19
DHO	1	6	1	1	09
Total ADPIs	3	13	5	4	25

Source: Primary data

KMF is the agency with whom 23 out of 25 ADPIs coordinate their work. Such coordination between KSCFC and ADPIs is there among 19 out of 25 ADPIs. But working relation with DHOs (for tablet supply concerns) is there only among 09 out of 25 ADPIs.

Concern: Normally, ADPIs have to coordinate with all these agencies. Sometimes CEO/ZP Office coordinates with KSCFC

Table 21: Receipt of utilization certificates

Divisions	Bengaluru	Belagavi	Kalburgi	Mysore	State
Get UCs (Yes)					
Without fail (Yes)	3	12	5	3	23
On Time (Yes)	3	12	5	3	23
Total ADPIs	3	13	5	4	25

Source: Primary data

23 out of 25 ADPIs report that they get consolidated UCs from CRPs without fail. All of them send it on time. Districts which falter are: Bagalkote and Chamarajanagar.

‘Problem Schools’ in jurisdiction of ADPIs. Feedback: All of them have said ‘No’. Hence table is not given.

ADPIs were asked: ‘Are there any ‘model’ schools, schools which are doing very well in Milk/MDM management and engaged in ‘good’ practices which are worthy of emulation. Feedback: ADPIs eagerly, excitedly gave their ‘positive’ responses. Here is data.

Table 22: ADPIs responses regarding Model Schools on Milk/MDM management

Divisions	Bengaluru	Belagavi	Kalburgi	Mysore	State
Best Practices ‘Yes’	2	12	4	3	21
No	1	1	1	1	04
Total	3	13	5	4	25

Source: Primary data

21 out of 25 ADPIs report 'Best Practices' in the schools of their jurisdiction. This information will facilitate selection of schools for CASE STUDIES. Field Supervisors had been advised to note down the DISE code of schools, identified with 'Best Practices'. Further, it is good that so many managers of the system of milk/MDM are satisfied/happy about performance of schools under their jurisdiction. 4 districts which have not come forward with Best Practices are Bagalkote (1), Chitradurga, Kalburgi and Udupi.

Voluntary/Self-Report of ADPIs about Milk/MDM services (in schools of jurisdiction).

Feedback: Only 2 ADPIs responded with a negative suggestion – to reduce quantity of milk from 150 ml. to 100 ml. It came from Bagalkote (1) and Chamarajanagar. This suggestion needs to be ignored.

Reasons for problems/concerns in M & S by educational officers and their redressal:

1. Laxity, shortcomings in MDM management is observed across the State. Marginal weakness in M & S by officers in **a few** places of the state may be one of the reasons. It is also true that officers cannot oversee **micro- management** of MDM in schools regularly and systematically. There is a need for micro – level supervision in this regard. If HTs and nodal teachers fail to do it, there can be checks and balances for the same through decentralized arrangements. There is an urgent need for greater involvement of Mothers' Committee (MC) in MDM management. It is possible to involve MC members on a rotation basis. MC members/women also feel **empowered** and do their job sincerely and efficiently.
2. Co-ordination of Milk/MDM implementation can be entrusted to ECOs. They can use CRP/BRP reports on supply of materials, receipt of contingency grants (problems), taste of food, persistent problems in implementation, and report to DDPI [include in their regular reports].
3. KEA needs to commission an evaluation/diagnostic study of problems concerns and dysfunctional ties in educational governance at block/district levels, focusing on M & S, Coordination, data management, training needs/professional development with reference to significant duties/responsibilities of officers including management of MDM/Milk schemes.

4.17. CASE STUDIES

4.17.1 MDM – GOOD SCHOOLS

Good schools are referred to as ‘Model Schools’ by officers. They are identified on the basis of converging opinions of Field Supervisors of the Project, CRPs, BRPs/BEOs/ADPIs (MDM).

Good schools are defined as those whose performance on various parameters of MDM is quite good. The parameters are defined in terms of variables and sub-variables. Compliance to each sub-variable is given 1 score. 121 sub-variables are spread across 6 variables. Hence, maximum possible score for perfect MDM performance (ideal performance) is 121 scores. Discrete sub-variables are scored; scores are pooled under each variable. Pooled scores across variables and sub-variables for all the 12 case study schools, are used for analysis.

Table 23: Scores on Discrete Variables (GOOD SCHOOLS)

Sl.No.	VARIABLES/SUB-VARIABLES	Maximum Score	Total
1.	Infrastructure	6	06
2.	Implementation		
	a) Management of Registers	9	49
	b) Supply of Food Materials (Receipts)	10	
	c) Parents’ Feedback on MDM organization	5	
	d) Students’ Feedback on MDM organization	17	
	e) Health Care of School (MDM Staff)	5	
	f) Health care – Students’ Feedback	3	
3.	Social Integration	2	02
4.	Problems of the School	4	04
5.	Compliance to SoP Guidelines		
	a) Rotation System	7	38
	b) Cleanliness of Kitchen	12	
	c) FEFO Compliance	6	
	d) M & S of Milk/MDM	13	
6.	Impact of the Scheme		
	a) Enrolments/Attendance/Promotion	3	22
	b) Values of MDM – Parents	9	
	c) Values of MDM – Students	10	

Source: Primary data

Plan of Analysis

1. Qualitative Analysis of individual sub-variables has been done.
2. Good Practices in individual schools will not lead to any generalization. Hence, performance of 12 schools taken for case studies, measured through scores obtained by them on 6 variables and 121 sub-variables are pooled together. Total scores of all 12 cases/schools are arranged in a descending order of pooled scores. Higher the pooled score, expressed in the form of percentages taken out of maximum possible scores for a variable, perfect performance, better is the performance. Lower the percentage and rank, lower is the performance, and higher in degree is the problem in Milk/MDM implementation.
3. The 12 schools of the study are from the following districts: Chikkaballapura, Bagalkote, Kolar, Raichur, Kalburgi, Udupi, Mandya, Shimogga, Tumkuru, Mysuru, Gadag and Vijayapura.

Table 23.1 : MDM Case Studies (GOOD SCHOOLS)

POOLED PERFORMANCE OF 12 GOOD SCHOOLS					
Sl. No.	Variables and Sub-Variables	Pooled Score	Maximum Score	Percentage	Rank
1.	MDM Management – Parents Feedback	60	60	100	1
2.	Health Care – Feedback of Schools	60	60	100	1
3.	Health Care – Students’ Feedback	36	36	100	1
4.	Rotation System	84	84	100	1
5.	Enrolments/Attendance/Promotion	36	36	100	1
6.	FEFO Compliance	71	72	99	2
7.	Values of MDM – Parents Feedback	107	108	99	2
8.	Problems for MDM Management	47	48	98	3
9.	Kitchen Cleanliness	141	144	98	3
10.	Receipt of Food Materials	116	120	97	4
11.	Values of MDM-Students’ Feedback	116	120	97	4
12.	Infrastructure	68	72	94	5
13.	M and S by HT/Nodal Teachers	140	156	90	6
14.	Management of MDM – Students’ Feedback	184	204	90	6
15.	Registers Maintenance	96	108	89	7
16.	Social Integration	21	24	88	8

TOTAL SCORE					
	VARIABLE-WISE DATA				
I	Infrastructure	68	72	94	3
II	Implementation	552	588	94	3
III	Social Integration	21	24	88	4
IV	Problems in Implementation	47	48	98	1
V	Compliance to SoP Guidelines	436	456	96	2
VI	Impact of the Scheme	259	264	98	1
	TOTAL	1383	1452	95	-

Source: Primary data

INSIGHTS FROM CASE STUDIES

1. Pooled performance of 12 ‘good’ schools reveals that they are functioning at 95 per cent efficiency.
2. In terms of major variables, impact of the scheme is very high at 98 per cent along with a position of almost no problems in implementation. Compliance to SoP guidelines is at 96 per cent. Performance is quite good in regard to infrastructure (94 per cent) and implementation (94 per cent). Lowest performance is in regard to Social Integration which also logs 88 per cent pooled scores.

Sub-Variables

‘Good’ schools have recorded 100 per cent scores on (a) day-to-day management of MDM as per feedback from parents, (b) observance of rotation system – nodal teachers’ location, (c) health care in schools as reported by HT and (d) as reported by students, as well as in (e) enrolments/attendance/promotion of students in the school.

Parents’ feedback on organization and conduct of MDM services is based on feedback from their children. They do not provide eye-witness accounts. Health care report from HTs can be accepted as it is based on normative distribution of tablets. Feedback from students also confirms this report. It is good. In the overall report of findings of the study, Health component of MDM scheme, distribution of tablets, is observed to be efficient at 50 per cent levels and lower than that. Reference herein is to normative distribution. The 12 ‘good’ schools have logged in 100 per cent efficiency. That is one of the reasons for them to get ‘good’ school ratings.

The ‘good’ schools have also done well in FEFO compliance, kitchen cleanliness and receipt of good quality food materials without any shortage, and on time.

Even among ‘good’ schools, there are two areas of concern – (a) Monitoring and Supervision of MDM service by HTs and/or nodal teachers leaves marginal scope for improvement. This is also true of maintenance of registers/ documentation. Social integration through MDM should be considered to be of high degree at 88 per cent social mixing of children at MDM time.

4.17.2 OTHER SCHOOLS – MDM

Other schools are defined as those whose performance on various parameters of MDM is quite low. This will be reflected in the overall score, total score being 121. Every sub-variable within a variable gets a score of 1 if there is compliance to this sub-variable/specification/expectation. Like this there are sub-totals for each set of variables. Sum of all sub-totals is 121 scores which indicates total performance on MDM. The discrete variables and their pooled scores are as follows:

Plan of Analysis

1. Qualitative Analysis of individual sub-variables has been done.
2. Analysis of ‘other’ schools will not lead to any generalization. Hence, performance of 8 schools taken for the case studies, measured through scores obtained by them on 6 variables and 121 sub-variables are pooled together. Total scores of all 8 cases/schools are arranged in a descending order of pooled scores. Higher the pooled score, expressed in the form of percentages taken out of maximum possible scores for a variable, perfect is the performance, better is the performance. Lower the percentage and rank, lower is the performance, and higher in degree is the problem in Milk/MDM implementation.
3. These 8 schools belong to Chikmagalur, Belgaum, Chikkodi, Bidar, Bellary, Chamarajanagar, Kolar and Bangalore Rural districts. Pooled insights from snapshots of problem schools will lead to cumulative insights about discrete dimensions of performance/non-performance. Results are tabulated here. Basic Data is given in Annexures/soft copy.

Table 23.2: MDM Case Studies (OTHER SCHOOLS)

Pooled Performance of 8 Other Schools					
Sl. No.	Variables and Sub-Variables	Pooled Score	Maximum Score	Percentage	Rank
1.	Values of Milk/MDM – Parents	71	72	99	1
2.	Management of MDM-Parents	39	40	98	2
3.	Health Care by Schools -	-	-	-	-
	Students' Feedback	22	24	92	3
4.	Enrolments/Attendance/Promotion	21	24	88	4
5.	Management of MDM – Students	108	136	79	5
6.	Problems in Implementation – HT	25	32	78	6
7.	Rotation System	42	56	75	7
8.	Receipt of Food Materials	60	80	75	8
9.	Cleanliness of Kitchen (Observation)	68	96	71	9
10.	Health Care by Schools	27	40	68	10
11.	Infrastructure for MDM	31	48	65	11
12.	M and S of Milk/MDM by	-	-	-	-
	HTs/Nodal Teachers	67	104	64	12
13.	Values of Milk/MDM> Students	51	80	64	13
14.	Social Integration	10	16	63	14
15.	Management of Registers	44	72	61	15
16.	FEFO Compliance	21	48	44	16
	Total Score	707	968	73	-
	Variables-wise Data				
I	Infrastructure	31	48	65	5
II	Implementation	300	392	77	3
III	Social Integration	10	16	63	6
IV	Problems in Implementation	25	32	78	2
V	Compliance to SoP Guidelines	198	304	65	4
VI	Impact of the Scheme	143	176	82	1
	TOTAL	707	968	73	

Source: Primary data

Insights from CASE STUDIES of ‘other schools’:

1. Pooled performance of 8 ‘other’ schools reveals that they are functioning at 73 per cent efficiency. There are several sub-variables which refer to (a) micro-management at schools like cleanliness of kitchen, FEFO at schools (where efficiency is low); (b) there are also a few sub-variables like enrolments, attendance, receipt of food materials (referring to shortages in receipt); and (c) parental/students’ feedback on the scheme and its components when efficiency is high. In sum, the case studies reflect systemic performance.
2. Even though these 8 schools are considered to be ‘other’ schools (low performing schools); rated like this by educational officers/field supervisors; still the impact of the scheme, as per feedback from parents/students gets first rank and logs 82 per cent of pooled scores. This is the inherent potential and value of the Milk/MDM scheme in a food starved, deprived society. The scheme has intrinsic values. This is not to say that deficiencies need to be ignored. They need to be addressed to carry Milk/MDM scheme to perfection.
3. There are very less implementation ‘problems’. This variable gets second rank. Implementation is better. It gets third rank. It is better because parents have given a good feedback on day-to-day management of MDM. Most of them are not eye-witnesses to micro management. They go by the final effects and feedback from their wards. In contrast, students, who are primary stakeholders in MDM performance, are not as much satisfied as their parents. Pooled score (percentage) of parents is 98 while that of students is 79 per cent.
4. Compliance of SoP guidelines is poor in ‘other’ schools. Performance percentage (pooled) is just 65 per cent. It has got 4th rank. 38 sub-variables have been considered under SoP guidelines. Of all of them, compliance to FEFO practice is quite low, lowest in performance assessment/analysis which logs 44 per cent compliance. M and S by HTs/Nodal teachers also leaves much to be derived. Performance is at 64 per cent while the summary performance on all variables under the lens is 73 per cent, 707 pooled score out of 968 maximum score.
5. ‘Infrastructure’ for MDM has received fifth rank. Most of the schools have shortage of eating plates and drinking glasses.
6. ‘Social Integration’ has received the least, sixth rank. This cannot be considered to be of high negative value. Tendency of students is to sit with classmates/neighborhood (home)

friends. They cannot be expected to sit with anybody/everybody during MDM time, even though this is an objective of MDM. Students' behavior needs to be tolerated.

4.17.3 Comparison between 'good' and 'other' schools (contrasts):

Enrolments, attendance and promotion between the two sets of schools do not show a large gap as compared to other parameters (variables/sub-variables).

FEFO compliance is highly contrasting. Good schools log 99 per cent compliance while other schools log 44 per cent compliance, lowest percentage under all sub-variables under foci.

There are 17 sub-variables in this analysis. They carry 121 scores (items of information/compliance). 15 out of 17 sub-variables are complied with in 'good' schools at minimum 90 per cent efficiency while the figure for 'other' schools is just 3 out of 17 sub-variables.

There are 7 out of 17 sub-variables whose efficiency level is less than 70 per cent in other schools. Not even a single sub-variable is at this low level among 'good' schools. Lowest percentage among 'good' schools is 88 per cent efficiency.

Inference: 'Good' schools are really good in all-round performance. Perfection in performance of one's duties of life is a matter of mind-set, attitudes in life. Such a mind-set pervades all activities of persons managing a 'good' system. Sensitization of low performing and 'other' schools is needed through showcasing of 'good' schools in Department's Newsletter. 'MDM tourism can be organized wherein low performing, 'problem' schools can be taken on a conducted tour to 'good', well performing (in Milk/MDM) schools. Nodal teachers/HTs of medium and large schools can be given this exposure. Cash incentive to one 'best' school in performance of milk/MDM in every district can be given.

4.17.4 Descriptive Account of case profiles of 2 schools- a 'good' school and an 'other' school is given in Annexure No. XVI. The 'good' school has a overall MDM performance score of 97.52% while the 'other school has a score of 53.72%.

4.18 M and S of NGOs in MDM

MDM has a long and chequered history of nearly 100 years. It got systematized in the beginning of the 21st century. It is one of the largest, public welfare programmes [better to call it ‘Right to Food’ programmes] of the world, in India. In 2016-17, MDM in India had a spread over 1.14 million schools and served 97.8 million children following a weekly cyclic menu with variety in contents.

Results:

1. In Karnataka State, 5.35 million children are served MDM across 55000 government, private, aided and Corporation schools. Out of this coverage, 0.931 million (9.31 lakh) children studying in 5,587 schools are served by 71 NGOs. Source: Department of Education, Government of Karnataka, 2019, website.
2. NGOs serve 17.40 per cent of total children in the State. There are 73 NGOs. Out of them, 29 NGOs across 4 out of 14 districts, viz., Bangalore Urban (Bangalore North and Bangalore South districts), Dharwad, Belagavi and Bellary serve 0.796 million (7.96 lakhs) children, 14.89 per cent (out of State total), a subset of 17.40 per cent children. In other words, another 42 NGOs across 10 more districts serve 135130 children, 0.135 million, 2.51 per cent of the State total, a subset of 17.40 per cent.
3. Out of 5531 schools served by NGOs in State, 2072 schools are in Bangalore Urban district, 37 per cent of total schools served by NGOs, in one district. Another 63 per cent are served by 56 NGOs across 13 districts of the State.
4. One single NGO, AkshayaPatra Foundation takes the weight of 1199 out of 2072 schools in Bangalore City, which constitutes 57.8 per cent of total schools served in Bangalore urban district. With a centralized Kitchen AkshayaPatra Foundation, ISKON, Bangalore serves 1199 schools including all Corporation Schools (Government sector schools).
5. Akshayapatra Foundation (1199), Adamyachethana (275), Annapurna Trust (111) are NGOs which serve more than 100 schools in Bangalore Urban – Number of Schools in brackets.
6. Akshayapatra Foundation is a national level NGO. It serves 1.8 million children in 19039 schools across 12 States and 2 Union Territories. It has been present in Karnataka (2000 AD), much before the State launched hot, cooked, MDM (2001 AD).

Concern:

1. NGOs are doing valuable service for the MDM scheme. This evaluation study addresses concerns of quality in service and problems of implementation.
2. It is noted in passing that there are several voluntary organizations/religious Matthas which have been providing MDM + breakfast + supper to a large number of students, free of cost without government reimbursement. Siddaganga Mutt, Tumkur, JSS Mutt, Mysore, Horanadu Annapoorneshwari Temple Trust, Chikkamagaluru; Dharmasthala Manjunatha Trust, Dakshina Kannada; Udupi Sri Krishna Mutt, Udupi; are some illustrations in this regard. (List is not exhaustive).

Analysis of NGO Data of this Study

Ten NGOs across 6 districts of the State constitute the sample of this study. Insights from analysis follow.

1. 9 out of NGOs maintain a Central Kitchen, get food prepared for the schools that they serve and carry them to the schools.
2. The NGO which maintains a kitchen at the school itself is just within ½ a kilometer distance from the school.
3. NGOs serve schools which are within an average distance of 7 kilometers. Transporting in a vehicle should not take more than 10 or 15 minutes to reach the schools which are in the 'Nearest' distance group.
4. There are 4 NGOs which need to travel up to 20 Kms., to reach schools that they serve. This may also be tolerable as it can be done around an hour. However, 2 NGOs, who travel the farthest distance in this sample, need to travel upto 60 Kms. Travel time itself will be between 1 to 2 hours, with traffic congestions, it can be well around 2 hours.
5. All NGOs have reported that they are able to reach schools to supply MDM in time.

Concerns: So long as NGOs services are accommodated in the MDM scheme, it is better to direct the NGOs to maintain a radius of 20 or less than 20 Kms for service delivery of MDM. If schools are at larger distances, number of Central Kitchens can be increased with one Nodal Centre for a given number of schools, keeping 20 kilometers as the norm of distance between school and the kitchen.

Observations of 4th JRM/MHRD: NGOs prefer to serve MDM through Central kitchens due to logistic concerns. There are controversial issues in service of NGOs through Central kitchens. Critics (eg. *Dr Sylric Kerpegami Google/Instagram*, 22nd August 2019) studied a

few NGOs and observed that Mothers' Committees prefer School Based Kitchens. It is felt that consumption of food is better in School Based Kitchens as food is hot when served. However, schools prefer centralized kitchen as they reduce HTs/Nodal Teachers' burden of work, responsibilities, stress and botherations.

4th Joint Review Mission for MDM in Karnataka State [February to March, 2013, Report by MHRD in 2015] studied, among other areas of concerns, a few NGOs [AkshayaPatra Foundation, AdamyaChethana, Sri Sai Mandali Trust and Mohsin Sheriff Educational/Charitable Trust]. The JRM observed regarding one of these 4 NGOs (name hidden) that the time gap between food supply to school and food consumption time by students in school is very much. Food preparation begins at 8.00 am., distribution starts at 8.30 am for the first/nearest school/schools. Students consume food after or by 1.00 pm. There is a need to squeeze the time gap through innovative administrative measures (one of them already suggested). Otherwise, the concept of MDM as a hot, cooked meal will lose its sheen. NGOs cannot be ignored. They need to be streamlined.

6. Compliance of NGOs to Department's MDM time-table

All NGOs in this study sample report that they follow Government time-table for serving MDM, regarding variety in food served on different days of the week.

7. Involvement of Mothers committees for MDM Services by NGOs

All NGOs in this study sample report that they follow Government time-table for serving MDM, regarding variety in food served on different days of the week.

8. MDM Service to Students

It is noted that NGOs, as per their submissions, do not use students to distribute the MDM in schools. [This is also observed by FS of the study] 6 NGOs have located their own staff in the school. In 4 districts, 4 NGOs depend on school staff. They may be small schools. As reported earlier, Mothers' Committee may help school staff. 4 NGOs might be having a unwritten understanding with MCs.

9. Supply of Milk along with MDM to schools by NGOs and the number of trips to schools they undertake.

All the NGOs serve milk to children apart from MDM. All of them visit schools 2 times for the purpose.

In schools where NGOs do not serve milk, the school itself keeps/stores/ maintains milk powder, prepare milk (cooks do it) and serve to children (cooks do it).

10. Cooperation from schools

There were three options/responses for this question. They are:

(*) from all schools, (*) from most of the schools and (*) from only a few schools. All the NGOs in this study report that they get cooperation from all the schools. Cooperation is there in all 6 districts.

11. NGOs methods of assessment of daily attendance/ demand for MDM in Schools

All the NGOs, except one in Belagavi district (that is 9 NGOs) depend upon average attendance for determining the students' strength for the day for whom food has to be prepared. Average attendance is of the previous month. For the first month, it is student enrolments and attendance during first week.

One NGO in Belagavi district gets SMS from HT about day's attendance.

Concerns:

SMS from HT is an efficacious option. But NGOs may not choose this option as their food processing work would have begun much earlier than the time of assembly of students to school. In small schools, where NGO is located near the school, within 1 Km, this may not be a problem. SMS may be the choice.

Reimbursement of Expenses on MDM to NGOs – Status and Concerns

Opening of a dedicated Bank account by the NGO to receive reimbursements from the Government for Milk/MDM expenses, receipt of such expenditures as per unit costs from the government, delays (if any) in reimbursements, follow up by NGOs in case of delays (if any), compliance by the government in such cases are the concerns herein.

All NGOs have opened a separate Bank account for MDM transactions. All of them receive reimbursements from government to this account, at the rate of unit costs of the Government for the total number of students served by the NGO, on the basis of average attendance for the previous month (that is the month for which it is served; for eg. July expenditures paid in August for July service).

5 NGOs have reported on delays in receiving reimbursement amount Bangalore – (1), Dharwad (1), Kalburgi (2) and Udupi (1). Out of these 5 NGOs who reported on delay, the

Bangalore and Dharwad NGOs (2 numbers) wrote to Government regarding the delay. Both of them report that matters improved, delay contained, after their letters to Government.

Adequacy of Unit Costs

Adequacy of reimbursements as per unit costs of the government, excess expenditures of savings (if any) by NGOs from government's receipts, items of expenditure in cases of excess cases are the concerns here.

Only 2 NGOs, one each in Bangalore and Dharwad report that the unit cost of reimbursement is not sufficient for them. They spend more on MDM than they receive. This extra amount is towards the use of vegetables in MDM.

The other NGOs report that they 'cut even', that is the unit cost is 'just sufficient' for meeting MDM expenses. None of them 'save' on their reimbursements.

Concern:

Unit cost includes the cost of materials/processing/transportation. Prices of food items – cereals, pulses, vegetables etc., vary across regions/districts, especially vegetable prices. They vary across seasons also. NGOs need to meet additional expenditures under CSR – Corporate Social Responsibility.

Complaints in the past regarding the quantity/quality/taste of MDM received by NGOs; Persons giving complaints -students, Government Schools, Aided Schools, SDMC, MC, others.

NGO Feedback: All the NGOs report that they had not received any complaint from anybody so far regarding the adequacy/quality/taste of the MDM served by them. Hence, table is not given.

MDM Audit of NGOs

Audits of MDM accounts – Government auditors, NGOs, own auditors; and negative comments/caustic remarks received on MDM programme from auditors/in audit reports, if any.

- 1 NGOs, both of them in Yadgir district get their accounts audited by government auditors. All the other NGOs get it done from their own auditors.
- 2 None of the NGOs, as they report, has received any negative comments on their accounts so far.

Concern: Transparency and Accountability are two major national level issues/concerns in NGO engagements in national development initiatives. MDM is not an exception. There is

no National NGO Policy in India/ Karnataka State. So far, so good. Nothing much to worry about these concerns, specifically regarding MDM accounts and audit.

Problems, if any, faced by NGOs in regard to the following logistic concerns in management of MDM – Language (Diversity of Use), water (availability), safety, local cooperation.

- 1 NGOs do not face any problem regarding language diversity in the regions/places served by them, safety of their materials and equipments, cooperation from local people.
- 2 Only one NGO, from Dharwad district has reported on problem of access to water.

Feedback: By and large, NGOs do not face any logistic problems in regard to management of MDM.

Problems (if any) of Wastage of MDM food and (if yes) its management by the NGO.

Management of wastage, if any, of MDM food.

Only 2 NGOs, from Kalburgi district, report that there will be wastage of food, once in a way. They distribute the leftover food to poor/needful families who reside nearby the school.

NGO Attitude to MDM

Three options of responses were given to NGOs to examine their attitude to MDM /Milk service, participation-Very Happy, Happy to some extent, Cannot say anything.

Feedback: All the NGOs have chosen the option 'Very Happy'.

Additional Information: a) Enrolment data and coverage of schools of NGOs for the year 2017-18, 2018-19 and 2019-20; b) Similar coverage and enrolments of sample NGOs, 2019-20 is given in the annexure No. XII.

4.19 Impact of MDM: Qualitative Analysis

4.19.0 Profile of Parents-Primary Stakeholders

There are 2621 parents in the sample. Proportion of parents with girl children in school is 56 percent. There are a few parents who admitted their wards to I standard before their 6th year, underaged children, may be in urban areas. Late admission is common in rural areas. There are 6.7 percent parents with overaged children. More the children for the parents, higher the cost of child-rearing and provision of food security at home. Average size of families is 2.17 in this sample. Analysis of educational levels of fathers/ mothers, occupational background of fathers-rural/urban and occupation of mothers (rural+urban) reveals that parents belong to poorest of the poor families. Milk/MDM are essentially **pro-poor** programmes. 47 percent fathers are agricultural labourers and coolies. 46 percent mothers are home makers, 26 percent are maid servants and 10 percent construction labourer women 32 percent are migrants to their place of stay.

4.19.1 Parents and MDM

Table 24: Adequacy, Quality (Taste) and Cleanliness concerns of Parents (Yes). These are concerns of CUSTOMER SATISFACTION.

Divisions	Bengaluru		Belagavi		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
A. MDM-Adequate (Yes)	780	94.4	647	93.8	445	96.7	625	96.9	2497	95.3
Not Adequate	46	5.6	43	6.2	15	3.3	20	3.1	124	4.7
Total	826		690		460		645		2621	
B. GOOD QUALITY (Yes)	788	95.4	652	94.5	439	95.4	635	98.4	2514	95.5
No	38	4.6	38	5.5	21	4.6	10	1.6	107	4.1
Total	826		690		460		645		2621	
C. Is it CLEAN (Yes)	733	88.7	578	83.8	412	89.6	596	92.4	2319	88.5
No	93	11.3	112	16.2	48	10.4	49	7.6	302	11.5
D. Complained to HT/SDMC on A/B/C	229	27.7	169	24.5	74	16.1	86	13.3	558	21.3
E. Complaint on [Yes] (A)	127	15.4	104	15.1	49	10.7	51	7.9	331	12.5
F. Complaint on (B) [Yes]	140	16.9	106	15.4	55	12.0	57	8.8	358	13.7
G. Complaint on (C) [Yes]	139	16.8	103	14.9	5	12.0	57	8.8	354	13.5
H. Complaint on (A/B/C) [Yes] Helped	127	15.4	90	13.0	51	11.1	54	8.4	322	12.3
Total	82.6		69.0		46.0		64.5		26.2	

Source: Primary data

- 1 Distribution of adequate quantity of MDM, maintenance of MDM of good quality and maintenance of hygiene in MDM service are important concerns in MDM management. Feedback from parents as they have observed or listened to feedback from their children is analyzed here.
- 2 Satisfaction about adequacy, quality and cleanliness in MDM service at the State level is: 95.3, 95.9 and 88.5 per cent respectively. Dissatisfaction percentages on the three concerns are at: 4.7, 4.1 and 11.5 values. These figures, especially the first and second – **are negligible but not ignorable**. These phenomenon at the State level are also uniformly reported by parents in all divisions except in Mysuru division wherein reservations regarding hygiene are on a lower scale, 7.6 per cent (State average 11.5 per cent).
- 3 12.5 per cent parents on quantity concerns, 13.7 per cent on quality and 13.5 per cent on hygiene complained to HT/SDMC. These percentages are out of those who were not satisfied, see table, small percentages. Some of them complained regarding quantity, some on quality, and some on hygiene, may be some of them on more than one concern. Altogether, there were 558 complaints from 2621 parents, 28.2 per cent of parents. Volume of complaints is more in Belagavi (33.6 per cent) and Bengaluru (30.5 per cent) divisions.
- 4 Volume of complaints need not always reflect the severity of a problem. It may also depend on protest (complaint) habits of people.
- 5 Proportion of parents complaining to HT/SDMC is not always a sub-set of percentage of parents who have expressed dissatisfactions in this survey. Complaints-reports are independently surveyed on three concerns, because dissatisfactions may be momentary and passing. A/B/C (Table) has reflected persisting dissatisfactions.
- 6 Complaints on A/B/C are lowest in Mysuru division and among the respondents, highest in Bengaluru division.
- 7 Complaints have been addressed by schools, on all the three counts, to the satisfaction of parents in nearly 58 per cent (322 out of 558) cases.

Position across Districts

Districts where complaints were not adequately/satisfactorily (to a higher degree) not attended to are, in the descending order of complaints filed, are discussed here. 26 districts have comparable (size) number of parents (covered) responded to this question. One district,

Chitradurga is 100 per cent satisfied on all 3 counts – no complaints. 8 districts have small samples. Hence, not included in the analyses. (Detailed table is in soft copy)

- 1 Maximum complaints have been there from Chikkodi, Belagavi, Davanagere, Bangalore Rural, Bangalore South and Shimoga (46 per cent and above parents). Resolution of complaints is better in Bangalore South, Bangalore Rural and Davanagere. It is quite low in Tumkur, Belagavi, Bidar and Shimoga (less than 50 per cent addressed).
- 2 Very less complaints, less than 10 are in Kolar, DK, Koppal, Ramanagara, Sirsi and Hassan. In Ramanagara and Sirsi, all complaints resolved.

4.19.2 Parents and Satisfaction with Milk Supplied

Table 25: Satisfaction with Milk Supplied

Division	Bengaluru		Belagavi		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
Quality (Yes)	659	79.8	560	81.2	347	75.4	569	88.2	2135	81.5
Taste (All)	762	92.3	645	93.5	418	90.9	598	92.7	2423	92.4
Like SMP 2 Dts. Raichur and Mysuru (Yes)	%		82.7		84.2		-		83.4	
Like Smell Raichur	62/75		(Raichur)		(Mysuru)				126	
Mysuru	64/76								151	
Quantity (Adequate)[All]	780	92.0	656	95.1	420	91.3	607	97.2	2463	94.0
Need More Milk [Yes]	13		11		23		21		68	
(i) In the Morning	5		9		17		15		46	
(ii) Other Times	8		2		6		6		22	
Need Milk – Sundays and Holidays	285	34.5	242	35.1	207	45.0	124	19.2	858	32.7
Total Parents	826		690		460		645		2621	

Source: Primary data

1. **Sundays and Holidays.** Perhaps, they will not be able to give milk to their children and feel that their children may miss milk on Sundays and holidays (will be discussed at a later stage when food security at home questions are addressed). This feeling or extended coverage of milk scheme on holidays is expressed by a higher proportion of parents in Kalburgi division (45.0 per cent) and by the lowest proportion (19.2 per cent) in Mysuru division.

2. On an experimental; basis, skimmed and perfumed, coloured milk is served only in 2 districts – Raichur and Mysuru. 83.4 per cent of parents report that their children like SMP milk. Over 82 per cent (children) parents in both districts like the smell of SMP (perfumed milk).
3. Parents have reservation about the quality of milk. Their proportion is 18.1 per cent. Districts where reservations on quality have been expressed are:

Sl. No.	Districts	Percent Not Happy with Quality	Sl. No.	Districts	Percent Not Happy with Quality
1.	Chikkaballapura	52.0	9.	Davanagere	24.0
2.	Ramanagara	38.7	10.	Chikkodi	22.7
3.	Bellary	34.7	11.	Bangalore North	22.4
4.	Sirsi	33.3	12.	Belagavi	21.3
5.	UK	33.3	13.	Gadag	21.3
6.	Koppal	32.9	14.	Bangalore Rural	20.0
7.	Bidar	26.7	15.	Bagalkote	20.0
8.	Kodagu	24.0			

Source: Primary data

- 1 15 districts have revealed that parents are not happy about the quality of milk. They say – Chennagilla. Next question – “YenuChennagilla?”, No response. These 15 districts have given above state average response. Some of them said, it is ‘watery’ milk.
5 districts responses on unhappiness is within 5 per cent – Dharwad (1.3), Yadgiri (2.7), Chamarajanagar (2.7), Udupi (2.8) and Mysuru (3.9 per cent).
- 2 Chitradurga district – zero unhappiness
- 3 All districts have minimum 75 parents in sample.
- 4 Adequacy responses are not analyzed district-wise here, for logistic reasons.

4.19.3. Values of Milk for Children – Parents Views

Several values are identified by parents from the Free Milk Distribution Scheme for their wards. Nutrition, (academic) studies, progress, activities, enthusiasm levels are some of the illustrative values. Here is data for the State.

Table 26: Values of Milk for Children

Division	Bengaluru		Belagavi		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
[A] Milk is Valuable (Yes)	707	92.5	566	90.6	392	92.4	591	95.7	2256	92.8
[B] Nutrition Improved [Energy] Yes	753	98.6	602	96.3	410	96.5	592	95.9	2357	97.0
[C] Physical Strength Improved	725	94.9	592	94.7	403	94.8	595	96.4	2315	95.2
[D] Enthusiastic Kids (Yes)	732	95.8	538	86.1	389	91.5	586	95.0	2245	92.3
[E] Happy and Lively (Yes)	725	94.9	538	86.1	397	93.4	598	96.9	2258	92.9
[F] Good in Studies	754	98.7	580	92.8	414	97.4	614	99.5	2362	97.2
[G] Interest in Sports	744	97.4	550	88.0	403	94.8	598	96.9	2295	94.4
H. Health Improved (Yes)	729	95.4	574	91.8	403	94.8	603	97.7	2309	95.0
Parents Total	764		625		425		617		2431	
Contributors to Growth of your Child										
MDM	57	6.9	161	23.3	46	10.0	80	12.4	344	13.1
Milk	131	15.9	98	14.2	89	19.3	48	7.4	366	14.0
Both	596	72.2	402	58.3	316	68.7	493	76.4	1807	68.9
Do not know	42	5.1	29	4.2	9	2.0	24	3.7	104	4.0
TOTAL PARENTS	826		690		460		645		2621	

Source: Primary data

1. It is to be noted that sub-questions [A] and [I] (i), (ii), (iii), (iv) were answered by all 2621 respondents/parents. Sub-questions B, C, D, E, F, G and H were answered by 2431 parents (out of 2621, 92.8 per cent); as per their choice.
2. Satisfaction with 'Milk' is more than 90 per cent on all A/B/C/D/E/F/G/H values. Overall, 92.8 per cent are happy with the variety of values of milk. On discrete values count, 97.0 per cent believe that nutritional status of their children (energy levels) has improved due to milk. The proportions of parents being happy on counts of health,

physical strength, enthusiasm, lively/happy mind-set, ‘good’ in studies and interest in sports are: 97.0, 95.0, 95.2, 92.3, 92.9, 97.2 and 94.4 per cent respectively.

3. These results on 8 parameters from 4 Divisions (32 boxes) are uniformly observed, above 90 per cent satisfactions – satisfaction across all 4 divisions, except in case of Belagavi division whose satisfaction is a little less than 90 per cent on 3 counts – D, E, G.
4. **Notes:** Contributors to Growth – Milk or MDM or both?
5. Majority of parents, 68.9 per cent believe that both Milk and MDM have jointly contributed to the growth and development of their children. 13.1 per cent parents give exclusive credit to MDM, while 14.0 per cent parents accord such credit to Milk. 4.0 per cent parents (out of 2621 sample) have responded: ‘Do not know’.
6. **Appreciations:** In sum, it can be easily inferred that both milk and MDM schemes are a ‘Run-Away Success’ in regard to customer satisfaction and Value for Money.

4.19.4 Food Security and Habits At Home

Morning drink given to children at home

Table 26.1: Milk/Tea/Coffee Habits of Children during morning hours.

Divisions	Bengaluru		Belagavi		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
Coffee	211	25.5	87	12.6	38	8.3	136	21.1	472	18.0
Tea	281	34.0	411	59.6	200	43.5	237	36.7	1129	43.1
Milk	265	32.1	166	24.1	183	39.8	241	37.4	855	32.6
Malt with Milk	69	8.4	26	3.8	39	8.5	31	4.8	165	6.3
Total Parents	826		690		460		645		2621	

Source: Primary data

1. Tea is the popular drink. It is consumed/given to children in 43.1 per cent homes. Popularity of tea is highest in Belagavi division where 59.6 per cent homes consume it. It is low in Bengaluru and Mysuru where it is consumed by 34.0 and 36.7 per cent homes.
2. Alternatively, Coffee is a relatively more popular in these two divisions, 25.5 and 21.1 per cent, as against State average of 18.0 per cent. Coffee is least popular in Kalburgi division with only 8.3 per cent acceptors.
3. Considerable proportion of homes in State 32.6 per cent, give milk to their children. Proportions of parents who give milk are slightly higher in Kalburgi (39.8), Mysuru

(37.4) and Bengaluru (32.1 per cent) divisions. It is slightly lower (24.1 per cent) in Belagavi division.

4. Offering milk with malt or Boost, Bournvita, Ragimalt etc., implies additional costs. 6.3 per cent homes in State meet the additional cost. This is higher than State average in Bengaluru and Kalburgi divisions.

Food Served at Home to Children

Food may mean breakfast (before school), lunch (on holidays and Sundays/Vacation period), evening snacks (immediately when children return from school) and supper. It can be once/twice/thrice/four times in a day (during holidays) and once/twice/thrice in a day on school days wherein MDM fills up lunch as food in the afternoon.

It is also to be examined as to how nutritious/healthy is the food given at home – contents of the food.

Here is data on all these concerns.

Table 26.2: Number of times food is served to children at home

Divisions	[School Day] [Yes/No]									
	Bengaluru		Belagavi		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
Once	53	6.4	46	6.7	15	3.3	20	3.1	134	5.1
Twice	324	39.2	353	51.2	282	61.3	283	43.9	1242	47.4
Thrice	449	54.4	291	42.2	163	35.4	342	53.0	1245	47.5
Total	826		690		460		645		2621	

Source: Primary data

1. For 134 out of 2621 children in the State, 5.1 per cent of total, MDM is the only staple food. They get food only once in a day. MDM is the second meal. No Breakfast. Milk at school is the first food of the day. Milk and MDM provide substantive food security for these kids. This percentage is slightly higher than State average in Bengaluru (6.4) and Belagavi (6.7 per cent) divisions. Many parents live in slums; are in construction labour/coolies/ Agricultural Labourers; migrants for labour to towns; difficult to meet both ends in a day, deprived of 'two' (minimum) square meals a day (proverbial usage). MDM/Milk are of greatest service to these sections).
2. 47.4 per cent of houses are able to give 2 meals/food in a day. MDM is the third meal, highly valuable. These homes are high in Kalburgi (61.3 per cent) and Belagavi (51.2 per cent) divisions.

3. More than 50 per cent homes in Belagavi and Mysuru divisions can offer 3 meals/food a day. Meal during third count, is in the form of snacks in the evening, not a full meal or supper/or breakfast. MDM is the third meal, substantive food.

Appreciations: MDM is of value for all homes and especially so for those who can afford food twice or once a day, only.

Adequacy of Food at Home

Table 26.3: Adequacy of food served at home [MDM not counted].

Division	Bengaluru		Belagavi		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
Adequacy of Food at Home Yes	585	70.8	544	78.8	368	80.0	525	81.4	2022	77.1
Total Parents	826		690		460		645		2621	

Source: Primary data

Only 77.1 per cent homes report that the food that they give to their children is adequate. For, 599 out of 2,621 children, night supper may be the only food after MDM at school. Position is more pitiable in Bengaluru division (70,8 per cent only get this) than the State’s average position.

Concerns: The irony of life is that poor and low middle class (just as others) are used to their life styles including those who give food to children only once/twice a day, those who do not give snacks/food in the evening;77.1% parents feel that the food they give to their children is sufficient (for their children). They have reconciled to their predicaments of life. This is true of all revenue divisions in the State. A vicarious sense of contentment pervades Indian way of life. Anaemia, malnutrition, under nutrition, stunting, food insecurity (partial security) are all ignored. Poor have no choice. It is in this context of life that Milk and MDM schemes assume significance. There is a proposal to extend MDM to 1 to 10 class children even during vacation. There is also a proposal to initially begin it in drought-prone/declared talukas (scheme already in place). So far so good; needs extended/comprehensive coverage.

It is ideal if breakfast can be served at school as a part of the Milk/MDM scheme. This will be MBF – Morning Breakfast. To begin with drought prone districts can be covered and later extended to the whole State. This is a feasible proportion as is being done by an NGO – Sathya Sai Institutions (SAI) in 06 districts of the State. A detailed note on SAI work is annexed to this report. See Annexure No. XVIII.

Food Basket at Homes

Health and nutrition greatly depends on the type of food, composition of contents of food, materials used, at home. There are regional variations in the food basket as determined by geographical, historical and cultural contexts of the environment in which people live. Here is data.

Type of food grains regularly used at home

1. As expected, the food basket in the State has regional variations. At the State level, Rice and Wheat are staple diets, followed by Ragi and Jowar.
2. Pulses and Corns are consumed by around 55 per cent of homes, each.
3. Two thirds homes consume vegetables regularly. Nearly 57 per cent consume leafy vegetables which contain substantial iron content. Nearly 50 per cent homes consume fruits regularly.
4. Consumption of vegetables, leafy vegetables and fruits is better in Bengaluru and Belagavi divisions. Mysuru division is not far behind. Consumption is relatively low in Kalburgi division.

Concerns: Considerable proportion of homes are hard pressed on proverbial ‘two square meals’ a day. The health and nutrition experts advocate ‘balanced diet’. First diet, then balanced diet. Significant proportion of homes in the State cannot provide balanced diet to the ‘wealth of the nation’, children. Hence MDM and Milk as of now are working in this direction. MDM scheme also distributes iron tablets. Good. Still, there is a need to provide a higher contingency amount for servicing vegetables, fruits and leafy vegetables in MDM. This will be an additional compensatory welfare/rights initiative under MDM scheme.

MDM needs to be customized to regional food habits, taking Gram Panchayats as the unit of planning and implementation. Millets like Jowar, ragi, bajra can be used once a week, depending upon local habits.

Home Care and Food Choices [Continued]

Ghee/Butter/Curds/butter milk provide fat content to children and facilitate growth process. Here is data. Of their use in the State, in homes, use of ghee/butter/curds depends on both food habits and capacity to buy them.

1. Normally it is believed that Ghee and Butter are ‘luxury’ items. Still, many homes, who can buy them, marginal capacity for purchase, do so and give it to children.
2. Nearly 70 per cent homes give either ghee or butter to their children (may be nominal quantity). It is just 50 per cent homes in Kalburgi division. It is a little high in Bengaluru and Belagavi division.
3. However, almost all homes give either curds or butter-milk. Curds are given in over 75 per cent homes in all three divisions – Belagavi, Kalburgi and Mysuru. It is low at 66.3 per cent coverage in Bengaluru Division. Marginal proportion, 6.4 per cent also give ‘other’ drinks, may be *Kashaya*, a herbal concoction or *ganji*, decanted rice brawl.

Concern: MDM does not give ghee/butter/curds or buttermilk. Buttermilk can be given to children during summer/rainy seasons, not in cold months.

4.19.5) Reasons for a small minority of parents being unhappy with MDM/Milk schemes: Parents are extremely happy with MDM, as their wards are happy. However, a few parents (15 out of 34 districts) are not happy with the quality of milk. They opine that it is ‘thin’ and watery. Such a practice of serving thin milk is because of absence of micro level supervision.

Following suggestions on milk/MDM supply (services) may be of value:

- Adopt GIS (Geographical Information System) tag for milk products to ensure quality of milk supplied to schools. Fix a regular time for supply of milk/milk products. A detailed note on the need and importance of this tag for schools is given in the Annexures. See annexure No.XX.
- Activate Mothers’ Committees and involve them in M & S of milk/MDM to children.

Impact of MDM Qualitative analysis (Contd..)

4.20 Feedback from Students

4.20.1 Profile of Students:

This is a profile of 5158 students from 515 sample schools. 53.2% are girls. Analysis of social composition reveals that the SC/ST/OBC /Minorities/General category students who benefitted by Milk/MDM scheme are in proportions of 23.1, 14.4, 44.5, 10.2 and 7.7 percent respectively; 85 percent children are located within 1 or 2 kilometers from the schools. 73 percent commute to school by walk. As per their self – reports, 6.4 percent students, 329 out of 5158, do not get breakfast at home. Milk at school is their first substantive food.

Table 27: Students Opinion about Milk

Number of Children who get milk at school in the morning and details thereon

Divisions	Bengaluru		Belagavi		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
• Is it Adequate?(Yes)	1595	96.2	1270	92.2	846	92.0	1144	95.2	4855	94.1
b. Feel Need for more milk – (Yes)	26	1.6	51	3.7	32	3.5	25	2.1	134	2.6
c. Extra Milk Desired										
i. Morning	22		37		26		19		104	77.6
ii. Evening	4		14		6		6		30	
d. % Morning for (c) (ii)	-		-		-		-			
e. Quality - Good (Yes)	1598	96.4	1328	96.4	876	95.2	1142	95.0	4944	95.9
(i) Thick (Yes)	1520	91.7	1172	85.1	835	90.8	926	77.0	4453	86.3
(ii) Watery (Yes)	138	8.3	206	14.9	85	9.2	276	23.0	705	13.7
f. (i) Smell of Milk Good	1101	66.4	1006	57.3	567	61.6	855	71.1	3529	68.4
(ii) Like Coloured Milk	784	47.3	562	40.8	383	41.6	443	36.9	2172	42.1
(iii) Like White Milk	587	35.4	663	48.1	392	42.6	506	42.1	2148	41.6
g. No. of Students	1658		1378		920		1202		5158	

Source: Primary data

1. As per obtained ‘data’, all schools give milk to children when they arrive to school.

13 students in Sirsi, 24 students in Koppal and 10 students in Hassan (only 10 and more than 10 students reports counted) report they do not get milk. Sirsi student sample is 143, Koppal is 170 and Hassan is 150. It is possible that 1 school in Sirsi, 2 or 3 schools in

Koppal and 1 school in Hassan are not giving milk out of 510 schools in the State. BEOs/DDPIs of these 3 districts need to follow up.

2. Is the milk served adequate for other Children? 94.1 per cent students (total of 5158) report that the milk served to them in school is ‘adequate’ for them. There are not much regional variations in this report. 194 students report that it is not adequate.

Districts where children report that milk served is ‘Not Adequate’

More than 7 students, more than 5 per cent of the sample of 150 average students in a district, have reported that milk served to them is ‘not adequate’ and also desire more milk in Bangalore South (23 students, 15.5 per cent), Belagavi (19, 12.8 per cent), Kodagu (18, 12.6 per cent), Chikkodi and Dharwad (12, 8.1 per cent), Bagalkote and Kalburgi (11, 7.4 per cent), and Udupi (8, 5.3 per cent). Together from 8 districts they constitute 114 out of total 134 students from 18 districts, it is zero from 8 districts.

Of the 134 students who have reported that milk served is not adequate, 134 students want additional milk in the morning itself while 60 desire it in the evening, before they go home.

Report on ‘Quality’:

95.9 per cent students report that the milk served is of ‘Good’ quality.

Independently of this question, students have given diverging opinions on the thickness/otherwise of milk served. 95.9 per cent report that the milk served is ‘good’, even while a sub-set feel that the milk served is ‘thick’ (86.3 per cent), while 704 students feel that the milk served is ‘watery’ (13.7 per cent).

Report on ‘Thickness’ of milk:

Minimum 15 per cent students reporting that the milk served to them is ‘watery’ is observed in the following nine districts; percentage reporting is given in brackets:

Chikkamagaluru (62.3), Dakshina Kannada (41.2), Belagavi (31.3), Udupi (37.3), Dharwad (33.3), Shimoga (25.3), Bagalkote (19.3), Raichur (19.3) and Bellary (17.3).

8 districts, with minimum of 10 to 14.9 per cent feel that milk served is watery.

Smell: 68.4 per cent students report that the milk served ‘smells’. This report is low (57.3 per cent) in Belagavi division and Kalburgi division (61.6 per cent). It is slightly higher (71.1 per cent) in Mysore Division.

Report on 'smell' of milk: Districts where minimum 25 per cent have complained of bad smell are: Chikmagalur (78), Madhugiri (72), Bagalkote (66), Chikkaballapura (61), Tumkur (59), Bellary (60), Raichur (58), Kolar (55), Kodagu (51), Sirsi (49), Hassan (45), Vijayapura (43), Ramanagara (43), Bidar (42), Koppal (37), Davanagere (33) and Dharwad (30 per cent) - 17 districts.

42.1 per cent students like coloured milk and 41.6 per cent like white milk.

Concerns: Let the milk be coloured or white. It should not smell and it should not be watery. Whether extra milk can be served in the morning to those who drink it is a matter of policy. Those who feel inadequacy is a very small proportion of students.

Discussion: A mixed opinion is observed regarding the colour and smell of milk – vanilla, chocolate, almond etc.

42.1 per cent students like coloured milk (SMP) while 41.6 per cent like white milk (WMP). 16.3 per cent students have no opinion. If children do not like some food, they may express nausea. It is a question of choice. Reasons cannot be deciphered. Alternatively there may be a few children who may get white milk, but prefer coloured milk.

It is better to customize milk service as per 2 groups of children who prefer flavoured and non-flavoured milk. There are logistic concerns. Choice may be left to individual schools. Once the schools choose one of the alternatives after conferring with parents/children – WMP, SMP, both can be given. Demand estimation can be made accordingly and milk service can be implemented.

4.20.2 VALUES OF MILK

STUDENTSS' OPINION ABOUT VALUES of MILK

On the following values/opinions of parents have been captured. Here is a 'self-report' of values of milk from students themselves:

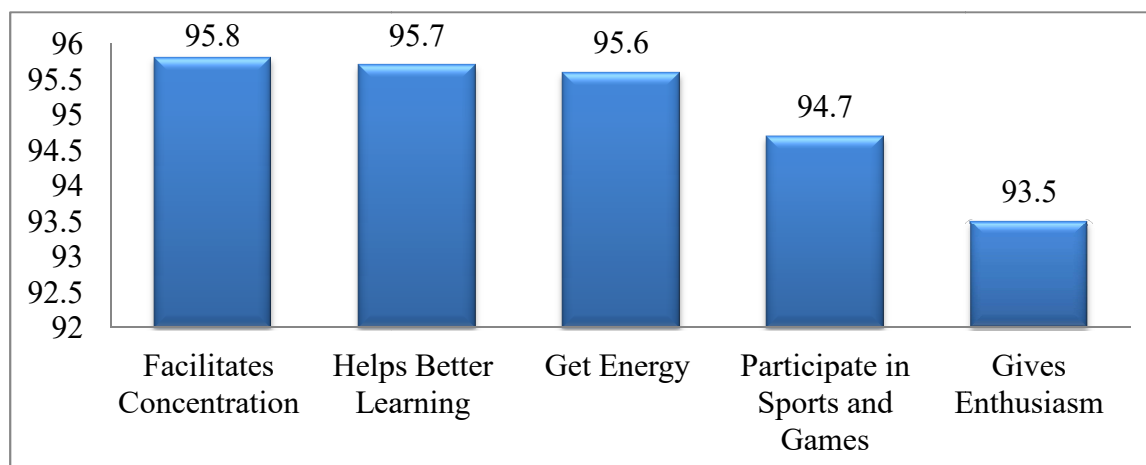
(a) Milk gives energy, (b) it helps to concentrate on classroom learning transactions, (c) facilitates participation in sports and games in school, (d) keeps us enthusiastic in school, (e) has improved health, (f) has improved learning levels, are the values of milk reported here. Data is given here.

Table 27.1: Values of Milk

Division	Bangalore		Belagavi		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
a. Get Energy	1618	97.6	1307	67.8	893	97.1	1113	92.6	4931	95.6
b. Facilitates Concentration	1618	97.6	1304	94.6	901	97.9	1119	93.1	4942	95.8
c. Participate in Sports and Games	1617	97.5	1294	93.9	881	95.8	1092	90.8	4884	94.7
d. Gives Enthusiasm (Yes)	1607	96.9	1262	91.6	872	94.8	1082	90.0	4823	93.50
e. Helps Better Learning (Yes)	1623	97.9	1317	98.0	892	97.0	1103	91.8	4935	95.7
Total Students	1658		1378		920		1202		5158	

Source: Primary data

Graph 02: Valuates of Milk



A minimum of 93.0 per cent of students in the State feel that the milk they get in schools energises them (95.6 per cent), facilitates concentration in studies (95.8 per cent), motivates them to participate in sports and games (94.7 per cent), keeps them enthusiastic in school (93.5 per cent), and finally has improved their learning levels (95.7 per cent).

Position across districts::

(a) As high as 95.7 per cent students in State feel energised due to milk. It is full 100 per cent students in Chitradurga, Davanagere, Kolar and Madhugiri (4 districts).

It is less than 90 per cent, (80 to 90 per cent range) in Bangalore North (89.3), Bagalkote (82.7), Chamarajanagar (83.3), Chikmagalur (89.9) and Udupi (87.3 per cent) [5 districts].

(b) In 10 districts, 100 per cent students report that early in the day milk helps them to concentrate on their studies. Maximum number of districts have ticked (100 per cent students) this value.

In 4 districts, this value is ticked in 80 to 90 per cent range. It is to be understood, that, unless, otherwise specified, rest of the students are in 90 to 99 range for all values.

(c) and (d) In 6 districts, 100 per cent students feel that milk has facilitated their participation in Sports and Games. This is equally true of (d) 'Keeps their enthusiasm high'.

(e) Equally so in 6 districts, students in 80 to 90 per cent range vote for the contribution of milk to help in Sports and Games. In contrast; 5 districts are in the range of regarding (d) value of milk in maintaining their enthusiasm. In Udupi district, less than 80 per cent students feel so about 'enthusiasm maintenance' as a value of milk.

In 5 districts, 100 per cent students feel that their health has improved due to milk.

In 11 districts, only 80 to 90 per cent students feel that their health has improved. This figure is less than 80 per cent in Dharwad district.

(f) In 7 districts, 100 percent students feel that their learning levels have improved due to milk. [See Table]. Such an attitude to milk has been given by 11 districts in 80 to 90 per cent range, maximum among 80 to 90 per cent choices, Chamarajnar being in less than 80 per cent range.

Values and Number of Districts:

100 per cent giving positive feedback

1. On 5 out of 6 values of milk 100 per cent students in Davanagere, Kalburgi and Mandya have given positive opinion. This is the maximum in 100 per cent category (see Table).
2. Next in 100 per cent category are Chitradurga and Bidar who have voted on 4 attributes, followed by Madhugiri whose choice is 3 attributes.
3. Kolar, Chikkodi, Bangalore Rural (3 districts) have identified at least 2 attributes of milk in 100 per cent category. Rest of the 6 districts have identified at least 1 attribute in 100 per cent category.

A total of 15 out of 34 districts identify one or the other attribute of milk in 100 per cent category.

Less than 90 (Mostly 80 to 90 per cent) giving Positive Opinion

In order of attributes of values of milk in 80 to 90 per cent range are: 5 values (1 District), 4 values (3 districts), 3 values (2 districts), 2 values (4 districts), and only 1 value (3 districts). Rest are in 90 to 100 per cent range of attributes to milk (see tables).

Appreciation: By and large, values of milk (6 values) are highly rated by students in varying degrees. Over 90 per cent values attributed (90 per cent and above students) by 23 out of 34 districts.

4.20.3 Mid-Day Meal Analysis

Table 28: Service of Hot Cooked Meal

Division	Bangalore		Belagavi		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
(a) Served Daily (Yes)	1650	99.5	1368	99.3	900	97.8	1179	98.1	5097	98.8
Total Students	1658		1378		920		1202		5158	
Students 'No' Response	8		10		20		23		61	
Schools	1		1		2		1		5	
<u>Service</u>										
(b) <u>Daily Served</u>	1443	87.5	1228	90.0	808	90.0	1121	95.0	4600	90.2
Miss.[No.] Once in a way	193	11.7	127	9.3	82	9.1	56	4.5	458	9.0
Miss [No.] Many a Times	14	0.8	13	1.0	10	1.1	2	0.2	39	0.8
(c) <u>Hot Meal</u>										
Daily	1531	92.3	1240	90.0	774	84.1	1111	92.4	4656	90.27
Hot Usually	121	7.3	134	9.7	143	15.5	84	7.0	482	9.3
Not Regularly Hot	6	0.4	4	0.3	3	0.3	7	0.6	20	0.4
(d) <u>Meals Fresh</u>										
Daily	1573	94.9	1251	90.8	786	85.4	1127	93.8	4737	91.8
Usually	76	4.6	114	8.3	131	14.2	67	5.6	388	7.5
Not Regularly	9	0.5	13	0.9	3	0.3	8	0.7	33	0.6

Source: Primary data

(a) 98.8 per cent students in the State report that they are served hot cooked MDM at school.

This report is uniformly received across all divisions. It is possible that there are 5 schools where they are not served MDM, out of 510 schools, as per students' reports, as there are 61 students who report like this, when the sample per school is 10 students. If 1 or 2 students from a district report like this, such reports are not counted as responses may

be by mistake. It cannot happen that 8 students give positive report and 1 or 2 students from same school give a negative report.

Districts where these 5 schools are observed are: Chikkaballapura (1 school, 8 students), Sirsi (1 school, 10 students), Koppal (2 schools, 20 students), Dakshina Kannada (1 school, 23 students).

(b) Regularity in Service of MDM

90.2 per cent students report that it is served every day. This is a little high at 95.0 per cent in Mysore division and a little low at 87.5 per cent in Bangalore Division. 39 (out of 5158) students report that by and large it is not served often, while 458 students reports that ‘once in a way’ it is not served. It is not served report (always) is from 0.8 per cent students.

MDM not being regularly served is reported by 1 or 2 students from students of 16 out of 34 districts. It is not by many students in any district. Report cannot be taken seriously.

(c) Is the Food ‘hot’ when it is served?

1. 90.27 per cent students in the State report that MDM food is ‘hot’ when it is served. This figure is low in Kalburgi division at 84.1 per cent. 20 students report at State level that MDM meal is regularly ‘not hot’, when served.
2. Districts where ‘by and large’ MDM is not hot are 5 out of 34 – Bangalore North (4 students), Bangalore Rural (2), Dharwad (1), Haveri (3), Udupi (6). As reports are only from a few students, here and there, matter is not serious.
3. 9.3 per cent students report that the MDM is ‘usually hot’. Perhaps NGOs serve food to the school where these reports have come. It is also possible that cooks prepare food early in the day where NGOs do not serve. Anyhow, both schools and NGOs can be sensitized to keep the food hot at the time of serving it.

(d) Is the food ‘fresh’ when it is served?

91.8 per cent students from State report in a positive way. This proportion is less in Kalburgi division at 85.4 per cent.

In 15 out of 34 districts, negative report ‘always’ has come and out of them, in 8 districts, only 1 student has reported like this, total for the State being 33.

Concern: It can be safely assumed that hot, fresh MDM is served daily in all schools of the State, to all students, with the exception of 5 schools (4 districts) reported earlier.

Variety in MDM Food**Table 28.1: Variety in daily MDM Service:**

Divisions	Bangalore		Belagavi		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
a. Variety (in food) Daily	1272	76.7	999	72.5	685	74.5	980	81.5	3936	76.3
• Usually (Yes)	175	10.6	175	12.7	170	18.5	137	11.4	657	12.7
• Rarely (Yes)	211	12.7	204	14.8	65	7.1	85	7.1	565	11.0
Number of Students	1658		1378		920		1202		5158	
b. Variety in vegetables served										
• Daily (Yes)	1610	97.1	1259	91.4	757	82.3	1071	89.1	4697	91.1
• Usually (Yes)	40	2.4	72	5.2	136	14.8	107	8.9	355	6.9
• Once in a way (Yes)	8	0.5	47	3.4	27	2.9	24	2.0	106	2.1
(c) Variety in Vegetables										
• Always (Yes)	1539	92.8	1156	83.9	733	79.7	951	79.1	4379	84.9
• Usually Yes	109	6.6	190	13.8	183	19.9	232	19.3	714	13.8
• Once in a way (Yes)	10	0.6	32	2.3	4	0.4	19	1.6	65	1.3
Number of Students	1658		1378		920		1202		5158	

Source: Primary data

(a) 76.3 per students in the State report that there is variety in MDM food served to them. The JD/MDM Office has issued a weekly time-table to schools for serving MDM which reflects variety. It is clear that in case of 12.7 per cent students, 657, this is complied with 'usually'. Adherence to MDM time table is 'rarely' followed in schools as reported by 565, 11.0 per cent students.

Position across districts: (Minimum 8 to 10 students): Bangalore North (75 students; 8 schools); Bangalore Rural (32, 3 schools); Chikkaballapura (17, 2 schools), Ramnagara (13, 1 school), Tumkur (71, 7 schools); Bagalkote (15, 1 school), Belagavi (36, 4 schools); Chikkodi (41, 4 schools); Dharwad (19, 2 schools); Gadag (9, 1 school); Haveri (10, 1 school); Sirsi (12, 1 school); Uttara Kannada (13, 1 school); Vijayapura (49, 5 schools); Bidar (11, 1 school); Koppal (14, 1 school); Raichur (13, 1 school), Yadgir (18, 2 schools); Dakshina Kannada (13, 1 school) and Udupi (63, 6 schools).

A total of estimated 53 schools (minimum) across 20 districts do not adhere to time-table. They do not serve variety of food.

Concern: * There is a need for intensive/extensive M & S in regard to these districts on the type of food they serve daily and to the extent they violate the time-table specifications on variety of food.

(b) Use of vegetables in MDM:

91.1 per cent students report that they get vegetables 'daily' in their MDM. This percentage is a little high in Bangalore division (97.1) and quite low in Kalburgi division. 6.9 per cent students report that 'usually' they get vegetables. Those who get 'rarely' are 106 students, 2.1 per cent sample.

Position across districts on Lack of Variety (minimum 10 schools) are: Belagavi (19 students, 2 schools); and Udupi (8, 1 school).

Only 3 schools from 2 districts do not serve variety of vegetables. This is among schools wherein 91.1 per cent students report that they get vegetables.

Concern: The values of a balanced diet across 6 days of a week and use of vegetables in MDM for supply of minerals and vitamins to students need not be overemphasized. M & S exercise needs to focus on schools/districts which do not follow guidelines.

Table 28.2: Needy Kids and MDM

Number of children who report that they will be hungry by the time MDM is served

Divisions	Bangalore		Belagavi		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
a. Very Hungry (Yes)	344	20.7	426	30.9	393	42.7	202	16.8	1365	26.5
• Hungry (Yes)	755	45.5	631	45.8	452	49.1	767	63.8	2605	50.5
• Not Much (Yes)	559	33.7	321	23.3	75	8.2	233	19.4	1188	23.0
Number of Students	1658	100	1378	100	920	100	1202	100	5158	100

Source: Primary data

26.5 per cent students in the State report that they will be 'Very Hungry' by the time MDM is served. This figure goes up to 42.7 per cent in Kalburgi division and up to 30.9 per cent in Belagavi division. It is a little low at 16.8 per cent in Mysuru division. It may be recalled, as parents reported, that significant proportion of homes cannot give breakfast at home and MDM is the first sumptuous food of the day for quite a number of children.

Table 28.3: MDM Food Service-adequacy concern

Divisions	Bangalore		Belagavi		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
a. * Adequate (Yes)	1635	98.6	1340	97.2	891	96.8	1185	98.6	5051	97.9
• Second Service (Yes)	19		24		21		13		77	
• No	4		4		8		4		20	
• Second Service (Yes)										
(i) Without asking (Yes)	10		6		4		4		24	
(ii) Not Automatic - On Demand (Yes)	8		12		13		7		40	
(iii) At our Sitting Place	1		4		2		2		9	
(iv) We have to go and get it	-		2		2		-		4	
No. of Students	1658		1378		920		1202		5158	

Source: Primary data

Total may not tally as ‘No Responses’ are not counted

1. 97.9 per cent students report that the MDM food served to them is ‘adequate’. Hardly 107 students out of 5158 students (total) report that the food served is not adequate. For 77 out of these 107 students, food is served for a second time. In effect, 30 students remain hungry after MDM. There is variation in administration of ‘second’ service. 24 students get it in a routine/automatic way. 40 students demand and get it. Only a few, very few students go and get it. Others get it at their sitting place.
2. Districts where 30 students report that MDM served is not adequate and they do not get a second service are: as per no. of students who report ‘No’ – Bangalore Rural, Bangalore South, Chikkaballapura, Kolar, Chikkodi, Koppal, Dakshina Kannada (6 districts, 1 student each district); Bangalore (7), Dharwad (4), Uttara Kannada (2), Bellary (3), Raichur (4), Chikmagalur (4 students). Though numbers are small, issue is significant. Nobody should go hungry.

Table 29: Quality of MDM – A Feedback

Divisions	Bangalore		Belagavi		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
(a) Always Good (Yes)	1495	90.2	1107	80.3	684	74.3	1044	86.9	4330	83.9
Usually Good (Yes)	152	9.2	237	17.2	230	25.0	147	12.2	766	14.9
Always Not Good (Yes)	11	0.7	34	2.5	6	0.7	11	0.9	62	1.2
(b) If Poor Quality,										
(i) It is Spicy (Yes)	1		9		3		5		18	
(ii) Salt will be more (Yes)	4		8		3		3		18	
(iii) Not Tasty (Yes)	5		16		-		3		24	
(iv) Bad Smell (Yes)	1		1		-		-		2	
Total	11		34		6		11		62	
(c) Complained about it (Yes)	6		6		2		3		17	
No	5		28		4		8		45	
(d) Complained to HT (Yes)	4		3		1		3		11	
No	2		3		1		-		6	
(e) To Teachers (Yes)	2		-		-		2		4	
No	4		6		2		1		13	
(f) To Cooks (Yes)	1		4		1		2		8	
No	5		2		1		1		9	
(g) Complaint Helped (Yes)	6		6		2		3		17	
No	-		-		-		-		-	
Total	1658		1378		920		1202		5158	

Source: Primary data

1. Nearly 84 per cent students report that quality of MDM is 'always good'. If 'usually good' response is clubbed with 'always good', then, the proportion of students who are satisfied with MDM rises up to 98.8 per cent students, 5096 out of 5158 students. Those who are not at all happy with MDM works out to be 62 students out of a total of 5158 students in the State, 1.2 per cent. This proportion is less than 1 per cent in Bangalore, Kalburgi and Mysuru divisions, while it is 2.5 per cent – 34 out of 1378 students in Belagavi division.
2. 18 students each in this bunch of 62 students report that the MDM will be with excess spice or excess salt. 24 students out of 62 find the MDM without taste. Some of them complained about their dissatisfaction to HT/Teachers/Cooks. Complaint helped in improving matters. 45 dissatisfied students have not complained also.

Position across districts on 62 Dissatisfied Students

1. Highest complaints have come from Belagavi (13) and Haveri (12).
2. MDM has no taste is a complaint from 24 out of 34 districts. Schools are expected to maintain a Taste Register and HT/Nodal Teacher/Visiting Officers have to record their observations on taste. HT/Nodal Teachers need to do it daily. Still, complaint on taste persists in 9 districts (varying counts of students).
3. ‘Taste’ is a subjective feeling. It is difficult to arrive at a unified opinion. Still, it is better to focus on taste of MDM in M & S at least in Belagavi district where the report is from 12 students.
4. Likewise, salty food is reported by 11 districts. It can also be looked into.

Students and Hygiene Concerns in MDM

As per guidelines, students are not expected to visit the Kitchen. Cleanliness of Kitchen and eating place are matters of concern. With inadequate staff, specifically Ayahs who assist cooks and engage in cleaning work, it is to be examined as to who substitute for the Ayahs in cleaning work. This is a larger problem in medium and big schools. Here is data.

Table 30: Kitchen and Hygiene, Eating Place and Hygiene

Divisions	Bangalore		Belagavi		Kalburgi		Mysuru		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
(a) Students in Kitchen										
(i) Many times (Yes)	231	13.9	248	18.0	167	18.2	200	16.6	846	16.4
(ii) Once in a way (Yes)	542	32.7	684	49.6	460	50.0	334	27.8	2020	39.2
(iii) No	885	53.4	446	32.4	293	31.8	668	55.6	2292	44.4
Total Number of Students	1658		1378		920		1202		5158	
(b) cleanliness of eating place	1547	93.3	1257	91.2	848	92.2	1147	95.4	4799	93.0
(c) Who Cleans?										
(i) Ayah	451	27.2	432	31.3	257	27.9	130	10.8	1270	24.6
(ii) MDM Staff	1034	62.4	770	55.9	629	68.4	729	60.6	3162	61.3
(iii) Students	284	17.1	356	25.8	151	16.4	418	34.8	1209	23.4
(d) Regularity of cleaning by students	223	13.4	267	19.4	80	8.7	352	29.3	922	17.9
(e) No. of students who have cleaned (any time)	777	46.9	542	39.3	367	39.9	525	43.7	2211	42.9
(e) ‘Happiness’ in cleaning work	724	43.7	493	35.8	328	35.7	416	36.3	1961	38.0

Source: Primary data

- (a) Without adhering to guidelines, 16.4 per cent students have visited the kitchen, many a times. This is true of all divisions in varying degrees. It is slightly less in Bangalore division. 44.4 per cent students, considerable proportion, given the ‘curiosity’ habits of students, have not visited the kitchen even once. These proportions are notably higher in Bangalore (53.4 per cent) and Mysore (55.6 per cent) divisions, possibly due to stricter vigilance.
- (b) 93.0 per cent students report that eating place will be clean always. Reports are uniform across all divisions regarding this question.
- (c) * (i) Ayahs are there in only a small percentage of schools. Ayahs have not been provided as per Department/Government norms. These are contract appointments of locally available persons who can be paid from contingency funds for which Department can make provisions and issue circular to use it specifically for this purpose.
- Only 24.6 per cent students report that Ayahs clean eating places. This facility of Ayahs doing cleaning work is reported by lowest proportion of students (10.8 per cent) in Mysuru division.
- (c) * (ii) Alternatively MDM staff (Chief cook or Assistant Cooks) do the cleaning work of eating places. This is reported by 61.3 per cent students. This practice is slightly lower (55.9 per cent) in Belagavi division and slightly higher (68.4 per cent) in Kalburgi division.
- (c) * (iii) 23.4 per cent of students in State report that they clean the eating places. Students doing this work are highest (34.8 per cent) in Mysuru division and low in Bengaluru (17.1 per cent) and Kalburgi (16.4 per cent) divisions.
- (d) However, it is noted that when students are engaged for cleaning the eating places (23.4 per cent in State), in a few schools it is possible that engagement of students by schools may be on a basis of Rotation System. 17.9 per cent students in State, percent to State total, report that they do cleaning work every day. 5.5 per cent students, a sub-set of 23.4 per cent, do not clean daily. There may be rotation system for 287 students, nearly 29 out of 515 schools, keeping 10 students as sample per school.
- (e) 42.9 per cent students in State report that they have cleaned eating places in schools, sometimes in the past, may be a few or many times or daily. This is uniformly so across all divisions. 38.0 per cent report that they are ‘happy’ to do so – cleaning of eating places [percentage to State grand total]. This is uniformly so across all divisions.

Position across districts on (a) students in kitchen, (b) cleanliness of eating place, (c) persons who clean eating place, (d) engagement of students for cleaning and (e) students feedback on cleaning

District-wise Analysis

1. Students who have visited the Kitchen many times: In Chikmagalur district, 59.7 per cent students report that they have visited the Kitchen many times. This is the highest level of non-compliance of the departmental guidance. More than 25 per cent students have done so in Gadag, Tumkuru, Belagavi, Bangalore Rural, Dharwad, Bangalore South and Udupi.
2. M & S in these districts in regard to surveillance on children (visiting kitchen), needs to be on priority. Other districts may also be given renewed directive.
3. Eating place is not clean in 15 districts. More than 10 per cent students report on this concern of hygiene in Gadag, Madhugiri, Bagalkote/Raichur, Chikkaballapura/ Belagavi/ Sirsi and Koppal.
4. In 28 out of 34 districts minimum 10 per cent students clean the eating place. It is very high at Kodagu (74.7 per cent) and Chikkamagaluru (67.3 per cent students). Minimum 25 per cent students do this service in the school in 10 districts.
5. In 9 districts out of 28 districts where students clean eating place, at least 25 per cent students do this cleaning work every day.
6. Only in 3 districts of the State, 10 and more than 10 students are not happy to do cleaning work of the eating place in school. Most of them are happy to do this. They have no reservations in this respect.
7. Students who have visited the Kitchen many times: In Chikmagalur district, 59.7 per cent students report that they have visited the Kitchen many times. This is the highest level of non-compliance of the departmental guidance. More than 25 per cent students have done so in Gadag, Tumkuru, Belagavi, Bangalore Rural, Dharwad, Bangalore South and Udupi.
8. M & S in these districts with regard to surveillance on children (visiting kitchen), needs to be on priority. Other districts may also be given renewed directive.
9. Eating place is not clean in 15 districts. More than 10 per cent students report on this concern of hygiene in Gadag, Madhugiri, Bagalkote/Raichur, Chikkaballapura/ Belagavi/Sirsi and Koppal.

10. In 28 out of 34 districts minimum 10 per cent students clean the eating place. It is very high at Kodagu (74.7 per cent) and Chikkamagaluru (67.3 per cent students). Minimum 25 per cent students do this service in the school in 10 districts.
11. In 9 districts out of 28 districts where students clean eating place, at least 25 per cent students do this cleaning work every day.
12. Only in 3 districts of the State, 10 and more than 10 students are not happy to do cleaning work of the eating place in school. Most of them are happy to do this. They have no reservations in this respect.

Concern: There can be two views on engaging students to clean eating place – (i) let them do it, they will learn discipline. (ii) It is not fair to engage them in child labour at school, a government sector school. It is difficult to take a position on any one of these two views. However, certain facts need to be put in place. They are:

1. All children do not do cleaning work. Select few will do it.
2. Normally girls, 6th/7th/8th standard, senior girls, are engaged for this work, leading to sex-typing of this task.
3. Upper, upper middle class children are not constrained to do this work in private unaided schools.

Can students be exempted from this work by giving cash incentives to CCH staff for doing this work.

MDM Service - Lunch Hour-Food Service:

Food service begins, children are served food, they cannot eat till others are being served. There will be prayer before children can start eating. For children to begin eating, teacher has to say “all of you begin to eat”; children have to wait for considerable time for this instruction from the teacher.

- (a) Nearly 60 per cent students need to wait to consume MDM after it is served. They cannot eat immediately after it is served to them. Such a waiting is uniformly observed (feedback on waiting) across all divisions
- (b) Waiting time is for 5 minutes only in a majority of cases of students – 68 per cent, % for a (i); it is 10 minutes for 25.2 per cent students (percentage for a (i) total); it is 15 minutes for 210 students – 6.8 per cent students. It is lowest (15 minutes) for students of Mysore division – 1.7 per cent.

(c) Independent of duration of waiting, 29.2 per cent of students would feel like consuming MDM as soon as it is served. It may be recalled, that notable proportion of students have reported that – MDM is first food of day (no breakfast) and they feel very hungry/hungry by lunch time.

(d) Of the total sample, 87.9 per cent students have to sing prayers before consuming MDM, after it is served to all children in the school. This proportion is uniformly reported across all divisions. However, all students are happy to sing prayers before MDM (a few who do not have to sing would also be happy to sing prayers).

Concern: Waiting for consuming MDM and singing prayers before consuming MDM is not an issue at all.

All students sit in school at MDM time and consume food as a community of children.

98 per cent children are quite happy and excited about it. Children are children irrespective of sex, age and social category.

(e) 44 per cent of children bring their own water bottles for drinking after MDM.

(f) In small schools, cooks serve food. In medium/large schools, senior girls help cooks/ayahs in serving food. NGOs use MC members to serve food.

Effects of MDM on Afternoon Classes

There is a generally shared opinion that MDM service in schools interferes with afternoon classes. An update is taken on this concern from the school and the students. Here is data from Students.

Table 31: Effects of MDM on Afternoon Classes

Division	Bengaluru		Belagavi		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
(a) (i) (*) MDM affects classes (Yes)	196	4.6	215	15.6	177	19.2	88	7.3	676	13.1
(ii) (*) Delay of 5 minutes (Yes)	76	4.6	73	5.3	77	8.8	37	3.0	263	5.1
(*) Delay of 10 minutes (Yes)	98	5.9	98	7.1	81	8.8	24	2.0	301	5.8
(*) Delay of 15 minutes (Yes)	22	1.3	44	3.2	19	2.0	27	2.2	112	2.2
(iii) * Delay is Daily (Yes)	62	3.7	63	4.6	51	5.5	47	3.9	223	2.2
(*) Usually (Yes)	76	4.6	50	3.6	83	9.0	25	2.0	234	4.5
(*) Delay, once in a way (Yes)	58	3.5	102	7.4	43	4.7	16	1.3	219	4.2
No. of Students	1658		1378		920		1202		5158	

Source: Primary data

* All percentages are for Division/State (last column), grand totals.

1. per cent students report that their afternoon classes are effected due to MDM. This report is highest in Kalburgi division (19.2 per cent), high (15.6 per cent) in Belagavi division and low (7.3 per cent) in Mysore division.
2. It is noted that in Northern Karnataka, historically, schools are of larger sizes (enrolments) as compared to schools in Southern Karnataka. MDM service also consumes a little longer time.
3. The delay for classes reported by 13.1 per cent of students in the State is for duration of 5 minutes (5.1 per cent students report), 10 minutes (5.8 per cent students report) and 15 minutes (2.2 per cent students report).
4. Out of the 13.1 per cent students in State who report on delay [a(i)], 2.2 per cent say that this delay happens every day. 4.5 per cent report that this happens 'usually'. Together, notable delay – daily/usually – is reported by 6.7 per cent students – 457 out of 5158 students.

District-wise Analysis :

Reports from 8 and more than 8 students considered across districts. Classes get affected (Yes): there are 10 students in each school, 150 students in a district.

1. Percentages are from district students' totals in the sample which is around 150 in some districts while it is just 150 in other districts.

More than 25 per cent students report that their classes in the afternoon are delayed due to MDM services – in Kalburgi (50 per cent students), Bangalore Rural, Bangalore South, Gadag, Bellary, Madhugiri and Dharwad (7 districts).

2. Percentages in subsequent columns (daily/usually) exceed the first column, as reported by students. In more than 25 per cent cases (students' report) delay is by 10 to 15 minutes in Kalburgi district only (out of these 7 districts). More than 20 minutes in Bangalore Rural and Bellary districts out of these 7 districts.
3. This phenomena happens every day or usually Kalburgi, Bangalore Rural and Bellary districts as reported by more than 25 per cent students.

Concern: The problem of classes in afternoons getting affected regularly for more than 10 to 15 minutes is of high significance in Kalburgi, Bangalore Rural and Bellary districts.

In other districts problem is there to a lower degree.

Solution: Instead of expecting all schools in the State to strictly adhere to the School Day Timings fixed at Bangalore CPI/DPIs Office, it is better to allow a little flexibility to large/medium sized schools facing problem of MDM affecting afternoon classes; let them close the school 15 to 20 minutes late in the evening and extend lunch hour accordingly. This is a simple solution.

MDM will not affect academic pursuits, if this solution is adopted. Let this be done in the 22 districts which report on this problem (students' reports). Extension of time may be from 5 to 15 minutes.

Values of MDM

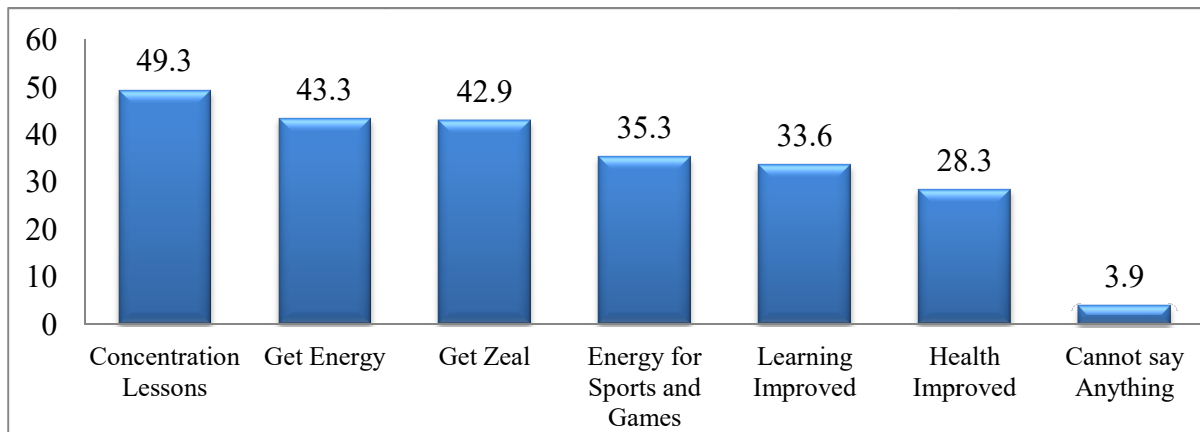
Ways in which MDM helps students:

Students have mentioned the following values in varying degrees – get energy, develop zeal in life, facilitates concentration in lessons, has helped to improve learning, health has improved, get energy for sports and games; there is also a response – ‘cannot say anything’. Here is analysis of students responses for this concern.

Table 32: Values of MDM

Divisions	Bengaluru		Belagavi		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
a. Get Energy (Yes)	711	42.9	537	39.0	352	38.3	632	52.6	2232	43.3
b. Get Zeal (Yes)	731	44.1	532	37.9	332	36.1	626	52.1	2211	42.9
c. Concentration Lessons (Yes)	885	55.4	591	42.9	320	34.8	748	62.2	2544	49.3
d. Learning Improved (Yes)	620	37.4	325	23.6	204	22.2	583	48.5	1732	33.6
e. Health Improved (Yes)	415	25.0	335	24.3	96	10.4	614	51.1	1460	28.3
f. Energy for Sports and Games (Yes)	614	47.0	417	30.3	146	15.9	644	53.6	1821	35.3
g. Cannot say Anything (Yes)	34	2.1	60	4.4	38	4.1	67	5.6	199	3.9
Number of Students	1658		1378		920		1202		5158	

Source: Primary data

Graph 03: VALUES OF MDM

Students have attributed a variety of values to MDM. In order of descending proportion of students, vis-a-vis their choices, at the State level, the values identified are: MDM facilitates concentration on Lessons (49.3 per cent), gives energy (43.3 per cent), promotes their zeal/enthusiasm in school (42.9 per cent), gives them energy to participate in sports and games (35.3 per cent), has assisted them in improving their learning (33.6 per cent) and improved their health (28.3 per cent). It is noted that only 3.9 per cent students are undecided about the values of MDM.

Appreciations: Methods of preferential scoring indicates that the values identified herein are preferred in the following order; scores in brackets: a) Concentration on Learning, b) Gives energy, c) get zeal, d) gives energy for sports and games, e) learning has improved and finally f) health has improved. ‘Cannot say’ is not counted.

Position across districts:

1. In this analysis number of students choosing a particular option under a/b/c/d/e/f, as a value of MDM, frequencies are pooled up for a district a+b+c+d+e+f. The pooled scores of all 34 districts are arranged in a descending order. Highest pooled score is given first rank and lowest pooled score is given thirty-fourth rank as there are 34 districts. Other districts get ranks between 2 and 33, as per their pooled score. Data is given in the table. Likewise, Column totals are pooled to get a summated score of each of the benefits of MDM, as perceived by students and arranged in a descending order.
2. Options and their Pooled Scores
Pooled score from 34 districts – total number of students choosing this option is the pooled score, out of 5158 students.

Choice 1: c) pooled score is 2544; per cent value – 49.32 – able to better concentrate on lessons.

Choice 2: a) 2232; Get energy for daily chores – percent value – 43.27.

Choice 3: b) Get zeal in life – 2211; per cent value – 42.87

Choice 4: f) Get energy for sports and games – 1821; - per cent value – 35.30.

Choice 5: d) 1732; Learning has improved – per cent value 33.57.

Choice 6: e) 1460; Health has improved –per cent value – 28.31.

Concern: None of the 6 values of MDM identified has got 50 per cent support from students. Maximum is 49.32 per cent support for C. In order of choices the 6 values of MDM are listed here:

Table 33: Choices access the 6 values of MDM

	MDM Values	Per cent Students Choosing it	Rank
c)	Facilitates better concentration for Learning	49.3	1
a)	Get Energy for daily chores	43.3	2
b)	Get Zeal in life	42.9	3
f)	Get energy for sports and games	35.3	4
d)	Learning has improved	33.6	4
e)	Health has improved	28.3	6

Source: Primary data

Note: These are students’ perceptions of the relative values of MDM.

District-wise Choices

- All the 6 values of MDM identified herein are completely supported by students in Mandya district, average 148.7 (choices) out of 150 students, 99.1 per cent.
- Top 10 districts which are highly satisfied with the 6 values of MDM are Mandya, Shimoga, Kolar, Chikmagalur, Kodagu, Chikkodi, Chamarajanagar, Belagavi, Davanagere and Udupi.
- Bottom 5 districts on low satisfaction scale with MDM are – Chitradurga, Bangalore South, Bangalore North and Kalburgi.

4.20. 4 Social Integration through MDM

One of the intended objectives of MDM is to promote social integration. Students attend schools from homes with diverse caste backgrounds. There is a caste-orthodoxy, untouchability (hidden, as it is unconstitutional) and social distancing in the larger Indian society. Government school (private aided also) is an institution of a secular, socialistic democratic Republic (of India). There should be a liberal milieu, full of equality and social integration, especially when MDM is served, when children move freely outside the classroom, in school, apart from sports and cultural activities. Here is data of children's behaviour during lunch/MDM time.

Choice of companions while consuming MDM:

- a. Classmates, (b) no particular place – change daily, (c) my caste boys/girls, (d) anybody – unmindful of caste.

Table 34: Social Integration through MDM

Division	Bengaluru		Belagavi		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
Classmates, (Yes)	1193	72.0	1058	76.8	744	80.9	882	73.4	3877	75.2
Change places, (Yes)	1143	68.93	872	63.3	532	57.8	648	53.9	3195	61.9
My Caste Boys/Girls (Yes)	289	17.4	237	17.2	160	17.4	120	10.0	806	15.62
Anybody (Yes)	176	10.7	83	6.0	16	1.7	200	16.6	475	9.0
Number of Students	1658		1378		920		1202		5158	

Source: Primary data

- 75.2 per cent students sit for MDM with their classmates. This practice is uniformly observed across all divisions. Even among those who sit with classmates, they do not sit with same classmates every day. 61.9 per cent change places. Changing places is high in Bengaluru and low in Mysuru division, lower than State average.
- 16 per cent students sit with their caste affinity groups. They may commute to school from same locality and have better rapport with them. There may not be any conscious caste preference.
8.8 per cent students are free lancers. They sit with anybody. Their proportion is high in Mysuru and Bengaluru.

4.20.4.1. Social Integration through MDM

Quite a discerning data on social integration through MDM is in regard to Social Profile of Cooks/Ayahs, the CCH staff.

4.20.4.2 Social Profile of Cooks/Ayahs Data

1,17,999 cooks/ayahs, that is cooks-cum-helpers (CCH staff) serve fresh, hot mid-day lunch to over 55 lakh children of 55,000 government schools of the State. **All are female.**

Table 34.1: Social composition of the CCH staff s is as follows:

[In Percentages]

SCs	STs	OBC	Minorities	Others	Total
21.48	10.61	47.74	10.62	9.55	100

Among CCH, the proportion of SCs and STs are 21.48 and 10.61 per cent; together, 32.09 per cent. Their population in the State is around 23 per cent, in general. It means, their proportion as CCH staff is higher than their proportion in the general population. Further, children in schools belong to all social groups.

It is to be noted that the schools, children, parents, communities as a whole, accept SC/ST cooks. **This is a very good phenomenon achieved through MDM scheme. This is the type of Social Integration desired in society as per the National Constitutional Value of Equality.**

4.20.5 Health Care in MDM

Promotion of health of children is a major goal of MDM. Health and Nutrition are addressed in MDM. Nutrition is taken care of by MDM and tablets are given for promotion of health. Three types of tables are given with full support/supplies from Health Department. They are:

- (i) Folic Acid – Iron Tablets – which are given (to be given) once every week, to promote haemoglobin content in blood.
- (ii) Vitamin A tablets – which are to be given once in 6 months, maximum 2 times a year.
- (iii) De-worming Tablets – which are to be given twice a year.

To what extent, schools give these tablets, as per norms and whether students consume them are of concern. Here is data – a feedback from children.

Table 35: Health Tablets**Table 35.1: Iron Tablets**

Division	Bengaluru		Belagavi		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
(i) Get Iron Tablets (Yes)	1500	90.5	998	72.4	754	82.0	997	82.9	4249	82.4
(ii) Periodicity										
* Every week once (Yes)	927	55.9	459	33.3	337	36.7	865	72.0	2588	50.2
* Once a fortnight (Yes)	179	10.8	105	7.6	192	20.9	53	4.4	529	10.3
* Once in a month (Yes)	233	14.0	136	9.9	115	12.5	46	3.8	530	10.3
* Others (Yes)	161	10.7	298	21.6	110	12.0	33	2.8	602	11.7
Habit of consumption of tablets (yes)	999	60.3	521	37.8	428	46.5	732	60.9	2680	52.0
No. of Students	1658		1378		920		1202		5158	

Source: Primary data

- 82.4 per cent students report that they receive Iron Tablets at school. This proportion is high in Bangalore division at 90.5 per cent and low in Belagavi division at 72.4 per cent.
- Only 50.2 per cent students get the tablets as per norms – one per week. This is high at 72.0 per cent in Mysuru and low in both Kalburgi and Belagavi divisions (36.7 and 33.3 per cent).
- Rest of the students do not get it as per norms (among those who get them). 10.3 students get them twice in a month. 22.0 per cent (10.3 + 11.7) get it sparingly.
- Effectively, nearly 50 per cent of the students do not get iron tablets as per norms.

Table 35.2: Vitamin A Tablets

Division	Bengaluru		Belagavi		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
a (i) Get Vitamin Tablets	1359	82.0	890	64.6	733	79.7	637	53.0	3619	70.2
(ii) Periodicity										
* Weekly once (Yes)	306	18.5	218	15.8	117	12.7	181	15.0	822	15.9
* Fortnightly (Yes)	189	11.4	131	9.5	187	20.3	53	4.4	560	10.9
* Monthly once (Yes)	213	12.8	127	9.2	69	7.5	48	4.0	457	8.9
* Quarterly Once (Yes)	68	4.1	57	4.1	34	3.7	15	1.3	174	3.4
* Once in 6 months (Yes)	582	35.1	317	23.0	306	33.3	268	22.3	1473	28.6
* Once in a year (Yes)	01		40	2.9	20	2.2	72	6.0	133	2.6
Number of Schools	1658		1378		920		1202		5158	

Source: Primary data

Table 35.3: De-worming Tablets

Division	Bengaluru		Belagavi		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
De-worming Tablets Yes	1585	95.6	1177	85.4	805	87.5	1115	92.8	4682	90.8

Source: Primary data

Table 35.4: Iron Tablets

Division	Bengaluru		Belagavi		Kalburgi		Mysuru		State	
	No.	%	No.	%	No.	%	No.	%	No.	%
* Take them Yes (Always)	999	60.3	521	37.8	428	46.5	732	60.9	2680	52.0
* Usually (Yes)	307	18.5	228	16.5	218	23.7	185	15.4	938	18.2
* Once in a way (Yes)	173	10.4	227	16.5	85	9.2	71	5.9	556	10.8
* Never (Yes)	21	1.3	22	1.6	23	2.5	9	0.7	75	1.5

Source: Primary data

- 52.0 per cent students take the iron tablets received by them. This proportion is high at over 60 per cent in Bangalore and Mysore divisions. It is quite low at 37.8 per cent in Belagavi division.
- If students who consume iron tablets given to them, by and large, are also considered, then, the proportion of those who use iron tablets goes up to 70.2 per cent. This proportion may include 52 per cent students who get iron tablets as per norm, once a week.

Districts where students do not take the tablets at all (count for 8 and more than 8 students) are: Bellary, Belagavi and Ramanagara – 3 districts.

- 70.2 per cent students receive Vitamin A tablets. It is high in Bengaluru (82.0) and Kalburgi (79.7) divisions while it is low (53.0 per cent) in Mysore division. Only 28.6 per cent students in State (grand total) receive this tablet as per norms, once in six months. All others, who get it, get it wrongly – weekly (15.9 per cent), fortnightly (10.9 per cent), monthly (8.9 per cent), quarterly (3.4 per cent) and yearly (2.6 per cent).
- Likewise de-worming tablets are issued, as per norms to 90.8 per cent students.

Concern: There is very low compliance, as per students' feedback, in distribution of tablets to students as per norms. – HTs, nodal teachers – need to be re-sensitised about the norms for issue of tablets at CRP meetings. Parents need to be sensitised at SDMC meetings (of all parents) and Gram Sabha meetings of GPs about the need and values of ensuring their children take the tablets.

4.20.6 Food Security at Home

Apart from health, nutrition and education (chiefly), MDM is also a measure of food security in a society punctuated by poverty, deprivation and inequality. It is in this context that food security at home gains significance. Here is data on type, variety and frequency of food served to students in this sample at home. Drink given in the morning (or no drink), number of times food is served, whether breakfast is served, whether children get some food/snacks after they return from school, whether they get supper in night; do children get vegetables, normally, fruits – normally, leafy vegetables, normally, ghee/butter/curds, normally.

1. All the students report that they get one or the other morning drink. It may be recalled that only 2621 parents out of 5158 parents, 51.8 per cent, had reported that they give morning drink. But here all students report that they get a morning drink. There are many small kids in the sample. Hence, report of parents can be considered in regard to ‘morning drink’ only. This may not be applicable to other types of food.
2. Going by students reports, proportions of students who get morning drinks, in State, are Tea – 43.2 per cent, Milk – 28.7 per cent, Coffee – 24.4 per cent and Malt with Milk – 3.7 per cent (as it is a little costly).
3. While coffee is more popular in Bengaluru and Mysuru divisions, tea is more popular in Belagavi division. Tea and milk are equally popular in Kalburgi division. Milk and tea are equally popular in Bengaluru and Mysuru divisions along with Coffee.
4. 3.9 per cent of total students in State sample, 199 students get only one meal a day. In another question on getting morning breakfast, (down the table), 205 students report that they do not get morning breakfast, nearly 4.0 per cent of sample.

MDM is the first substantive food of the day for 6.2 per cent children in the State [The parents’ report had revealed that this figure is 5.0 per cent. For information and recall], 200 children in this sample. This figure will run into lakhs when this discovery is generalised for the whole State (universe).

For 49.0 per cent sample in State 2527 out of 5158 students, MDM is the second meal as they are able to give only 2 meals a day. After MDM, they get supper in the night at home. They will have to wait for at least 8 hours after MDM for the next meal.

Pathetic state of life for 53 per cent of children in the State

1. It is also to be noted that supper is given in 97.5 per cent homes. 2.5 per cent children (127), do not get supper. Getting supper in night is of comparable proportion across the whole State.
2. 96.1 per cent students get vegetables in food. This is uniformly so across all divisions. 87.1 per cent also get fruits. 95.8 per cent get leafy vegetables.
3. Use of Ghee/butter is only in 57.4 per cent homes. However, curds are given in 75.4 per cent houses. Use of Ghee/butter is high (relatively) in Bangalore division and low in Kalburgi division.

DISTRICT-WISE ANALYSIS

1. No Breakfast: District-wise update on students who do not get breakfast (in the morning) is given here [minimum 8 children are counted]. Number of students are noted in brackets against the districts. Bangalore North (8), Bangalore Rural (8), Chikkaballapura (15), Bagalkote (16), Belagavi (10), Sirsi (25), Bellary (21), Koppal (24) and Hassan (8). These districts account for 135 out of 199 children in the State. Rest of the 64 children are from 22 districts.

All children get breakfast in Bangalore South, Chikkodi, Chamarajanagar districts.

2. No Evening Snacks: Districts where students are not getting evening snacks after they return from home (minimum 8 students counted). Number of students in boxes Chitradurga (106), Bagalkote (75), Chikkamagaluru (75), Ramnagara (70), Koppal (69), Bellary (52), Kolar (49), Hassan (49), Madhugiri (41), Shimoga (39), Mandya (35), Vijayapur (34), Bangalore Rural (31), Chikkaballapura (30), Sirsi (29), Gadag (28), Bidar (28), Yadgir (28), Bangalore North (26), Chamarajnagar (24), Mysore (24), Raichur (23), Haveri (21), Belagavi (19), Tumkur (14) and Dharwad (9) - 26 districts account for 1028 out of 1070 students who do not get evening snacks/food immediately after school when they return home. Rest of the districts account for 42 students.
3. No Supper: 127 students, 2.5 per cent, report that they do not get supper. District-wise update (minimum 8 students reporting) – Bangalore South (17), Bagalkote (16), Koppal (11), Sirsi (10), Chikkaballapura (8),

5 districts account for 62 out of 127 children who do not get supper at night. Rest of the 65 children are in 23 districts. In Dharwad, Mandya, Udupi, Mysore, Chitradurga and Shimoga, all children get supper.

4. No Vegetables regularly [Minimum 8 children count]: In the following districts, students do not get vegetables regularly – [No district in count in Mysore division]; Dharwad (45), Koppal (31), Raichur (22), Sirsi (17), Haveri (15), Bagalkote (10), Chikkaballapura (9) – 7 districts. In Yadgir, Kalburgi, Bidar, Vijayapura, Tumkur, Shimoga, Kolar, Chitradurga, Bangalore North – 9 districts – all children get vegetables regularly. Rest of the 18 districts account for 55 children as 10 districts do not give vegetables regularly.
5. Districts which give pocket money: Except Mandya [less than 8 children], all other districts give pocket money to students in varying proportions. Children may eat junk food – no information.

4.21 ENROLMENTS and RETENTION in MDM Schools

(Tables in Annexure V)

[A] ENROLMENTS

1. There is a net loss of 127 students in 1 to 10 standards in the State from 2013-14 to 2017-18, 4 years average.
2. This net loss from 1 to 10 standards varies across 4 divisions, the loss/gain being – 257 students, loss of 257 students in Bengaluru division; - 97 in Belagavi division, loss of 97 students on an average; a gain of 151 students in Kalburgi division and a gain of 80 students in Mysuru division.
3. At the State level losses are observed between 1 to 10 in 2013-14 to 2014-15 and 2014-15 to 2015-16, the losses being 972 and 402 students. Thereafter there are gains between 2015-16 to 2016-17 and 2016-17 to 2017-18, the gains being 145 and 716 students.

Reasons for this loss/gain phenomena:

1. There is declining enrolments at LPS stage in the State, over the years, 4 years average decline being 2,480 students. This may be due to (i) population deceleration and (ii) RTE enrolments.
2. There is a gain at HPS and HS stages, across all divisions and the whole State. The gain is due to reducing rate of drop-outs at HPs and especially at secondary stage of schooling.
3. Reducing rate of drop-outs at HPS/HS may be due to several factors, one of them being the distribution/provision of milk and MDM. MDM has been there for quite a few years contributing steadily to enrolments and retention. Milk is a new addition and attraction.

4. Students and parents in their feedback on Milk/MDM – Values of milk / MDM have attributed highest priority to concentration for lessons/ learning and to improvement in learning. These ratings of students/parents may be recalled in this context.
5. Bottom-line is that Milk/MDM have contributed to increasing enrolments and retention especially at HPS and HS stages.
6. In a review of SDG, goal 4 of Karnataka's position, in a national context (NITI AYO), there has been a mention of sub-optimal Gross Enrolment Ratio (GER) at secondary stage. The State has set a target of 100 per cent enrolments at Secondary state along with 100 per cent retention by 2030. Milk/MDM will facilitate this by 2025.

[B] RETENTION

A perusal of data from 2013-14 to 2017-18 in the foregoing table reveals the following:

1. The loss is going down at LPS stage. It was 2884 (-2884) in 2013-14. It has come down to -2083 by 2017-18, in 4 years, 4 years average for the whole State is – 2480 – Reducing drop-out and increasing age-group enrolments over the years, in spite of population recession.
 2. Gains at HPS are from 1241 students between 2013-14 to 2014-15, to 1533 students by 2017-18, at the State level.
 3. Gains at HS stage are from – 972 students in 2013-14/2014-15 to + 716 students by 2017-18.
 4. Losses/gains at State level, trends at LPS/HPs/HS are uniformly observed all over the State, across all divisions.
 5. Gains are highest in Kalburgi division and then Mysore division.
 6. Gains/losses for division is noted. Per district average gain/loss is presented here. It is to be noted that districts vary in size in Bengaluru Urban (2 districts), Bijapur, Belagavi are large, for example. Kodagu, Udupi and Bidar are small. Averages are to be considered with this caution. Every division has small and big districts.
 7. Per District gains/losses 1 to 10 are – 23, - 11, + 25 and + 10 for Bengaluru, Belagavi, Kalburgi and Mysuru divisions respectively.
 8. Backward districts/divisions (Educationally backward) will have better growth rates.
- Growth Rates in Enrolments

Divisions	Bengaluru	Belagavi	Kalburgi	Mysuru	State
LPS	-3.5	-3.5	-2.28	-2.27	-3.08
HPS	+ 2.28	+ 3.10	+ 3.43	+ 3.35	+ 3.05
HS	+ 2.28	+ 2.45	+ 3.18	+ 2.85	+ 2.60

Note: Growth rates are 4 year averages.

ENROLMENTS: Sex and Social Composition of Students

Same trends are observed across divisions and the State in regard to sex and social composition of students. By and large, there are 52 boys to 48 girls everywhere.

Again, by and large, said composition reveals that the proportion of SC/ST/OBC/Minorities and general population is 20 : P 07 : 40 : 15 : 18 per cent in total enrolments. Proportions of SC/ST/OBC in enrolments are higher than their proportions in the general population (Census).

4.22 Impact of Milk / MDM: Quantitative Analysis

Learning Levels of Children

In relation to Milk/MDM Attendance

I. QUANTITATIVE ANALYSIS

One of the chief objectives of Milk/MDM scheme is to promote learning levels among students. It is hypothesized that attendance to Milk/MDM services, to school would ensure learning. Increasing attendance will lead to increasing performance/learning in school examinations. This assumption is tested using statistical analysis of average marks obtained by students of 515 schools, which is the sample of the study. Results of 5158 students in various subjects and overall/total performance across various standards of sample schools is used for the purpose along with their percentages of attendance. Subjects of study, subjected for analysis are: Kannada, English, Mathematics – all standards; EVS up to 5th standard (3rd to 5th); EVS 1 – Science and EVS 2 Social Studies, 6th to 9th standards. Results for two consecutive years 2016-17 and 2017-18 are considered.

Further, relationship between average attendance and learning attainments at X standard public examination (KSEEB) is examined. For this purpose data has been taken for 163 schools of the sample who have X standard of schooling. LPS and HPS schools are left out. Results for 2018-19 are considered, the latest year for which this data is available.

Correlation analysis and ‘t’ test analysis are adopted for statistical analysis. Correlation between attendance and learning achievements are examined. Spearman’s Rho Values are computed. ‘t’ tests are used to test the significance of the differences between mean achievements and attendance across the 4 divisions in the study. 6 ‘t’ values are possible across 4 divisions. Detailed analysis is given in Annexure No. I

II. RESULTS

1. Correlation values between average attendance and learning attainments of students (515 schools) are significant at 0.01 level, as per 2016-17 data.
2. Similar correlation values for the 2017-18 data are also positive and significant at 0.01 levels.

Hence, the null hypothesis set for the study: “There is no relationship between MDM and results (learning attainments) at school” has been rejected. Alternative hypothesis: “There is strong, positive and significant relationship between MDM attendance and school results” is accepted.

3. ‘t’ test analysis has revealed a significant F value. Hence, the proposition that variations in attendance of students (distribution) does not converge with variations in results (distribution) is accepted. There is a significant P value. Hence the hypothesis “Variations in average attendance (MDM) will make a difference in average results, is accepted.
4. Paired t-test analysis across 4 divisions for the years 2016-17 and 2017-18 reveal the following:

Variance in Attendance rates and results thereon across Bengaluru and Belagavi are not significant either at 0.01 or at 0.05 levels of significance. MDM has significance (attendance) for results at Bengaluru as compared to Belagavi. The same position is true between Bengaluru and Kalburgi. However, Bengaluru and Mysuru with differing distributions give similar results between attendance and results.

2017-18 Data: Improvements are observed in attendance (MDM attendance) in 2017-18 as against that of 2016-17, in Belgaum/Kalburgi divisions. It was already high in Bengaluru and Mysuru.

However, it is observed that improvements in MDM attendance are not reflected in improvement in results, especially in Belagavi, followed by Kalburgi.

4 divisions of State differ in correlation between MDM attendance and school results. High correlation is observed in Bengaluru division followed by Belagavi and later, at lower levels in Mysuru and Kalburgi, in this order.

III.

Out of sample 515 schools of the study only 163 schools send children to X public examination of KSEEB. Attendance data of these 163 schools are correlated with X results, through Person's and Spearman's techniques. Results are given for boys, girls and total students. Spearman's Rho values are tested for significance with 2 tailed tests.

Results of Analysis

Rho is positive and significant in Bengaluru division for total and boys at 0.01 level and for girls at 0.05 level. High attendance rates at Bengaluru division are correlated with good results. School attendances are not in tandem with X results in Kalburgi division. With high attendance results are poor in Kalburgi. Alternatively, with lower levels of attendance, X results are better in Belagavi and Mysore divisions.

IV Final insights on MDM attendance and school as well as X results.

1. 'r' values are positive everywhere though all values may not be statistically significant.
2. Positive and significant correlations are observed between school results and school attendance (Milk/MDM) and school results (3rd to 9th standards) across all subjects and overall scores, as revealed in Tables 1 and 2. However, this is not the case with X public examination results, except in Bengaluru division.
3. It is observed that learning in school and results in examination which are, by and large, a consequence of learning at school depend on several factors apart from (MDM) school attendance. High and significant correlations are not observed between the two variables. This is understandable. Without MDM, correlation would have been very much lower still.
4. High correlations are observed across school subjects and attendance at school level examinations which is not the case at X public examination. Difficulty values at school examinations is very much lower than that at X public examinations in most of the schools.
5. Learning concerns need to be addressed with higher levels of strictness at schools, right from lower levels in order to get better results at X public examination.
6. Milk/MDM are essential/necessary conditions in this direction, may not be sufficient conditions.

4.23 Impact of Milk/MDM (Contd.)

Quantitative Analysis: Health and Nutrition:

Milk/MDM programme has been able to reduce severe anaemia by 60.43 per cent during a 2 year reference period. Severe Anaemic Malnutrition, SAM is also reduced from 1257 cases in 2017-18 to 41 cases in 2019-20. A detailed analysis with data is given in annexure No. XVII.

4.24. Economics of Milk/MDM Scheme

Allocations and expenditures on milk/MDM scheme for the period 2013-14 to 2018-19, unit costs of the scheme for the 6 years period and 6 years average unit costs, share of Union and State governments for this scheme, cost-benefit analysis of the scheme are discussed under the heading: Economics of Milk/MDM Scheme.

Table 36: Milk/MDM Expenditures

[Rs. in Crores]

Year	Allocations	Releases	Releases as % of Allocations	Expenditures	Expenditures as % of Releases	Balance	No. of Beneficiaries (Lakhs)	Unit Costs (Amount in Rs)
2013-14	1000	1279	100+	1196	94	83	62.12	8.75
2014-15	1493	1424	95	1433	96	-	61.40	10.61
2015-16	1630	1501	92	1557	100+	-	61.40	11.52
2016-17	1642	1646	100+	1367	83	279	59.49	10.45
2017-18	1587	1587	100	1343	86	244	55.08	11.09
2018-19	1710	1710	100	1465	86	244	55.08	12.09
Total 6 years	9062	9147	100+	8361	91.40	-	354.57	10.68 (Av. 6 years)

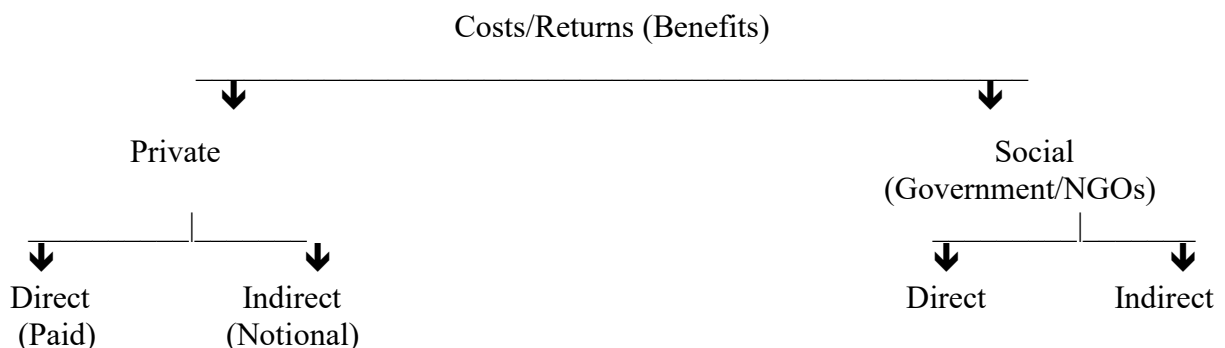
Source: SSA, GoK

- There have been no shortages in releases for given allocations in any single year between 2013-14. In fact, during a few years releases exceed allocations. This indicates that Milk/MDM schemes are **on priority** in the government calculus.

- Overall, for the 6 years period Milk/MDM expenditures constitute 91.40 per cent of releases. Demand for grants matches releases only after 2017-18, may be after SATS and digitization of demands.
- Overall, expenditures on Milk/MDM must be on the higher side than the data presented here as expenditures on Anganwadis are not counted here (plus others like Madrasa institutions).
- Unit costs, that is amount spent per child on milk/MDM per day, assuming 220 working days in a year range from Rs.8.75 in 2013-14 to Rs.12.09 in 2018-19. Average cost for 6 years is Rs.10.68 per child per day for an average of 59 lakh children per day, children who study in Government sector schools.
- As already discussed under section 1.1.3 in the report, the Union and State Governments share MDM, only MDM, not milk, expenditures on 60 : 40 ratio.

4.25. Cost-Benefit Analysis

Cost-Benefit analysis recognizes following types of costs and benefits (See John Vaizey: Costs of Education; Mark Blaug: Economics of Education; and Psacharopoulos: "Returns to Education"]



There are no private costs for Milk/MDM scheme. Social costs included are from the State in India – Union + States together. Direct costs in Milk/MDM are the expenditures/unit costs of the Government – on provisions, transportation, vegetables (contingency), fuel, processing (salary of cooks/ayahs). Indirect (social) costs are: labour inputs by educational officers/offices, school HT/ Teachers, Mothers' Committee (marginal), NGOs, stakeholders – Education/ Health Departments, KMF, FCI, ZP/TP/SDMC, Banks.

Benefits are of 2 types again – Private/Social; there are direct/indirect private benefits under both private/social benefits. [Returns normally refer to Capital gains in milk/MDM scheme]. There are several indirect benefits both under private/social categories. Regular

attendance, concentration for learning, improvements in learning levels, zeal for sports/games through fitness/energy, cognitive development, social mixing, love of school, pleasant memories of school (health, nutrition, food security, education] are the indirect private benefits. Among social benefits (indirect, not direct – incomes) are: promotion of health and nutrition – reduction of anaemia, stunting, increase in haemoglobin levels among children, satisfaction of parents, improvements in education system and honouring the right to food [illustrations only].

Analysis of data from this Study

Analysis of a 3 year reference data, 2017-18 to 2019-20, reveals a reduction of severe anaemia by 60.43 per cent among government school children, 6 to 18 years, who get benefits of Milk/MDM. Contribution is through services of calorific value food, proteins, minerals, vitamins, IFA tablets, de-worming tablets. SAM, severely acute malnutrition got reduced from 1257, incidence among students, in 2017-18 to 41 students in 2019-20.

High, positive and significant correlations are observed between school attendance and learning levels. Differentials across 4 divisions, as tested by ‘t’ test analyses, in the relationship between attendance and learning levels are not significant. This indicates the realization of equity, no regional disparities, in accrued benefits of Milk/MDM among 55 lakh children of 54,000 government schools in the State.

Qualitative analysis of feedback from primary stakeholders – the students and parents, reveals that milk/MDM, especially milk is very well received by them in their contributions to health, nutrition, education and specifically food security. Primary stakeholders are ‘Very happy’. In this way, Milk/MDM scheme is a run-away success even while there is considerable scope in logistics of implementation as discussed at various places/concerns in the report.

4.26 Regional Analysis

NFHS data on malnutrition refers to 2015-16. Data presented in this report refers to

- (i). NFHS data of 2019-20 and
- (ii). RBSK data provided by the DSERT for the year 2019-20. Here is data across regions, specifically the HK Region [See Anenxure XVII pp.317-320].
 - (a) There are 55 lakh children under MDM scheme. NFHS data does not specifically address 6 to 16 years which is the Milk/MDM catchment range, 1 to 10 standards

of schooling of this study [Anganwadi is outside the scope of ToR]. RBSK data covers 6 to 16 years range.

RBSK identified 10685 children who had severe anaemia, 0.19 percent of total students in 2017-18. Within a span of 2 years this figure got reduced to 4228 students, 0.076 percent; a **clear impact of milk/MDM services**.

It is surmised that anaemia will get reduced to zero well before 2020, the short term target year of SDG goals 3/4/10.

- (b) There is another parameter known as severely acute Malnutrition, SAM. The incidence of SAM in 2017-18, as per RBSK data was 1257 among 55 lakh children in 2017-18. It got reduced to 41 cases by 2019-20. **This can be definitely attributed to impact of Milk/MDM**
- (c) Severely Acute Malnutrition, SAM was in 19 out of 30 revenue districts (1257 cases) in 2017-18. Due to impact of Milk/MDM, is got confined to only 4 out of 30 revenue districts (41 cases).

4.26.1 Regional spread of SAM (RBSK data)

It is noted that out of 6 districts of HK region, viz; Bidar, Bellary, Kalburgi, Koppal, Raichur and Yadgiri, incidence of ‘anaemia’ in 2017-18 was noted in only one district.

2017-18: 1257 cases in 30 districts; 87 percent in 04 districts → [SAM] Mysuru (Mysore division). Davanagere and Bengaluru city (Bengaluru division), Bellary (Kalburgi division).

However, SAM got reduced to 41 cases by 2019-20, 97 percent reduction in 2 years, due to **clear impact of Milk/MDM scheme**.

Incidence of SAM in Bellary/HK region 2019-20 became zero. Other districts had very low incidence in 2017-18 and became zero by 2019-20, except in Kalaburgi district of HK region where 06 cases were reported (out of total 41 cases in state). Bagalkote (12) and Vijayapura (21) of Belgaum division reported a total of 33 out of 41 cases (over 80 percent of total cases in 2019-20). Bengaluru city reported 02 cases.

It is clear that out of 06 HK Division/region districts, it is only Kalburgi which reported 06 cases of SAM (out of total 41 cases in State).

There is no incidence of SAM in 2019-20 in Bidar, Yadgiri, Koppal, Raichur and Bellary.

Milk/MDM has deep impact on SAM in HK region as revealed in status in 2019-20 and improvements from 2017-18 to 2019-20 (RBSK data / DSERT)

Nutrition care under Milk/MDM scheme in the State has been quite effective so far. It will continue to be so and facilitate full realization of SDG goals 3/4/10 by 2020

5. Findings and Conclusions

A] 5.1 Programme:

Children are served milk in the morning as soon as they attend school and Mid-day, hot, fresh, cooked lunch in the afternoon, 55683 government sector schools serve 53.48 lakh students, of whom 17 percent students are served by NGOs and rest by the JD (MDM)/DoE/GoK. 64000 Anganawadi centres are also served under the MDM scheme.

5.1.1 Objectives of the Study:

Examination of coverage, supply chain and processes, adequacy of infrastructure facilities; study of impact of the programme on enrolments, retention, attendance, nutritional values, learning achievements, food security and relevance of the programme to target groups; management of MDM with other school/teaching functions at school; impact on health and nutrition as per parents and students' feedback; M&S practices of educational officers; community participation in conduct of MDM; compliance of schools to standard operating procedures (SoP) of the DoE; assessment of the relative performance of the districts in Milk/MDM management; constraints faced by the schools; suggestion of remedial measures based on needs in the field constitute the (objectives) foci of the study. In sum, bearing on Milk/MDM on education, health, nutrition and food security are the chief objectives of the study and the programme.

5.1.2 Methodology, Sample and plan of Analysis

Descriptive survey, documentary analysis of data, observation and case studies constitute the main methods of the study. A stratified random sample has been drawn for the study from 4 divisions/34 districts of the state at the rate of a minimum 15 schools (Total 515 schools) per district, 10 students per school (5 boys, 5 girls) 4 to 5 parents per school, 76 educational officers, 10 NGOs and Head teachers of all schools. Case studies of problem/well performing schools are also included.

5.1.3 Analysis is both quantitative and qualitative. Enrolments, retention, learning, attendance data are subjected to quantitative analysis, compliance to SoP data, ranking of districts on MDM performance are treated for qualitative analysis. Feedback from schools/parents/students/ NGOs/educational officers are subjected to quantitative analysis

BJ FINDINGS OF THE STUDY

5.2 IMPLEMENTATION

5.2.1. School Details

- 1 515 schools is the total sample of the study in the State. Across the 4 divisions, Bengaluru, Belagavi, Kalburgi and Mysuru, the distribution of 515 schools is 165 – 11 districts, 139 – 9 districts, 90 – 6 districts and 121 – 8 districts.
- 2 81.36 per cent of 515 schools are Government while the rest are government aided private schools. LPS: HPS: HS proportions are in 8.5 : 59.2 : 32.3, balance. 69.23 per cent schools are from rural areas. 90.87 per cent schools are co-educational.
- 3 Majority of schools are quite old and established. 73.05 per cent schools had begun before 1985, the year of adoption of National Education Policy (1986), while 18.16 per cent were begun before 2000 AD – the year of launching SSA (1986 to 2000). Of them, 6 per cent are before 1900. 80 per cent schools from rural areas are in GP villages. Most of the schools are in accessible localities.

5.2.2 MDM Infrastructure Facilities

- 1 A great majority of schools (88.54 per cent), have adequate kitchen - ware fire extinguisher (86.02); Kalburgi division is relatively better than the rest. Insufficiency is there with regard to eating plates and Drinking glasses.
- 2 Districts which need attention to eating plates/drinking glasses are Kolar, Bellary, Chamarajanagar, Mysuru, Haveri, Vijayapura, Kalburgi and Yadgiri (8 districts).
It is recalled that there are 15 schools in each of the 34 districts, by and large; Incidence is in 8 and more than 8 schools.

5.2.3. Day to day Implementation of MDM:

Display of Menu: As per FIs observation, 84.27 per cent schools display day's menu on notice board - as per guidelines of JD/MDM. Details are given – day/date/menu details by 75.92 per cent schools. Districts that need attention are – Bagalkote (6 schools), Dharwad (9), Bellary (6 schools), Chamarajnagara (10), Chikmagalur (10) – total 5 districts.

Cleaning of Kitchen - In 87.38 per cent schools, cooks clean the kitchen; Ayahs are not there. Only Bengaluru North (9 schools), Bengaluru South/Bagalkote (9 schools) and Bagalkote (7 schools) have Ayahs – minimum 7 schools update.

Cleaning of Eating Plates: In 66.21 per cent schools students clean their own eating plates. The incidence is quite high in all 8 districts of Mysore division

Water facility for MDM (for Cooking/Washing) 11 per cent schools report that they do not get sufficient water. Districts which face shortage are (count for higher than 20 per cent schools): Chikkaballapura (6 schools), Kolar and Bidar (4), Ramanagara/Haveri/Sirsi/Bellary (3 each).

How do they manage water? Schools get it from private suppliers (15 of 56), from villagers (6, free supply) or bring it from a distance (12). No response from 23.

Kitchen Garden: There are constraints in maintaining a kitchen garden just as there are advantages. 29 per cent schools maintain a KG, grow vegetables (102/150), leafy vegetables (89/150) and fruits (67/150); use them as supplements to MDM. Majority of these schools purchase vegetables from market, just as all others do.

It is reported from some schools that the Department had given a one-time grant of Rs.3,500/, subject to feasibility, for maintaining KG. Only 30 out of 150 schools had received it, as self-reported.

Using modern methods of horticulture, Department should promote KG in schools. Universities of Agricultural Sciences/Horticulture should be approached for assistance/support/guidance/hand-holding.

Involvement of NGOs (where they are not managing MDM): 203 out of 515 schools, nearly 40 per cent have been supported for MDM by NGOs. They have given eating plates (133 schools), drinking glasses (99), utensils (46), steady supply of fruits (46), vegetables (21).

A one-time grant Rs.5,000/- had been given by the Department for purchase of cookware for MDM. 71 per cent schools report the receipt of this grant. The receipt is low at 65.46 per cent schools of Belagavi division.

5.2.4 Maintenance of Registers:

- 1 Registers are useful in management of transparency and accountability of a programme – process management. As per SOP – Standard Operating Procedures (ToR) guidelines, MDM schools need to maintain following registers – MDM attendance, stock, taste,

tablets distribution, SOP compliance, supervision, five-point vigilance as well as a short video-clip of MDM process.

- 2 91.45 per cent schools maintain MDM attendance registers. Small LPS schools may not do it. There are not much inter-district/division variations in this practice.
- 3 87.38 per cent schools maintain MDM stock register. Belagavi Division record is lowest at 79.86 per cent schools.
- 4 94.17 per cent schools maintain Taste register. However, FIs observed that out of them (94.17 per cent) entries were found in 67.18 per cent schools. Very low compliance is from Kalburgi division (55.55 per cent schools).
- 5 JD/MDM has issued SOP guidelines to all MDM schools. A SOP register needs to be maintained by schools. Compliance to SOP is distinct from maintenance of SOP Register which is a Ready Reckoner of MDM management. 75.54 per cent schools maintain a SOP register. This is lowest at Mysuru division at 66.94 per cent.
- 6 Schools need to issue iron, vitamin and de-worming tablets to children, as per norms, and maintain a record of issues. 85.44 per cent schools do so. Compliance is low in Kalburgi division at 77.77 per cent.

Analysis:

- 1 Normative Compliance is examined/analysed elsewhere (HT tool and Students' tool).
- 2 HT/Nodal Teachers need to supervise several aspects of MDM daily and record their observations/efforts in Supervision Register. 68.54 per cent schools do so. There is low compliance in Kalburgi division at 57.77 per cent.
- 4 point-vigilance register is maintained in 53.33 per cent schools. Again, low compliance in Kalburgi division at 46.66 per cent schools.
- 3 Lowest compliance is with regard to video clip of MDM management – 18.06 per cent schools, low all over.
- 4 57 per cent schools maintain SMDC register. Without this register, it is difficult to know whether MDM concerns are addressed at SDMC meetings.

Maintenance of Registers in Districts:Management:

Classified list of districts on the number of registers they **do not** maintain.

Number of Registers NOT maintained by DISTRICTS

<u>All Eight:</u>	Raichur, Bagalkote (2 Districts)
<u>Seven:</u>	Bellary (One)
<u>Six:</u>	Kolar, Chikmagalur, Dharwad (Three)
<u>Five:</u>	Haveri, Kalburgi, Bidar, Koppal, Udupi, Chamarajanagara, Dakshina Kannada (7)
<u>Four:</u>	Tumkur, Chikkodi, Yadgiri, Davanagere, Madhugiri, Vijayapura, Kodagu, Mandya, Bengaluru North (9)
<u>Three:</u>	Chikkaballapura, Belgaum, Chitradurga, Shivamogga, Sirsi, Bengaluru South, Mysuru, Ramanagara (8).
<u>Two:</u>	Bengaluru Rural, Uttara Kannada, Gadag, Hassan (4 districts).

TOTAL 34 DISTRICTS

In the body of the report, districts which need serious attention of the Department in regard to maintenance of registers are [names of registers] identified (3 out of 34 districts, Chapter 4).

5.2.5> MDM Contingency Amount

Department provides/gives contingency amount to schools for MDM management – to purchase fuel, replace gas cylinders, buy vegetables/sambar powder. Here is a summary update on sample schools (515) of the study.

87 per cent schools receive this amount. 84 per cent have opened a bank account for the purpose and receive by DBT. 28.50 per cent schools report delays in receipt of this amount. Delay is highest for Bengaluru Division and lowest in Mysuru division.

84 per cent report that the amount received is adequate for their needs.

Districts which do not receive this grant (8 or more schools out of 15) > Bengaluru North (11) and Dharwad (13 schools). 18 out of 34 districts report delays in receipt. 2 districts report that amount is not sufficient – Kalburgi and Kodagu.

5.3 Findings on SOP Guidelines- Compliance to M and S guidelines/DoE

5.3.1. Rotation System

Schools are directed to appoint one teacher of the school as a ‘Nodal Teacher’ for the day’s supervision of MDM/Milk services. The Nodal teachers will be changed every day on rotation basis. 90 per cent schools follow this system. In 9 out of 34 districts 3 or more than 3 schools out of total 15 schools do not follow this guideline, 20 per cent schools do not comply with. Davanagere, Kolar, Madhugiri, Bagalkote, Gadag, Sirsi, Bellary, Koppal and Chamarajanagar are these 9 districts.

87 per cent schools also maintain a rotation time-table. It is not by oral communication. Kolar, Tumkur, Haveri, Bellary, Chikmagalur, Dakshina Kannada, Kodagu (7 districts) do not have time-table (3 and more than 3 schools/ 20 per cent).

In 25 per cent schools teachers were observed near kitchen during school hours – outside lunch hours.

In 88.74 per cent schools, nodal teachers had monitored cleanliness of Kitchen in the morning, as expected.

MDM affects teaching duties in Udupi, Mysuru, Mandya, Gadag, Belagavi, Bengaluru, Vijayapura, Bengaluru South and Bengaluru Rural districts (9 districts).

5.3.2. Concerns of Hygiene

7.7 per cent cooks carry skin problems (as observed). Medical check-up of cooks is not carried out in 21.36 per cent schools. 33.83 per cent schools do not maintain health register of cooks.

In 7 districts, there is no medical check-up (minimum 6 schools), no health register (23/34 districts) and Dermot problems in 7 districts (See main report).

Schools are expected to keep a fire extinguisher/sand or water in a bucket near the Kitchen. 81.55 per cent schools comply with this guideline. This is not complied with (minimum 4 schools) in Bengaluru Rural, Maiduguri, Bagalkote (9 Schools), Dharwad (8 schools), Gadag, Bellary (7), Bidar/Kalburgi/Chikmagalur (8 schools out of 15) – total 9 districts.

5.3.3. Cleanliness Practices

As per SOP guidelines, kitchen has to be cleaned daily. There should not be cob-webs in ceiling, lizards on the walls, cockroaches on the floor; walls should not be dirty and water storing place should be clean/dry.

89 per cent schools clean the kitchen daily. Cob-webs were observed in Ceiling (6.21 per cent schools), walls were dirty (11.84 per cent), lizards on walls (2.52 per cent), cockroaches on floor (only 9 schools), water storing place was not clean (20.58 per cent schools).

Both lizards/cockroaches observed (minimum 3 schools, 20 per cent) in Bagalkote, Belgaum, Bellary, Gadag, Chamarajanagara (5 districts).

Lizards only (additional 5 districts).

Cockroaches only (2 more districts).

There are 6 hygienic concerns listed herein – cleanliness practices. Bagalkote is a defaulter on 5 out of 6 counts (minimum 20 schools). Belgaum and Bellary default on 4 out of 6 counts. Bengaluru North, Haveri, Gadag and Chamarajanagara default on 3 out of 6 counts.

Analysis: Cleanliness concerns are highly significant. If something goes wrong, children fall sick and need to be hospitalized. This has happened here and there in the past, across the State. Basically, the Government will be unhappy about it. Further, media points the Department in bad light. Hence, M & S officers need to bestow extra attention on these concerns.

5.3.4. Management of Store Room

- 1 SOP guidelines specify that the provisions of daily use and tablets need to be stored as per FEFO method – First Expiry, First out. Materials with longer shelf life will get stored at the back and those with earlier shelf life will be stored in front and used first. Further, date of expiry should be prominently marked on the storage container using a Marker pen.
- 2 By and large, FEFO is complied with by a large majority of schools. Compliance varies with materials. FEFO for oil (86.60 per cent schools), salt (76.31 per cent), milk powder (76.12 per cent). Compliance for Sambar powder, vegetables is very low (8.54 per cent).
- 3 Compliance for tablets is in 76.31 per cent schools. Only 60 per cent schools have marked expiry date on the storage boxes.

Districts:

- 1 Food boxes are marked with market pen in 30 out of 34 districts. Bengaluru South, Davanagere, Kodagu, Sirsi are exceptions (minimum 20 per cent non-compliance).
- 2 Milk powder is not stored as per FEFO in 23 districts, tablets in 16 districts, salt in 21 districts.

HTs, Nodal teachers, M & S Officers need to be re-sensitised about significance of FEFO compliance in schools.

5.3.5.> Monitoring by NODAL TEACHERS

Nodal teachers need to (a) oversee that Cooks wear apron, (b) Kitchen windows are kept open, (c) Gas cylinder is located at a safe distance, (d) MDM materials have sufficient shelf life, (e) taste food and record their feedback, (f) students wash hands before/after food, (g) no child near kitchen, (h) kitchen is cleaned – before and after cooking, (i) kitchen-ware is cleaned before cooking, (j) vegetables washed in salt/turmeric and (k) containers are closed with lids during cooking and before service of MDM.

If there is no compliance on any of these 11 recommended practices, it is a reflection on the nodal teachers' monitoring performance. Percentages of compliance is as follows: (a) 80.39 per cent, Kalburgi division – low at 63.33 per cent; (b) 93 per cent compliance; (c) 90.49 per cent compliance; (d) 81.94 per cent compliance, (e) In 85.63 per cent schools, teachers' feedback recorded – as observed; districts without taste register or no feedback record (minimum 20 per cent schools) are: Kodagu, Yadgir, Bidar, Chikmagalur (7 schools), Bellary (11 out of 15 schools), Haveri, Kolar and Chikkaballapura; (f) 91.84 per cent schools comply; (g) children were observed to be near kitchen in 21.94 per cent schools; (h) 89.13 per cent schools clean kitchen before cooking; however, only 70.87 per cent clean after cooking; Districts where post cooking cleaning does not happen are (minimum 6 out of 15 schools); Bengaluru Rural, Bengaluru South, Mdhugiri, Dharwad, Uttara Kannada, Vijayapura, Bellary (8), Kalburgi, Raichur, Chikmagalur and Kodagu (9 schools). In Bellary, kitchen is not cleaned either before or after cooking (6 schools). It is swiping, not just sweeping which is referred to here. (i) 87.57 per cent schools clean kitchen-ware before use; (j) 76.50 per cent schools wash vegetables with salt/turmeric water before use; (k) 84.72 per cent schools close containers where food is cooked/stored with lids.

Further, in 7.93 schools, rice/pulses are not cleaned with water before use (minimum 3 schools).

FINDINGS ACROSS DISTRICTS

There are 13 specifications of various cleaning requirements. A maximum of 6 violations are observed across districts.

One - Violation only – Davanagere, Sirsi, Chikkodi, Uttara Kannada, Tumkur, Madhugiri, Vijayapura and Yadgiri.

Two - Violations – Belagavi, Bidar, Chamarajanagara, Dakshina Kannada, Kolar, Bengaluru Rural, Bagalkote, Raichur and Haveri.

Three Violations – Kalburgi, Bagalkote, , Bengaluru North, Koppal, Bellary, Chikmagalur.

Four Violations – No Entries

Five Violations – Chikkaballapura, Bellary, Gadag and Kodagu.

Six Violations – Dharwad

M and S needs to be more intensive in districts with more than 2 violations. Nature of violations also matter.

5.3.6 Monitoring of Cooking/Serving food (continued)

Precautions suggested/recommended, so far, as per SOP are for preparatory activities. Precautions also need to be taken while cooking and while serving food. They are: (a) foam that gets gathered while cooking rice/pulses need to be decanted/cleaned, (b) places where food is to be served needs to be cleaned; (c) water for drinking (always) needs to be potable; (d) quality of rice is to be examined by HT/nodal teachers before use; (e) food is to be served in small containers; (f) Teachers need to be monitor MDM food service to children; (g) Notes regarding all this are to be recorded in 5 point scale register.

Here is an account of compliance on all these 7 specifications:

- 1 Foam is cleaned in 89.13 per cent schools. It is not so (minimum 6 schools) in Bengaluru North, Dharwad and Bellary.
- 2 Food served in clean places in 86.02 per cent schools; exceptions (minimum 6 schools) are Bellary, Bengaluru South, Raichur, Chikmagalur.
- 3 Potable water in 92.82 per cent schools. Exceptions are Bengaluru South and Bellary.

- 4 In only 62.52 per cent schools, quality of rice is examined before it is given to cooks. Low compliance all over the State.
- 5 Food is served in small containers in 100 per cent schools.
- 6 Teachers monitor MDM service in 89.96 per cent schools. Exceptions are Bellary, Raichur and Kolar.
- 7 There is low compliance to recording of notes on 5 point scale in 10 districts.

All districts in general, Raichur and Bellary in particular, need resensitisation on cooking/serving practices as per SOP guidelines.

5.3.7> Monitoring Activities : Information and Communication

Head Teacher has several monitoring responsibilities.

- 1 HT should send SMS to higher officers and NIC. 87.57 per cent HTs do it; in 451 out of 515 schools. Exceptions (minimum 3 schools, 20 per cent) are Belgaum, Dharwad, Bellary, Bengaluru North, Ramanagara, Bagalkote, Sirsi, Uttara Kannada, Koppal and Chikmagalur (10 districts). However, only 79.03 per cent HTs remember Toll Free Number (15544).
- 2 HTs need to give day's (morning) attendance note to cooks so that they prepare so much food (per head count) as is needed for the day's students attendance. 92.43 per cent HTs comply. Exceptions (minimum 3 schools, No) are Belgaum, Dharwad, Bellary, Koppal and Chikmagalur (5 districts). MDM attendance and school attendance match in 93 per cent schools. GOOD.
- 3 In only 66.60 per cent schools, Mothers' Committee (MC) members visit school during lunch time. In 24 out of 34 districts (minimum 3 schools, 20 per cent, 'No' response), they do not visit.
- 4 In 19.81 per cent schools, MDM cuts into afternoon classes. It happens (minimum 20 per cent schools), in 16 out of 34 districts.

District wise position: Chikmagalur does not do well on 5 out of 6 variables (under a/b/c/d) considered. Dharwad, Bellary and Koppal are sub-optimal on 4 of 6 variables; 4 districts on 3 variables – Bagalkote, Sirsi, Dakshina Kannada, Kodagu; 11 districts on 2 variables and another 11 districts on one variable.

- 1 An important duty of HT is to monitor MDM and School attendance harmony. 93 percent schools are good in this. There will be **no 'wastage'**. They need to involve MC members, by motivating them, in MDM supervision.
- 2 HTs should be given freedom to suggest school working hours in such a way that MDM does not cut into teaching time in the afternoon. Decentralised management is always good.

5.3.8 Health Care

- 1 Health Cards are issued to every child in 92.23 per cent schools, 475 out of 515 schools. If the current year, year of field work 2019-20 and last year 2018-19, (as the current academic year is not yet completed) are counted, out of 475 schools, entries are observed in health cards in 403 schools, 78.25 per cent of total 515 schools.
- 2 Folic Acid (Iron Tablets for promoting blood count) is issued in 87.96 per cent schools, 453 out of 515 schools. However, it is 'correctly' issued (once in a week), in 256 schools, in 49.71 per cent schools.
- 3 Vitamin A tablets are issued in 87.96 per cent schools, 436 out of 515 schools. However, it is correctly issued (once in 6 months), in 247/515 schools, 47.96 per cent schools.
- 4 De-worming Tablets are issued by 90.49 per cent schools, 466 out of 515 schools. But it is correctly issued (once in 6 months) in 348 out of 515 schools, 67.57 per cent schools.

Concerns: Wherever it is issued, normative distribution is observed only in a sub-set of schools. Violation of norms is highest in Belagavi division (21.32 per cent) schools in regard to issue of folic acid; in Kalburgi division (35.59 per cent) in regard to vitamin A tablets and in Belagavi division again (32.35 per cent) as regards de-worming tablets.

- 5 50.0 per cent children in State do not receive folic acid as per norms. This proportion in case of Vitamin A is 52 per cent. It is 32 per cent in case of De-Worming tablets.
- 6 A re-orientation of HTs/Teachers is needed on health care concerns of MDM at CRP meetings. Sensitisation of officers is needed at higher levels.

5.4 MDM Supervision in Schools: Adequacy, Quality and Timelines of Food supply:

1. (a) Quality of Food grains, (b) Kitchen Hygiene, (c) Potability of Water and (d) performance of duties by cooking staff, need supervision.

HT/Nodal Teachers/Cooks/MC members are empowered to supervise a/b/c. All these aspects are jointly looked into regularly by the HT/Nodal Teachers. Involvement of MC members is low.

2. Adequacy of Supply of MDM Materials: Items considered are (a) Rice, (b) Pulses, (c) Oil, (d) Iodized Salt, (e) Milk Powder, (f) Vitamin A Tablets, (g) Do-Worming Tablets, (h) Iron Tablets, (i) Gas Supply, (j) Firewood where needed.

Adequacy, as reported (adequate) is: (a) 81.75 per cent, (b) 80.34 per cent, (c) 80.39 per cent, (d) 63.24 per cent, (e) 79.03 per cent, (f) 73.60, (g)78.83, (h) 73.40, (i) 73.01, and (j) 46.80 per cent.

Way-out:

- 1 The Block Office needs to oversee that there is no short supply of food materials. CEO/ZP also needs to note this. Department should bring this to CEOs attention. Vigilance needs to be intensified.
- 2 Education and Health Departments need to co-ordinate for adequate supplies with the help of CEO/ZP. JD/MDM needs to reactivate the processes.
- 3 Gas supply is a local problem. State Government may sort it out with ONGC, Karnataka Unit.
- 4 Districts report on short supply of all 9 items listed here (leave out firewood). They are: Shivamogga, Vijayapura, Dakshina Kannada, Dharwad and Haveri. Gadag district reports on 8 items, except milk powder. 3 districts viz., Bengaluru North, Chamarajanagara and Chitradurga face shortage of 7 items.
- 5 Information on item-wise shortages have to be built up from school level, through CRP/BRP/BEO/ADPI (MDM)/DDPI/ to CEO, SP and DHO/CEO, ZP.

Quality of Food Supplies

- 1 Feedback from HTs schools on quantity of food materials – rice, pulses, oil, iodized salt, milk powder is collected by asking them to rate the materials as – Good/ G, Satisfactory/S and Poor/P. Here is data.
- 2 99.61 per cent schools report on the ‘good’ quality of rice. 98.25 per cent report so on ‘pulses’. 99.61 per cent report ‘oil’ as ‘good’. 98.64 per cent report that salt is ‘good’, 99.61 per cent (in State) report that milk powder is ‘good’.

By and large, quality of all food supplies is ‘**good**’. Very heartening feedback.

Timeliness of Supply: There is a 3 fold classification of feedback: ‘always’ on time; ‘by and large’ on time; ‘not at all’ timely. Here is a feedback. Items covered are: Rice, Pulses, Oil, Salt, Milk Powder, Folic acid, Vitamin A, De-worming tablets.

Almost all schools have reported that the supply is ‘always’ or ‘by and large’ timely. Only a few schools, exceptions, have reported on delays in supply, can be ignored. It is not a general phenomenon.

13 districts (14 schools) report on delay in getting salt. This is the maximum incidence. Chamarajanagara and Bengaluru have reported delay in regard to 8 items (total 20 schools).

Quantitative analysis of compliance to SoP guidelines reveals that it is in the range of 74 to 82 percent, state average being 76.77 percent

5.5 Problems in MDM Management – Feedback from HTs:

- 1 11 per cent schools face water problem, 55 out of 515 schools. They buy water in 37 schools. Department reimburses costs for 18 schools. water access is a minor problem.
- 2 Safety and security of MDM materials is a concern. 66 schools face threat of theft (feel so) while 28 schools experience it; 26/28 reported to police. 167/515, one third schools expressed need for security guards on contract basis, local hiring. It needs to be noted that majority of schools do not have a compound (wall).
- 3 Maintenance of Hygiene is a concern. Only 28.54 per cent schools have Ayahs – MDM maid servants. In 38.96 per cent schools, students – senior girl students, clean premises after MDM service. Can Ayahs be given on local hiring/contract basis to every school?

5.6 M & S of NGOs in MDM

a) Role of NGOs in MDM

- 1 **MDM** has a long and chequered history of nearly 100 years. It got systematized in the 21st Century. It is one of the largest public welfare (Right to Food) programmes of the world in India and Karnataka State.

MDM serves 1.14 million schools and 97.8 million children in India (2016-17). In Karnataka, MDM serves 5.35 million children of 55,307 schools (LPS + HPS + HS), of Government sector – Government + Aided + Corporation – schools (2016-17).

Non-Government organizations, NGOs, partake 0.931 million (9.31 lakhs) of this load from 5,587 schools. They are 71 in number (66 count, as 5 of them out of 71 serve in more than one district) and work / serve in 14 districts.

- 2 One single NGO, AkshayaPatra Foundation takes the weight of 1199 out of 2072 schools in Bangalore City, 57.8 per cent of the total in the City. Adanya Chetana (275 schools) and Annapoorna Trust (111 schools) are other leading NGOs of the City. AkshayaPatra Foundation is a national level NGO. It serves 1.8 million children in 19,039 schools across 12 States and 2 Union Territories.
- 3 This study addresses the quality of service of NGOs in Karnataka State.

b) Coverage in the study: 10 NGOs across 6 districts of the State constitute the sample of this study. They serve 2410 schools and 3.73 lakh students. 9 NGOs maintain a Central Kitchen. 7 kilometres is the average radius within which they serve schools. 4 of them travel a maximum of 20 kilometres to the last school. 2 NGOs have to go up to 60 kilometres.

All 09 NGOs report that though they serve through a Central Kitchen, and they reach schools in time.

A better alternative would be, let the NGOs maintain more than 1 central kitchen. Distance between the kitchen and schools served should not cross 20 kilometres.

Critique: The 4th JRM/MHRD observed (2015 report) that time gap between food supply to schools by NGOs and time of consumption by students is very wide.

Even this study has observed such time gaps in many schools. Concept of ‘hot’ cooked meal loses its sheen. Department has to address this concern. There are 2 options – Let NGOs manage MDM in schools with a school kitchen or let them locate nodal central

kitchens within a radius of 20 Kms and supply 15 minutes before lunch time through decentralised transport.

c) Functioning of NGOs: All NGOs report that they strictly adhere to the Departments' time-table in preparation and service of MDM to schools. It was observed to be so on the day of visit to schools where NGOs served.

- 1 NGOs do not involve students for distribution of MDM anywhere. This is good. Staff of NGOs (6 NGOs) or school staff (4 NGOs) serve food. In small schools, school staff can assist. Four NGOs take the assistance of MC Mothers Committee Members for serving food. They may mean MC members when they say school staff. NGOs may have an unwritten understanding with MC members.
- 2 All 10 NGOs also manage milk distribution in schools. In some schools, small schools, NGOs supply milk powder and school prepares milk and distributes it to students.
- 3 All NGOs report that they get cooperation from all the schools that they serve.

d) NGOs technique to assess demand for MDM

9 out of 10 NGOs use average attendance of the school for the previous month. One NGO in Belagavi district gets SMS daily from HT, of the day's attendance.

Concern: SMS from HT is a cost-effective option. But NGOs may not use it as their Central Kitchen begins work early in the morning well before the school begins for the day. Previous day's attendance would be a better option. NGOs may be advised on this.

e) Reimbursement of MDM expenses to NGOs

All NGOs have opened a separate bank account for receiving MDM reimbursements from the Government. They receive it through DBT. 05 of them report that there were delays in getting reimbursements. 2 of them wrote to Government and matter improved thereafter. Delays happened in Bengaluru North, Dharwad, Kalburgi and Udupi.

Adequacy of Reimbursements on Unit Cost Basis:

8 out of 10 report that unit cost structure of the Government/Department is sufficient/acceptable to them. 2 NGOs report that they spend more. This extra expenditure is on vegetables.

Unit cost includes cost of materials/processing/transportation. Prices of food items – cereals, pulses, vegetables vary across regions. Further, some NGOs have to supply food

to schools at long distances. That is how unit cost exceeds Department's calculus. None of the NGOs save on reimbursement, as reported.

f) MDM Audit

- 1 NGOs get their annual MDM accounts audited by their own auditors. 2 of them, from Yadgir district, get it done by Government auditors.
- 2 Transparency and Accountability are 2 major national level issues in NGO engagements in development initiatives. This will be so as there is no national NGO policy. Hence, the present arrangement needs to be accepted.
- 3 NGOs report that they do not experience any problems of logistics in MDM management – language, safety, local cooperation etc.
- 4 NGOs experience problems of wastage of MDM food at school. They distribute it to poor people, whenever there is wastage.

g) NGO Attitude to MDM:

All the NGOs report that they are 'Very Happy' to involve themselves with the MDM/Milk programme in the State.

5.7 M and S from Departmental Officers – CRPs, BRP/BEOs/ADPI (MDM)

As per ToR, a total of 76 officers are met for In-Depth Interviews – IDIs, to get their feedback on implementation of MDM in the State.

There are 28 CRPs in the sample, across 19 districts of all 4 divisions. Average number of schools per CRP is 15. It is 10 in Bengaluru division, 16 each in Kalburgi/Mysuru divisions and 15 in Belagavi division, in this sample.

a) MDM/Milk Coverage:

19 out of 28 CRPs report that all schools in their jurisdiction get MDM. 98 schools in 9 districts do not get / do not want MDM (25 per cent schools). It is to be noted that Department gives MDM to both government and aided schools. Districts are Belagavi (24 schools), Bellary (20), Raichur (15), Yadgir (13), Vijayapura (12), Chitradurga (11), Bagalkote (02), and Udupi (01). It is also noted that in some places, religious Mattahs give MDM.

However, 26 out of 28 CRPs report that all schools in their jurisdiction are served milk. In 2 districts, a few schools do not get/accept milk.

26 schools do not get milk service out of 98 schools who do not get MDM. Other 72 schools get milk. There are a total of 410 schools under 28 CRPs.

b) CRPs and Monitoring Milk

19 out of 28 CRPs monitor milk distribution – ‘always’, 09 do so, ‘once in a way’. 26 CRPs visit High Schools also. 18 CRPs get cooperation from all aided schools, 2 report ‘most of them’ and 8 report ‘only a few of them’.

What needs to be monitored in milk distribution? Is there a system in distribution? - served in place of assembly in order of standards beginning from first through fifth to eighth and tenth. Is it served in their classes from 1st to 10th? Will all children get it? Who serves milk – cooks, ayahs (if they are there), school staff, senior students? Is milk served in full glass? Are all glasses are of same size? [Note that unlike MDM, all children, irrespective of age and standards, are to be served same quantity of milk). Will there be spillage of milk; will milk be consumed by all children in full or will there be wastage? Do nodal teachers/HT

monitor complete consumption of full glass? How is wastage, if any, of milk disposed off? What will children do with used glasses? Who cleans them? Are they kept at some place/places? How do children wipe their mouth after consuming milk, especially small kids? Will there be glow on the faces of children (at least some children, younger ones) after they consume milk? Like this, there are variety of concerns in monitoring of milk distribution/service programme in schools.

6 CRPs out of 28 do not monitor, as per self-reports, milk service. This is because they may not visit schools at the beginning of the day.

CRPs need to be sensitized about the need to monitor milk service and the diverse components to be monitored.

CRPs have variety of functions, duties, responsibilities. It is a complex job. Still, it is better if they do simple checking of milk distribution.

c) Cooperation of Aided Schools:

18 CRPs get full cooperation from aided schools. 4 CRPs in Bengaluru Division – Bengaluru Urban, Bengaluru Rural, Chitradurga and Ramanagara – do not get cooperation from aided schools. 2 CRPs do not visit High Schools due to official status considerations.

d) CRPs and MDM/Milk Monitoring:

Priorities in M & S work of 28 is as follows: (a) Checking parity between school attendance and MDM attendance (25 CRPs), Cleanliness of Kitchen (23), Taste of MDM Food (20), MDM Display Board (20), Upkeep of Cooks (18), Social Integration during MDM time (17), Nodal Teachers System (15), FEFO compliance (5), FEFO is the last and low priority among CRPs.

The foregoing analysis should be useful to JD (MDM)/DSERT and DIETS in review of content of training of CRPs in a cascade mode.

e) SMS Practices and CRPs

25 out of 28 CRPs report that they receive SMS from HTs on day's MDM attendance daily. 3 CRPs report that they receive it 'once in a way'. They are from Haveri, Uttara Kannada and Udupi districts, one CRP each.

Even while 25 out of 28 CRPs receive SMS from HTs daily, still 05 of them do not receive it from all schools of their jurisdiction regularly. These 5 districts are: Mandya, Chamarajanagara, Bagalkote, Uttara Kannada and Hassan.

In total there is a problem regarding SMS to CRPs from HTs in 7 districts – irregular messages in 3 districts; non-compliance of a few schools in 441 districts; UK is in both lists.

f) CRPs and Community Connect

Problems of the communities/parents around the schools get on surface in SDMCMC meetings. CRPs need to attend them at their convenience. 24 out of 28 CRPs have attended SDMC meetings and 18 CRPs have attended MC meetings.

Districts where they have not attended MC meetings are: Bellari, Bengaluru Urban, Bengaluru Rural, Bidar, Chitradurga, Dharwad, Raichur, UK, Vijayapura and Yadgir – 9 districts, assuming that MC meetings have taken place everywhere.

None of the CRPs who have attended SDMC/MC meetings have received any complaints. They report that there are no ‘Problem’ schools. 19 out of 28 CRPs referred to commendable practices in MDM in schools of their jurisdiction – ‘Model’ schools. List has been taken – useful for selection for CASE STUDIES. DISE code taken.

6.19.6> CRPs were asked to report on any appreciations/concerns in their mind voluntarily. Apart from general appreciations of MDM, they were specific regarding improvement of attendance (1 CRP) and higher concentration in learning – teaching transactions among students (ICRP).

These are appreciations and suggestions from ‘foot soldiers’ of the MDM programme.

They did not identify any significant problems.

However, among their suggestions to improve MDM, following can be mentioned – serve horse gram/green gram/black gram (sprouted grams), in Sambhar apart from Turdhal; give Badam powder (ICRP); appoint ayahs (ICRP); appoint clerks for a cluster of schools for MDM accounting (ICRP).

5.8 BRPs/BEOs

a) Coverage: 23 BRPs/BEOs have been met for IDIs from 20 out of 34 districts, as per ToR.

There will be 6 BRPs in BEO Office of a taluk. One Block Officer, on an average, has 37 schools for M & S work in his/her jurisdiction. BRPs may engage in field visits for 15 days in a month. They have several other functions at block office including trainings; S/HPS/HS will be under their jurisdiction. There are reported vacancies of CRPs in 12 districts, in 13 clusters, who to BRPs. Other field officers at BEO Office, substitute (their work) for them. Here is data of their MDM related work.

BRPs (represent BEOs) receive feedback from CRPs regularly on MDM/Milk programme. There is no issue.

They also forward it after checking to ADPI (MDM) regularly – daily or weekly.

b) M & S Visits of BRPs

1. 14 out of 23 BRPs visit 21 to 30 per cent schools every month. 08 of them visit 11 to 20 per cent schools. Only one of them visits 10 and < 10 per cent schools, as per their self-report.
2. 21 out of 23 BRPs monitor Milk/MDM programme during their visit to schools. 16 of 21 do it 'always'. 2 BRPs from Haveri and Chikmagalur, one each, self-report that they do not monitor milk/MDM.
3. 14 out of 23 BRPs report that NGOs in their jurisdiction keep them informed about the DISE codes of schools they serve, day's attendance for milk/MDM, problem (if any), regularly (inform). No issues. In case of other 09 BRPs, there may be no NGOs in their jurisdiction.
4. Include M & S of milk/MDM in job chart of BRPs as a mandated duty, if it is not already included.

c) Monitoring Functions of BRPs: What do BRPs monitor? This was not a structured question. Significant responses are: attendance, upkeep of cooks, nodal teachers' location and presence, MDM display board, kitchen hygiene, taste of food, social integration and FEFO compliance. Not all will minor all these aspects. They are mentioned by one or the other BRP.

M & S concerns of Milk/MDM are left to the choice of BRPs. There is no standard practice. For instance, only 4 out of 23 BRPs are concerned about FEFO.

DSERT may arrive at a consensus in consultation with JD/MDM on the priorities, if any, on the M & S functions of BRPs; include them in BRP training at DIETs; even while comprehensiveness in M & S – no priorities – is ideal.

d) RPs and Community Connect: 21 out of 23 BRPs have attended SDMC meetings; 18 have attended MC meetings. This is good. 10 BRPs have received complaints at these meetings. Complaints are related to selection and behavior of cooks. Government policy is to give preference to SC/ST in selection of Cooks.

e) Coordination of Supplies to Schools: 20 out of 23 BRPs report that they received ‘adequate’ supplies of tablets for ‘all’ schools. 21 got tablets ‘in time’. However, only 12 were satisfied with sufficiency of ‘shelf life’ of tablets. 21 out of 23 have reported on insufficient shelf life of tablets to DHOs in the past.

Belagavi, Haveri and Chikmagalur districts did not get tablets (for distribution to schools) in adequate quantity and in time.

CEO of ZP needs to direct the DHOs to be watchful in future in regard to 3 aspects of health care of MDM programme – adequacy, timeliness and shelf life of tablets.

f) Demand Estimation in MDM/Milk

09 BRPs get information directly from schools; 14 get it through CRPs; 05 out of 23 gave ‘no response’. Dharwad, Chikkodi and Haveri depend on average attendance of previous month. Multiple options are possible for estimation of demand. 4 BRPs also consult ADPI/MDM.

BRPs are not clear about demand estimation techniques. JD/MDM, DSERT need to give clear cut guidelines and sensitize them.

g) MDM/Milk as an Item of Agenda in monthly meetings of BEOs with CRPs

15 BRPs report that MDM/Milk is a ‘regular’ agenda item for review in BEO meeting of CRPs. It is ‘usually’ so with 6 BEOs and ‘rarely’ so with 2 BEOs.

Dharwad and Raichur ‘rarely’ review MDM/Milk in BEO meetings, in their districts.

h) ‘Model’ Schools and ‘Other’ schools

2 BRPs, one each from Dharwad and Raichur districts mentioned ‘problem’ schools. In 12 districts, ‘model’ schools were mentioned. Their DISE Codes have been collected for purposes of CASE STUDIES.

None of the BRPs had any issue of concern to report on their own to the IDI teams.

5.9 ADPIs OF MDM

a) Coverage: There are 25 ADPIs, MDM in the sample from 20 districts, as per ToR.

There will be one ADPI for MDM/Milk, BEO rank, at block office working under DDPI for coordination with CEO/ZP in planning, monitoring, review of MDM/Milk programme in the district.

ADPIs get MDM/Milk, M & S reports, from HTs/Nodal Teachers, CRPs, BRP/BEOs and other Officers who visit schools as well as from DIET faculty.

Convergence of M & S functions of Officers for use of ADPI (MDM).

91 to 100 per cent schools in their jurisdiction are visited by 22 out of 28 CRPs who give their visit reports to ADPI. Other 6 visit 51 to 80 per cent schools and send reports.

Only 14 RPs visit 21 to 30 per cent schools in their jurisdiction and send reports to ADPIs. 8 of them visit 11 to 20 per cent schools.

Even among ADPIs, only 10 out of 25 can visit 21 to 30 per cent schools.

By and large, dependence has to be on CRPs for M & S of MDM. BRPs/ADPIs can only cross-check and oversee. Hence, M & S by CRPs needs to be strengthened/tightened.

16964 schools are under the jurisdiction of 25 ADPIs of the IDI sample. NGO served schools may also be there. Yes, all ADPIs have NGO served schools. Total 8 ADPIs do not have NGOs, out of 25 total sample.

14 out of 17 ADPIs report that NGOs regularly report to them on their functioning – daily attendance and problems (if any); as well as routine activities – coverage of schools. 03 ADPIs do not get such reports – in Bellary (1), Chikkodi (1 out of 3) and Chitradurga (1 ADPI).

All ADPIs report that they get cooperation from NGOs.

Concern: NGOs may be advised (renewal of circulars) to mandatorily keep in touch with ADPIs on MDM/Milk concerns.

b) M & S Visits of ADPIs

1. 21 out of 25 ADPI 'always' monitor MDM/Milk when they visit schools. 04 of them do it 'usually'. 23 of them cover 11 to 30 per cent schools.
2. Monitoring Foci: 4 priorities merit attention of ADPIs in M & S – equal priority – MDM attendance priority, presence of nodal teachers, upkeep of cooks and finally, social integration of children.
3. ADPIs can reduce the number of visits (for cross-verification purposes – CRPs, other Officers), but they should engage in a comprehensive M & S of MDM/Milk programme.

c) Reports from BRPs

1. 19 ADPIs get reports from BRPs on MDM/Milk; 12 of them get it 'daily'; 02 of them get it 'usually' and 05 get it 'once in a way'. 14 of them do not get such information from 'all' schools.
2. Bengaluru, Chamarajanagara, Chikmagalur, Kalburgi and Chikkodi (1 CRP each) do not send reports to ADPIs.
3. BRPs reports to ADPIs, lateral messages needs to be systematized. Otherwise, consolidation of information becomes difficult for ADPI. Cross-checking will be a problem.

d) Onward/upward Linkages of ADPIs

17 ADPIs consolidate their reports daily and send it across to EO/MDM/DDPI and to JD/MDM, as per their self-reports. 08 of them send it once in 2 days.

e) Community Connect

21 out of 25 ADPIs have attended SDMC meetings in the past. 18 of them have attended MC meetings. Only 3 items, ADPIs had received grievances in such meetings – Districts are Belagavi, Haveri and Mandya. One grievance was regarding quality of food and the other two were regarding cooking staff.

f) Co-ordination with Stakeholder Agencies

1. 23 out of 25 ADPIs co-ordinate their work with KMF wings. Such co-ordination is there with KSCFC among 19 ADPIs. But working relation with DHOs is reported by only 09 ADPIs.
2. CEO/ZP may co-ordinate with all agencies. ADPIs may coordinate with ZP through DDPIs.
3. No positive suggestions came from ADPIs regarding MDM/Milk programme. Only 2 ADPIs from Bagalkote and Chamarajanagara – one each – suggested to reduce quantity of milk; may be ignored.

g) Method of estimation of demand for Milk /MDM:

In 06 districts, they depend both on reports from schools and from CRPS. 2 ADPIs get information directly from schools. 5 ADPIs – 'No Information'; 7 ADPIs – Directly from CRPs.

There is no 'standard' practice. Practice of demand estimation needs to be standardized.

5.10 Impact of MDM/Milk

Feedback from Parents

- a) **Parents' Background-** MDM serves the poor and lowly.
- b) **Adequacy of MDM food, Quality (Taste) and Cleanliness Concerns – Feedback from parents. These are concerns of 'Customer Satisfaction'.**

Satisfaction levels (proportion of parents) on adequacy, quality and cleanliness are 95.3, 95.9 and 88.5 per cent respectively. However, in the past, 558 out of 2621 parents, had complained to HT/SDMC on one or the other attributes; not all of them at the same time or the same attribute. Complaints were more from Belagavi (33.6 per cent) and Bengaluru (30.5) divisions. They are lowest in Mysore division. 58 per cent of parents, in the State, who complained also report that complaints had been satisfactorily addressed by the schools.

Position across districts: 100 per cent satisfaction is reported in Chitradurga district on all the three counts.

558 parents from 25 districts complained (8 districts – parents sample is small – not included in analysis of this question). Maximum complaints are from – Chikkodi, Belagavi, Davanagere, Bengaluru Rural, Bengaluru South and Shimoga districts; 223 out of 558 complaints, 40 per cent, from 7 out of 25 districts. Very less complaints, less than 10 per cent are from Kolar, Dakshina Kannada, Koppal, Ramanagar, Sirsi and Hassan districts. All complaints satisfactorily addressed by schools in Ramanagara and Sirsi districts.

- c) **Satisfaction with Milk – Quality (thickness), Taste and Quantity (Adequacy).**

81.5 parents are satisfied with quality; 92.4 per cent with taste and 94.0 per cent with quantity. Their feedback is based on their children's reports to them.

Skimmed milk (SMP) is served in Raichur and Mysore. It is also flavoured and carries a perfumed smell. 83.4 per cent like SMP.

A few (students) parents feel that the milk served to their wards is not adequate. They desire more milk (68 out of 2621 parents, 2.6 per cent). One third parents expect milk for their children on Sundays and Holidays also (now it is served on 5 days in a week).

Districts: Parents of 15 districts are not happy with the quality of milk – (milk is watery). Chikkaballapura, Ramanagara, Bellary, Sirsi, Uttara Kannada, Koppal – one third parents are unhappy. All districts have minimum 75 parents (in these 15 districts).

Parents' Views on Values of Milk for their Children

92.8 per cent parents are happy with the 'milk' services in schools and variety of values of milk to their children. 97.0 per cent believe that their children's 'Nutrition' has improved due to milk; improved physical strength – 95.2 per cent believe so; kids will be enthusiastic – 92.3 per cent; always lively and active – 92.9 per cent; improved in their studies – 97.2 per cent; developed interest in sports and games – 94.4 per cent; their health has improved – 95.0 per cent attribute this value. These percentages refer to 2431 parents, 92.8 per cent, who believe in values of milk.

For a question whether all the values identified herein are due to milk or MDM or both. 14.0 per cent parents give credit exclusively to milk, 13.1 per cent to MDM; while, 68.9 per cent attribute credit to both milk and MDM. 4.0 per cent are not clear about any of them.

The **bottom-line** is that the milk and MDM schemes are highly successful in regard to both customer satisfaction and value for money.

d) Food Security and Food Habits at Home – Feedback from Parents

All parents report that they offer morning drink – one or the other to their children. 43.1 per cent give Tea; 32.6 per cent give Milk; 18.0 per cent give Coffee and 6.3 per cent give malt/boost with milk.

There are regional variations in morning drinks given to children – Coffee being popular in Bengaluru/Mysuru divisions; Tea being popular in Belagavi and Kalburgi divisions; milk being popular in Kalburgi and Mysuru divisions.

Food Served at Home

It is to be noted that 134 out of 2621 homes, 5.1 per cent give food only once in a day to their children. MDM is the second meal, no breakfast. Milk at school is their first food. This figure (percentage) is slightly higher in Bengaluru and Belagavi divisions.

47.4 per cent homes give food twice in a day to their children. MDM is their third meal. They get breakfast and supper at home. For another 47.4 per cent MDM is a substantive food. From 1.00 pm to evening 8.00 or 9.00 pm., they do not get anything to eat. Children at a growing age have to remain hungry for long hours. This affects concentration in studies.

Parents were asked whether this food they give at home is ‘adequate’ for their children. Only 77.1 per cent (out of total 2621 parents) responded positively. Position is more pitiable in Bengaluru division. This proportion is only 70.8.

Home Care and Type of Food

Rice and wheat are staple diets followed by Ragi and Jowar. As expected, there are regional variations in use of cereals and millets. 55 per cent home give pulses or corns. 65 per cent homes consume vegetable regularly. 57 per cent use leafy vegetables. 50 per cent homes give fruits regularly.

Bottom Line is that significant proportion of homes cannot afford adequate food as well as balanced diet. MDM/Milk are good supplements and wholesome food to children. Folic acid is also valuable.

Home Care (Contd.)

Children are valued in Indian homes, even among poor parents. Nearly 70 per cent homes give butter/ghee to their children. Alternatively, 30 per cent are deprived of it. 31.1 per cent homes give ‘pocket money’. Children may eat ‘junk food’.

Impact of MDM (Contd.)

5.11 Feedback from Students

a) Students' Background

As per ToR, there are 5158 students at the rate of minimum 10 students from 515 schools in the (sample) study, who have given feedback on Milk/MDM/tablets.

1. Social composition of students reveals that the percentages of SC, ST, OBC, Minorities and General categories are – 23.1, 14.4, 44.5, 10.2 and 7.7 respectively. Proportion of SC is lower than State average in Belagavi division, OBC in Kalburgi division and general category in Bengaluru division.
2. 63.1 per cent children go to 'neighbourhood' school, 1 Km or less than a 1 Km from home. 72.5 per cent children walk to school.

b) Food Security at Home

– Feedback from Students

92.0 per cent students report that they get breakfast at home 'daily'. Another 1.6 per cent students get it 'usually'. Rest of the 6.4 per cent students do not get breakfast at home. It may be recalled that 5.1 per cent parents had reported about food insecurity at home. Students report, 6.4 per cent, may be more reliable. That is, for 329 out of 5,158 students, milk they get at school is the first food of the day while MDM is their first substantive food of the day. Many of them might have walked to school with empty stomachs. Milk and MDM are of great value/ significance for them.

Position across districts: Percentage of children who do not get morning breakfast across districts are: Bagalkote (17.3 per cent), Koppal (14.7 per cent), Davanagere (13.0), Haveri (12.2), Chikkaballapura (12.0), Dharwad and Bidar (11.3), Vijayapura (10.7) and Bellary (10.0) – 9 districts, 10.0 or more than 10.0 per cent children.

All children get breakfast (zero per cent, No) in Bengaluru South and Udupi. It is less than 2 per cent children in Madhugiri/Ramanagara (1.3 per cent), Kalburgi (1.4), Chamarajanagar/Mandya (0.7 per cent) – less than 2 per cent count in 5 districts.

Concern: Milk is a valuable, energy giving, nutritious and healthy food to a large number of children.

c) Students Opinions about Milk – Adequacy and Quality

Adequacy: 94.1 per cent children feel that the milk served to them is ‘adequate’. 95.9 per cent feel/report that it is of good quality – it is thick, not watery. Satisfaction level on quality was lower at 81.5 per cent among parents. Students’ report should be considered as genuine, as they are the primary stakeholders. More than 30 per cent like coloured/flavoured milk.

Districts Update on Inadequacy:

Every district has 150 students, minimum. More than 7 students (8 and above) will be 5 per cent. Such districts are in foci here. Inadequacy is expressed by students of Bengaluru South (15.5 per cent), Belagavi (12.8), Bagalkote/Kalburgi (11.74%), Udupi (5.3 per cent) – 5 districts. Students from 18 districts reported inadequacy – 134 students. 5 out of 18 districts referred here form a sub-set of 114 students out of these 134 students. It is zero in 8 districts.

It is to be noted that a few (10 and more than 19) students in Sirsi, Koppal and Hassan have reported that they do not get milk – not the entire district – may be a few schools only – BEO/DDPI of these 3 districts may look into this.

Quality: 95.9 per cent students in State, overall figure, feel that the milk served is of ‘good’ quality. However, 13.7 per cent students also report that it is ‘watery’. In 8 districts, at least 15 per cent students also report that it is ‘watery’. In 8 districts, at least 15 per cent students report on ‘watery’ milk. Districts which report ‘watery’ milk are Chikmagalur (62.3 per cent students), Dakshina Kannada (41.2), Belagavi (31.3), Udupi (37.3), Dharwad (33.3), Shimoga (25.3), Bagalkote (19.3) and Raichur (17.3 per cent); total for State 705 out of 5158 students. DDPIs/BEOs of these districts/taluks should note.

Further 68.4 per cent students report that they do not like the ‘smell’ of the milk served to them. ‘Smell’ is a subjective perception. Still, as proportion of students who dislike ‘smell’ is consirable, matter needs attention.

d) Students’ Opinion About Values of Milk

A minimum of 93.0 per cent of students feel that the milk they get in school energises them (95.6 per cent), facilitates concentration in studies (95.8 per cent), motivates them to participate in sports and games (94.7 per cent), maintains their enthusiasm in school (94.7 per cent) and finally has improved their learning levels (95.7 per cent).

Districts: In 10 districts, 100 per cent students value milk for assisting them to concentrate on studies. This report of 100 per cent students is given in 4 districts regarding value of milk for energizing them; in 6 district, 100 per cent for motivation for sports and

games; 100 per cent in 5 districts for its health values (See table in analysis chapter for specific districts); it is 100 per cent in 7 districts for improving learning values.

5 out of 6 values are given fully positive rating, 100 per cent students in Davanagere, Kalburgi and Mandya districts. Chitradurga and Bidar districts – 100 per cent students value 4 out of 6 attributes of milk.

Over 90 per cent and above students value (all 6 values) milk in 23 out of 34 districts.

e) MID-DAY MEALS: STUDENTS' FEEDBACK

How is the service of MDM in Schools? 5097 out of 5158 students, report that they receive MDM daily, 98.8 per cent. 51 students report that they do not receive it daily. At 10 students sample per school, 5 schools report that they do not get it daily. They miss it either 'once in a way' or miss it 'many times'. This happens across Chikkaballapura, Sirsi, Koppal (2 schools) and Dakshina Kannada – 4 districts.

93.3 per cent students report that MDM food is 'hot' when it is served. In Kalburgi division, this is low at 84.1 per cent. 9.3 per cent students who report that food is not 'hot' at the time of service, are perhaps, served by NGOs.

91.9 per cent students report that MDM is 'fresh' when served.

Concern: MDM is served 'hot and fresh', daily in all schools of the State, exception being 5 schools in 4 districts.

Variety in MDM

89 per cent students report that there will be variety in MDM food served to them – variety every day (76.3 per cent), variety usually (12.7 per cent).

Vegetables are served 'daily' for 91.1 per cent students. It is usually so for 6.9 per cent students. Only for 2.1 per cent students, 106 students, vegetables are served 'once in a way'.

Will there be 'variety' in vegetables? 'Always' there is variety is a report from 85 per cent students. It is 'usually' so for 13.8 per cent students. Together, it is 98.8 per cent students who get variety in vegetables.

53 out of 5115 students, across 20 districts, do not adhere to official time-table for MDM.

M & S needs to be focused on such schools/districts after getting feedback from CRPs.

Needy Kids

26.5 per cent students report that they will be VERY HUNGRY by the time MDM is

served. This proportion is 42.7 per cent in Kalburgi division/districts. Many homes do not give breakfast.

Adequacy of MDM food

For 97.9 per cent students MDM served for the first time, first service, itself is 'adequate'. Still, in many schools, second service is given either on demand or without it.

There are 30 students who report that first service is not adequate and also, they do not get second service. Though numbers are small, issue is significant. Nobody should go hungry. A general circular may be reissued to all schools.

f) QUALITY OF MDM – A FEED BACK

98.8 per cent students report that MDM is always good (83.9) or usually good (14.9 per cent).

62 students (1.2 per cent) report that it is 'not good'. They mean, it is spicy (18 students), salty (18 students) or simply 'not tasty' (24 students). Only 2 students reported on 'bad smell'. Many of them complained and it helped. This issue is insignificant, may be ignored. There are 13 dissatisfied students in Belagavi district and 12 in Haveri. Rest of the 37 students are in 15 districts.

g) Students and Hygiene Concerns in MDM

1. 16.4 per cent students, as per self-reports have visited kitchen many a times. Proportions of such students are high in Chikmagalur (59.7 per cent), Gadag/Tumkur/Belagavi (30 to 32 per cent), Udupi, Bengaluru South, Bengaluru Rural, Dharwad (25 to 30 per cent). It is low in Mysore/Kalburgi districts (less than 10 per cent).
2. More than 10 per cent students from 8 districts report that eating place is not clean. Gadag, Madhugiri, Bagalkote, Raichur, Chikkaballapur, Belagavi, Sirsi and Koppal. A total of 15 districts reveal such reports, with varying percentages.
3. 23.4 per cent students clean eating places. A sub-set of 17.9 per cent students do this daily. Their proportion is highest in districts of Mysuru division (34.8 per cent).
4. Two contrasting can be there on engaging students for cleaning work. This report does not take any position. However, it is noted that cleaning work is given/done by senior girls (sex-typing) of 6th/7th/8th standard. Upper, upper middle class children attending private unaided schools are not constrained to do this.

h) Lunch Hour Feelings on MDM

1. Children consume their MDM together at one go. For this, they have to wait as MDM is to be served to all children and then the whistle has to be given for consuming MDM. In large schools, this process will take 15 minutes. 210 students, 6.8 per cent report such extended delays.
2. 29.2 per cent students report that they feel the urge to eat MDM immediately after it is served to them. Many of them do not get breakfast at home and have already reported that they become very hungry by lunch time. 88 per cent have to pray before eating and they are 'happy' to do so.
3. 97.9 per cent students feel happy and excited about community eating in MDM programme. 44.2 per cent students bring water from home.

i) MDM and Afternoon Classes

1. 13.1 per cent students, 676 out of 5158, report that their classes get delayed after MDM in the afternoon. Out of them, a sub-set, 6.7 per cent say that it happens daily/usually (457 out of 676 students). Delay is for more than 10 minutes in case of 301 out of 457 students, 5.8 out of 13.1 per cent students.
2. 25 and more than 25 students from 7 districts viz., Bengaluru Rural, Bengaluru South, Gadag, Bellary, Madhugiri, Dharwad and Kalburgi (50 per cent) report on delays – only schools where 8 and more than 8 students out of 15 per school reporting so are considered in this analysis.
3. Delay is by 10 to 15 minutes in Kalburgi district and more than 20 minutes in Bengaluru Rural and Bellary districts.
4. Let schools where delays happen, as per feedback from HTs to CRPs be allowed freedom to close the schools in the evening after adjusting for afternoon delays. Decentralised governance, at schools, is a simple solution which will be effective in a fool-proof way. 22 districts report on delay of 5 minutes and beyond. Specific schools in these districts may be given freedom of choice.

j) VALUES OF MDM

Students' perceptions of the diverse, possible, values of MDM are captured here.

49.3 per cent students feel that MDM facilitates concentration on lessons. This is the highest percentage. 43.3 per cent believe that it gives them energy. 42.9 per cent get zeal in life/routine activities due to MDM. 35.3 per cent get energy for participation in sports and

games. 33.6 per cent report that their learning has improved while 28.3 per cent feel that their health has improved.

All students have responded with one or the other choices, except 3.9 per cent, 199 out of 5158, who have said ‘Cannot Say Anything’.

In every district, a given number of students, out of 150 total students, choose an option. This number varies across the 6 options in a district. The total scores in a district are pooled for all 6 options. Every district has a pooled score for 6 options which differs across 34 districts of the study. The districts are arranged in descending order of pooled scores. District with highest pooled score is considered to value MDM at the highest level. Likewise, district with lowest pooled score values MDM the least. All other districts are placed in between depending on descending order of pooled scores. Results/findings on this basis of District – specific valuing of MDM is given here.

All 6 values are completely supported in Mandya district – 149 average number of students out of 150.

Districts which are satisfied with all 6 values of MDM are – Mandya (in descending order) → Shimoga, Kolar, Chikmagalur, Kodagu, Chikkodi, Chamarajanagara, Belagavi, Gadag and Udupi.

Districts are, from bottom up, Chitradurga, Bidar, Bengaluru South, Bengaluru North and Kalburgi.

Concern: None of the 6 values has got exclusive 50 per cent support from students. There is nothing to feel ‘negative’ about this. Life and variables of life have diverse determinants. These are perceptions of students, as they feel it. What is to be bothered about is bottom ranked districts who do not value MDM, low ratings of the 6 values. Factors, other than MDM need to be looked into. MC/SDMC meetings need to discuss these concerns.

k) Social Integration through MDM

75.2 per cent students sit with their classmates for lunch/MDM. A sub-set of 61.9 per cent change places while sitting with classmates daily, different classmates. Nothing wrong with both the practices. It is human nature. Another 8.8 per cent sit with ‘anybody’, perfectly time.

Caste discrimination is observed in 15% of the students. This needs to be discouraged through proper counselling.

In particular students of Kalburgi division (19.6 per cent students) and Bengaluru/Belagavi (over 17 per cent) division schools need focused attention.

Social composition of CCH staff reveals that there is high level of social integration in MDM. **Children/parents accept SC/ST cooks wholeheartedly.**

l) Health Care in MDM

1. 4249 out of 5158 students, 82.4 per cent report that they get Iron tablets/folic acid. Only 2588 out of 5158, get it once a week (50.2 per cent), as per norms. 52.0 per cent students report that they take/consume the tablets.

Students who do not take iron tablets – (Count is for schools with 8 or more than 8 out of 15 students in schools) are Bellary, Belagavi and Ramanagara – 3 districts.

2. 70.2 per cent students get Vitamin A tablets. However, only 28.6 per cent of total students get it as per norms, once in 6 months.
3. 90.8 per cent students get de-worming tablets. It is given everywhere as per norms, once in 6 months.
4. Tablets, except de-worming tablets, are not issued as per norms. Position is critical in regard to iron tablets, both in regard to non-adherence to norms by schools and consumption by students.
5. Resensitisation of (CRPs) officers, HTs, nodal teachers and Parents/SDMC/MC is required on norms of issue and need to consume tablets, especially iron tablets.

m) Food Habits at Home

Along with health, nutrition and education, MDM is a route for food security. To what extent food security at home works in tandem with MDM and Milk. An update is taken in this analysis.

1. All the students report that they get one or the other morning drink. Parents reported that only 51.8 per cent of them give a morning drink. Many young kids are there in student sample. As such, parents' reports may be more reliable.
2. Going by students' report, 43.2 per cent students get tea, 28.7 per cent – milk, 24.4 per cent – coffee and 3.7 per cent – milk with malt. There are regional variations in morning drink, as expected.
3. 9 per cent students in the sample, 199 out of 5158, get only one meal in a day. MDM is their second meal. No Breakfast.

MDM is the first substantive food of the day for 6.4 per cent children in the State.

This figure may run into lakhs when the discovery is magnified/generalised for the whole State; It will be 2,16,000 children who attend school with a hungry stomach.

For 49.0 per cent children, 2527 out of 5158, MDM is the second meal of the day. They get breakfast and supper at home, 2 meals only in a day. They will have to wait for at least 8 hours after they get MDM in the afternoon, at school. They do not get evening snacks after they return home from school.

Life is pathetic for 49 per cent and cruel for over 6 per cent children of the State.

Milk and MDM are green spots.

It would be better if breakfast is served to children at school at least in drought prone taluqas. SAI, Sathya Sai Trust, has shown the way.

96.1 per cent children report that they get vegetables in food (may not be regularly). 95.8 per cent get leafy vegetables. 87.1 per cent get fruits.

57.4 per cent get ghee/butter. 75.4 per cent get curds. A large number proportion is deprived of ghee/butter/curds.

Position across districts

Districts where children do not get breakfast (minimum 8 children is counted) are (number of children in brackets): Bengaluru North, Bengaluru Rural, Hassan (8 children), Belagavi (10), Chikkaballapura (15), Bagalkote (16), Bellary (21), Koppal (24) and Sirsi (25). These 9 districts account for 135 out of 199 children who do not get breakfast from 31 districts in the State. All children get breakfast in Bengaluru South, Chikkodi and Chamarajanagara.

127 students report that they do not get supper at night, 2.5 per cent of total. 62 out of these 127 children are from Bengaluru South (17), Bagalkote (16), Koppal (11), Sirsi (10) and Chikkaballapura (8) – 5 districts. Rest of the 65 students are from 23 districts. All children of Dharwad, Mandya, Udupi, Mysore, Chitradurga and Shimoga, get supper – 6 districts.

In Mysore division, in all districts, children get vegetables regularly. However, [minimum 8 count], children who do not get vegetables regularly are – number of children in brackets – Dharwad (45), Koppal (31), Raichur (22), Sirsi (17), Haveri (15), Bagalkote (10), Chikkaballapura (7) – 7 districts.

In Yadgir, Kalburgi, Bidar, Vijayapura, Tumkur, Shimoga, Kolar, Chitradurga and Bengaluru North – 9 districts – all children get vegetables regularly. Together, 24 districts are accounted as 8 districts are from Mysore division. 55 children of other/rest of the 10 districts do not get vegetables regularly.

All districts, except Mandya, give pocket money to children. They may eat fried groundnuts, pounded/puffer rice (puri – not poori), cut oranges/pineapple, cut papaya/cucumber with masale powder etc., in front of school. If it is more, they may eat junk food. This cannot be stopped.

5.12 CONCLUSIONS OF THE STUDY

A] Conclusions of the study on MDM/Milk programme in the State have been drawn as per the standards of WHO/UNESCO/ILO.

The conceptual framework therein stipulates Results Based Management (RBM) of a programme as the criteria of evaluation of the programme. 5 criteria have been outlined for RBM – namely, (a) **Relevance**, (b) **Efficiency**, (c) **Effectiveness**, (d) **Sustainability** and (e) **Impact**. The findings of this study will be reviewed in the framework of these five criteria. Being world organizations in Europe, they have left out **Equity** as a criteria which is of relevance for India/Karnataka. Equity concerns have been addressed as an under-current across all the five criteria, in this report. Details of objectives, insights from review of research studies, Evaluation Questions for this study, Log Frame Theory of Change, methodology of the study and sample thereon, variety of techniques and tools of analysis, findings of the study with loci of schools, parents, students, educational officers, supervisors of the project have already been presented in earlier chapters. Integration of findings and insights from the perspective of ILO criteria of conclusions will follow.

B] a) Relevance of Milk/MDM Programme

The MDM programme and later the milk distribution programme to children of government and aided private schools have been conceived with four major goals. They are:

1. To promote enrolment, attendance, retention, transition rates, completion rates, quality of learning and personality development of students (Education).
2. To promote health status of children, (Health),
3. To promote nutritional status of children (Nutrition) and
4. To provide food security to children from poor and disadvantaged homes which will in turn facilitate their health, nutrition and educational progress? [Food Security].

To what extent has the milk/MDM programme achieved ‘Relevance’ in regard to the [objectives] four goals identified herein.

b) Milk/MDM and Education

1. Two opposite trends have been observed in regard to enrolments of children in the sample schools (5115, 34 districts) of the State. Enrolments are going down steadily at the LPS

- stage while they have been increasing at the HPS and HS stages. It is higher at HPS than HS stage. This is revealed by enrolment analysis of data for the period 2013-14 to 2017-18.
2. This trend is observed uniformly across the 4 divisions of the State – Bengaluru (11 districts), Belagavi (9 districts), Kalburgi (6 districts) and Mysuru (8 districts). It is noted that there are 34 educational districts across 30 revenue districts of the State.
 3. Average **losses** in enrolments for the 4 year period across 4 divisions and the State are: 907, 713, 330, 530 and 2480 students. Per district loss in the 4 divisions and State are 82, 79, 55, 66 and 73.
 4. Losses are less in Kalburgi and Mysuru, lower than State average also. Backward districts/divisions will always gain more as they have a lower base as compared to advanced districts/divisions. This is the case of Kalburgi division.

Milk/MDM are contributory factors for gains.

Reasons for Loss at LPS: Declining enrolments at LPS stage is explained by three reasons – (i) there has been a saturation, full enrolments and no drop-outs at LPS stage; this stage began in 2006 in the State. (ii) In spite of retention, there has been a population deceleration/declining rates in the State; birth rates have been going down. Children eligible for I standard, 6 years plus, will go down over the years as LPS strength will go down. (iii) RTE section 12(1) (c) enrolments began in 2013-14, in the State. Considerable number of children joined private, unaided schools under RTE 12(1)(c).

Gain at HPS/HS Stages

There have been increases at HPS (6/7/8) and HS (9/10) stages in enrolments, average increases at HPS stage for 4 years from 2013-14 to 2017-18 being – Division-wise - + 421, + 414, + 304, + 394 and finally + 1533 for State. District average across 4 divisions and State are: + 38, + 46, + 51 + 49 and + 45.

At the high school stages, average increases for 4 years are – division-wise and State > + 229, + 202, + 177, + 211 and finally + 819. District averages across 4 divisions and State are: + 21, + 22, + 30, + 26 and + 24.

Explanations for Increases

Even while average enrolments show a decline at LPS stage, they have increased at HPS/HS stages. This is because of success of schooling at LPS stage leading to better transition levels for 5th to 6th and from 8th to 9th standards, as well improved retention at HPS/HS stages.

Milk/MDM programmes have a substantive degree of contribution for improving enrolments and retention at HPS and HS stages.

Net gains: In effect, warding off the declining rates of enrolments at LPS stage, improved positions at HPS and HS stages have revealed a net gain in 1 to 10 standard enrolments, average gains per district across two backward divisions viz., Kalburgi and Mysuru, the values being + 25 and + 10 students. In Bengaluru and Belagavi divisions, relatively advanced divisions in the State, the net loss is low at -23 and 11 students, the net average for the State, 1 to 10 standards, being quite low at -4 students. This is a systemic loss/gain.

Milk/MDM have been of high 'RELEVANCE' in keeping up enrolments after continuing for plateau effects, population deceleration and RTE 12(1)(c) demands.

Note: Same trends in enrolments are observed across sex and social categories of students.

Correlation results on LAT and attendance is given in Annexure No : I

Qualitative Insights: LEARNING

Parents and students have accorded very high values to milk and MDM for their potential to 'improve concentration in studies' and in 'improving learning'.

Sub-section 6.7.3. – 97.2 per cent parents (total 754), believe that due to milk their wards have improved in their studies. To another question in the same section, whether they attribute values to milk or MDM or both for their children's prowess, 14.0 per cent give exclusive credit to milk, 13.1 per cent give exclusive credit to MDM, while 68.9 per cent parents give credit to both milk and MDM.

Question 5 series of Milk captured students' ratings of milk. 95.7 per cent students believe that milk contributed to better learning, while 95.8 per cent believe that it facilitated their concentration in learning. These reports are uniformly observed across all divisions.

However, in response to a question on relative values of milk and MDM, students have not equally rated MDM. 49.3 per cent believe that MDM has facilitated 'Concentration for Lessons' while 33.6 attribute 'learning improvements to MDM'.

The bottom-line is that not only the 2 programmes have achieved a high degree of 'Relevance' but also they have been successful in regard to both customer satisfaction and value for money.

However, full marks is given to milk by all students while students are reserved in regard to Value of MDM for learning.

c) Relevance of MDM to FOOD SECURITY

1. Large volume of students who attend government sector schools are from poor and disadvantaged homes. Government has successfully regulated ‘fees’ in private, aided schools which are in government sector; unlike the private, unaided sector who are elusive in regard to compliance to rules of fee collection. As such, children who attend aided schools are also not “well to do” sections of society, by and large, presence of aided schools also in rural areas/urban slum regions is also almost nil. Hence, those who attend schools in rural areas/slums are from poor homes and they attend government (not aided) schools – MDM is served in both government and aided schools. **MDM, by and large, serves the poor.**
2. 199 out of 5158 children in the study get only one meal a day. MDM is their first meal, no breakfast. When this figure, proportion of students in this sample is magnified for the State for purposes of understanding, around 2,16,000 children attend school without breakfast. They may get supper at home for which they have to wait for around 8 hours after MDM at 1.00 pm; no evening snacks also.
3. Further, 2257 out of 5158 children, 49.0 per cent get breakfast and supper at home. MDM is their third meal for the day. These children also wait for 8 hours after MDM time for their third meal. These children get breakfast.
4. As a chief source of the first/second meal, for more than 50 per cent children of school going age from ‘poor’ families, MDM/Milk are substantive food, a reliable means of Food Security in the State.

‘**RELEVANCE**’ of MDM/Milk for food security is sui generis (unique/distinct/only one of its kind).

d) Relevance of MDM/Milk to health and nutrition.

Incidence of malnutrition, observations on BMI [State update] prevalence of anaemia among children is already referred to under Chapter I of this report. It is in this context that distribution of iron/vitamin A tablets is of high relevance in the MDM/Milk programme.

However, it is observed that the health component of MDM programme needs to be made more relevant. Normative distribution is largely missing.

It is revealed that nutrition levels improved due to Milk/MDM services. Severe anaemia in children reduced by 60.43 per cent among 6 to 18 years aged government school children. Incidence of SAM, severely acute malnutrition, declined from 1257 cases to 41 cases of students. Reference years for these 2 processed data is 2017-18 to 2019-20.

C] a) Efficiency of Governance of Milk/MDM Programmes

Ground realities in status of implementation of the MDM (wherever MDM is written, Milk is included, unless it is separately mentioned. This may be noted) programme, compliance to SoP [standard operating procedures] guidelines by schools, feedback on conduct of the programme from students, M & S practices of officers, feedback from grassroots managers – HT/Teachers and schools will provide adequate insights into the efficiency levels of the MDM programme. Here is data.

Ground Realities (School Level): Before absorbing observations of efficiency of Milk/MDM programme in the State, it is necessary to any reader to understand that MDM is a mega programme of gigantic size. 54 lakh children in around 55,000 schools in the State are served milk every day in the morning, as soon as children attend school and they are again served mid-day, hot, cooked lunch, with variety every day in menu/Vegetables. This is **‘not an easy task’**, by any standards.

Having said so, it is observed that MDM/Milk programme is implemented **well** (not very well) in almost all the districts/divisions/State, with exceptions of lack of efficiency.

1. There is a shortage of eating plates and drinking glasses (8 out of 34 districts under the lens). Kitchen-ware is sufficient everywhere.
2. Display of Menu, a SoP guidance, needs attention in a minority of schools.
3. In 2/3rd schools, children wash eating plates (may be senior children), good practice!
4. Water access to cooking/washing/drinking is good.
5. Even with access to modern methods of horticulture (terrace cultivation), maintenance of Kitchen garden to supplement MDM needs sub-optimal. Modern methods are recommended by Horticulture Department, not observed in any school.
6. Departmental grant, a routine practice, for purchase of kitchen ware/replenishments thereon is not comprehensive.

Documentation of a programme through maintenance of registers lends transparency and accountability. It lends **‘Efficiency’** to the system.

Eight registers are mandated by SoP. Compliance is quite good to 2 basic registers – MDM attendance register and Taste register. The first one facilitates control of wastage in Milk/MDM and second one facilitates preservation of ‘quality’. There is a ‘little’ laxity in regard to stock, SoP and other registers. ‘Poor’ compliance is in regard to capturing MDM management in school through a Video clip. Incidentally, 2 districts do not maintain any registers (of total 8), while 1 district maintains only one register and 3 maintain 2 registers. There are large variations in efficient management of registers, across districts/divisions; a reflection on diversity in M & S by officers and governance thereon.

Contingency amount for purchase of vegetables/replacement of gas cylinders/sambar powder is given to almost all schools. A small percentage report on delays.

b) SoP Guidelines

Standard operating procedures for MDM are issued by the Department to all schools.

1. Almost all schools follow Rotation System, rotation time-table and location of nodal teachers for the day.
2. Medical check-up of cooks is rather unsatisfactory and maintenance of health register of cooks has very poor compliance.
3. Fire safety measures are ‘just satisfactory’.
4. Hygiene concerns/cleanliness practices – 6 areas – are sub-optimal at least in one-fifth schools and in 12 out of 34 districts. Specifically, lizards on walls, cockroaches on floor, swampy water storing place need special attention. Even though proportions of schools across districts with such issues are low, problem is serious. It is a question of children’s health and safety after consuming MDM. Unpleasant and stray incidents in the past have led to a demand through the media for discontinuation of MDM programme by splinter groups and projected the government in ‘**red light**’.
5. Compliance to FEFO method is by and large satisfactory even while attention is needed to milk powder, sambar powder, salt and most important – tablets.
6. Monitoring by nodal teachers of MDM programme is satisfactory. A maximum of 5 to 6 violations of 13 specifications in regard to MDM cooking – preparatory and processing guidelines – are observed in 5 out of 34 districts. Some of these violations are bad. (highly objectionable?)
7. Serving time compliance to guidelines is quite satisfactory.

Almost all HTs send SMS on daily MDM attendance to NIC even while many of them are not able to recall the toll free number.

Most significant observation is that **MDM attendance and school attendance are in harmony** in almost all (93 per cent) schools.

Two Concerns need special attention – MDM time cuts into school teaching time (20 per cent schools) and MC (Mothers' Committee) involvement for MDM is rather low.

These are all HTs management of MDM concerns.

c) Health Care

Health care concerns – issue of 3 types of tablets – especially Folic Acid, has very 'poor compliance'. This is a poor management of concerns of anemia. Issue of folic acid is not as per norms in nearly 50 per cent schools. This is so in case of nearly one-third schools for de-worming tablets. Health care in MDM is at 50 percent efficiency.

SoP Summative Insights: A quantitative analysis of compliance to SoP guidelines has revealed that at the state level, compliance is at 76.77 percent. Range of efficiency across divisions is observed to be between 74.19 to 81.61 percent.

d) Problems (if any): Are there any ground level (school-level) problems in management of MDM? - Water, security/safety, hygiene? There is hardly any problem with water access for MDM, a minor problem in regard to theft of MDM materials and a serious problem in regard to maintenance of hygiene for MDM services. In 40 per cent schools senior students clean eating places before and after food – sweeping and swiping. There are no Ayahs/maid servants. This is also bad because, girls do it. There is '**sex-typing**'.

e) MDM Supervision

Five Chief areas of concerns constitute MDM management – Good Grains, quality of food, kitchen hygiene, potability of water, performance of duties by cooking staff. Some of them have already been addressed (in conclusions). In regard to food grains – three specific concerns are there – adequacy, quality and timeliness.

- 1 There is considerable short supply (as reported by HTs/Schools) of every item, in varying degrees – rice, pulses, oil, iodized salt, milk powder, vitamin A tablets, de-worming tablets, iron tablets, gas supply/firewood. 5 districts report on short supply of all 9 items.
- 2 By and large, '**Quality**' of Food Supplies is '**good**'. **Highly heartening feedback**.
- 3 With a few exceptions of items in a few districts, MDM food supplies are 'always' or 'by and large' timely.
- 4 Bottom-Line is that quality and timeliness of MDM food supplies are good/satisfactory while the marginal concern is about quantity.

EFFICIENCY CONCERNS (Contd.)

DJ FEEDBACK from DEPARTMENTAL OFFICERS

CRPs, BRP / BEOs, ADPI/MDM

Sample consists of 28 CRPs, 23 BRP/BEOs and 25 ADPIs/MDM, across 19 out of 34 districts, a total of 76 field officers.

a) Coverage of Milk/MDM: A few schools under their jurisdiction do not get/accept milk service and few more do not get/accept MDM. It is noted that some Mathas/Big Temple Trusts serve MDM to schools run by them or around their vicinity.

- 1 Residual number of CRPs do not monitor Milk service or MDM service.
- 2 Many of them are either not aware of areas of monitoring (concerns) Milk/MDM or hold incorrect priorities in M and S of the 2 programmes.
- 3 ‘Community Connect’ – attending MC/SDMC meetings of CRPs is ‘good’; places where Milk/MDM services are/or can be discussed.
- 4 CRPs did not report any significant problems in their jurisdiction regarding milk/MDM. Rather, they identified several, commendable MDM practices, fit for case study.

Such reports ensure sustainability of the programmes.

b) BRP/BEOs

- 1 Most of the BRPs/BEOs do not have time to monitor milk service. To do this, they have to be at school point early in the morning of school hours.
- 2 M & S concerns of Milk/MDM is left to the choice of BRPs – that is what it appears to be. There is no standard practice.
- 3 BRPs are not satisfied with shelf life of tablets supplied through them to schools.
- 4 BRPs are not clear about demand estimation techniques for Milk/MDM services.
- 5 There are ‘no’ problem schools in MDM as per BRP/BEO reports. There are ‘Model’ schools. Sustainability is ensured.

c) ADPIs/MDM

- 1 By and large, ADPIs depend on CRPs for M & S of Milk/MDM as, given their multiple responsibilities, they do not have much time for school visits to monitor MDM.

- 2 Most of the ADPIs in this sample are in districts served by NGOs; Some ADPIs do not get reports on MDM attendance, served by NGOs, regularly.
- 3 Many BRPs do not send reports on Milk/MDM services in schools of their jurisdiction to ADPIs. This non-compliance throws up issues of Cross-Verification, tabulation and consolidation of Milk/MDM service in their blocks. If it is sent, all BRPs do not send them in time. Lateral coordination also is an issue.
- 4 Most of the ADPIs directly coordinate their work with stakeholders like KMF wings, KSCFC. Others work through Office of DDPI or EO/CEOs of ZP. There is no standard practice.
- 5 Practice of demand estimation for Milk/MDM is not standardized across districts.

EJ EFFECTIVENESS PARENTS' FEEDBACK

a) Going by the profile – education, occupation of parents, it is inferred that **Milk/MDM serve the poor and low in status**. Food security rights are being honoured partially by this programme.

- 1 **Satisfaction levels** of parents on **adequacy, quality and cleanliness** concerns of MDM are **above par**.
- 2 Going by their children's feedback, parents report that **quality** of milk (thickness) is **satisfactory** while **taste and quantity** (adequacy) are **good**.

Almost all children who receive skimmed milk, perfumed milk, 2 districts, like it.

Almost all parents accord high values to Milk service for its potential effectiveness in promoting physical strength, health, interest in sports and games, nutritional status – children are always lively, active and enthusiastic as well as doing well in scholastic pursuits (Total 2621 parents).

The **Bottom-line** is that milk/MDM schemes are highly successful in regard to customer satisfaction and value for money.

Food Security and Food Habits at Home

Significant proportions of homes cannot afford adequate food as well as balanced diet. Milk/MDM are good supplements to home care; provide wholesome diet to children. Folic acid is also valuable while coverage as per norms needs attention.

b) Feedback from STUDENTS

There are 5158 students from 515 schools of 34 districts / 4 divisions of the State. A small percentage is over-aged. Social composition largely tilts towards the lower social strata. Majority attend ‘neighbourhood schools’.

MILK: For a large majority of children, as they report, milk is a valuable, energy giving, nutritious and healthy food. Milk served daily is ‘adequate’ and is of good quality (thick, not watery). However, considerable proportion of students, over two-thirds, have reservations on the ‘smell of milk’. ‘Perfumed milk’ may be welcome.

c) Values of Milk

Almost all students report that the ‘milk’ is effective/valuable in energizing them, motivating them to participate in sports and games, maintaining their enthusiasm in school, facilitating concentration in studies and finally improving their learning levels.

Bottom Line is that milk is effective for all four goals – health, nutrition, education and food security, as per students’ feedback. *Aurkya Chahiye? Innenubeku?* What more is needed? On effectiveness of milk.

d) MDM

- 1 There is nearly 100 per cent ‘REGULARITY’ in service of MDM across the State. MDM is served ‘hot’ and ‘fresh’, daily in all schools of the State; there will be variety in menu, vegetables daily and variety in vegetables.
A few exceptions, very minor, are there.
- 2 As many homes do not give breakfast or give inadequate breakfast, more than a quarter of students report that they will be ‘**Very Hungry**’ by MDM time. They are served ‘**good quality**’ MDM in ‘**Adequate**’ quantity.
- 3 One sixth students, as per their self-report, have visited kitchen several times – prohibited by SoP guidelines. Nearly a quarter students, senior **girl students** clean places of MDM service (sex-typing).
- 4 (676 out of 5158 students report) MDM delays afternoon classes by 5/10/15 minutes daily, in - /07 / 02 districts.

e) Values of MDM – Effectiveness

6 Values are listed – Concentration for lessons, energizing, giving zeal, participation in sports and games, improvement in learning and promotion of health.

None of the 6 values has got at least 50 per cent support from students (50 per cent students). The 6 values listed above are already arranged in descending order of support in a range from 49.3 per cent students to 28.3 per cent support.

Justification: There is nothing to feel ‘negative’ about this. Life and variables therein (eg. Life and learning in schools) have diverse determinant factors. Learning/ Education is determined by several, variety of factors. MDM is only one of them, not a major factor.

What is disturbing is, in a district-wise analysis (see Chapter 5), a few bottom ranked districts have accorded very low values (rating by students) to all 6 values. Discussions by the Department with students, with MC members, SDMC, schools, may clarify the position.

f) Social Integration Through MDM

There is high level of social integration (mixing of children freely without being conscious of their social background) during MDM time, except among nearly one-sixth volume of students (both boys/girls). Social Composition of CCH staff is highly secular.

g) Health Care

One out of every 2 students get folic acid as per norms. One out of every two students consumes them. This is 3 out of 10 students in case of Vitamin A tablets. Position is good, as reported by students, in regard to de-worming tablets.

Health care is, by and large, effective in regard to a **slender majority** of students.

h) Food Security at Home

MDM is the first substantive food of the day for a miniscule proportion of students in this study. When this miniscule proportion is magnified to State level MDM coverage, this miniscule appears to be 2,16,000 children.

Going by students who got only 2 meals a day along with those who got 1 meal (no breakfast) – Life is pathetic for 49 per cent and cruel for 4 per cent children every day.

Milk and MDM are green spots for food security

F] SUSTAINABILITY

a) NGOs in Milk/MDM

Government by itself serves Milk/MDM to 4.42 million children in 49720 schools (2016-17 update). Total students and schools covered are 5.35 million in 55307 schools. It would not have been difficult for the Government to cover another 0.931 million children in another 5587 schools which are now served by NGO. In order to throw open Milk/MDM for PPP – Public Private Participation and to accommodate NGOs who are voluntarily in the field for a long time – like AkshayaPatra Foundation and AdanyaChethana – high coverage and wide area of service – Government is pulling on with NGOs, for good purpose.

However, there are frequent threats of large scale withdrawal/ discontinuation of NGOs in Milk/MDM/programmes due to public criticism/outcry in some quarters. For instance, there was severe criticism and call for discontinuation of AkshayaPatra Foundation who serve 1199 out of 2072 schools in Bengaluru City itself with a service for 57.8 per cent of students' coverage, as they do not serve eggs/onion/garlic and serve 'Jain' food which lacks 'Nutrition'. Following this criticism which faced judicial scrutiny, AF MDM samples were sent to CFTRI, Mysore, and National Institute of Nutrition, Hyderabad for testing on Nutrition standards (2018 AD). The AF/MDM got ratified on its Nutrition standards, and continued to play in the field. **Sustainability** got ensured.

- 1 If for any reason and change of guards who take decisions, NGOs are discontinued (may be major players) then there will be **serious concerns of Sustainability**, at least for a time till new adjustments are made.
- 2 There is a demand from one vocal section, **Sub-section** of Teachers' associations and Head Teachers to directly grant MDM materials to homes of children attending schools as Milk/MDM affects their teaching duties. Fortunately, Government has ignored such demands. If status quo continues, there will be problem of sustainability.
- 3 One small section of cooking staff – cooks/ayahs are demanding regularization of their services along with service benefits. This is a farfetched demand. They are, as of now, hired on contract basis. Such a demand, if it gets crystalised and receives public space, poses threat to sustainability.

- 4 Otherwise, Milk/MDM programmes are laudable/commendable/ praiseworthy programmes which are a 'stitch in time' in a developing society with large poor and disadvantaged homes from where children attend Government schools. It is **highly, positively sustainable.**
- 5 Increasing number of private, unaided schools, over the years will not affect the stability and growth of government sector schools in future as the unaided schools will reach a saturation point while government sector schools improve in standards and quality over the years arresting the demand for alternatives.

b) Management of the scheme by NGOs:

These concerns, concerns of efficiency, effectiveness and quality of service are already included under the general analysis of Milk/MDM in this Chapter. They do not merit repeated attention. Only a few abiding concerns are noted here.

- 1 Service from Central Kitchens makes it difficult to serve 'hot' and 'fresh' MDM. MDM is supplied to schools well before lunch time and it gets cold. The 4th JRM/MHRD (2015) had also noted this (Karnataka State update).
- 2 One good practice is that NGOs do not engage students for cleaning MDM premises or serving MDM food. They involve MC members, may be with some incentives, for these services.
- 3 NGOs get cooperation from all schools. There are 71 NGOs (66 + 5 in additional districts – same 5 NGOs) across 14 districts serving Milk/MDM.
- 4 By and large, 10 NGOs studied herein, report that the reimbursement they get at governments' unit cost is '**adequate**' for them.
- 5 All the NGOs are '**Very Happy**' to serve Milk/MDM.

G] IMPACT OF MILK/MDM PROGRAMMES

Milk/MDM services in the State have been bestowing, even with scope for improvements, tremendous impact on life and liberty in the State. Liberty refers to freedom from hunger while life refers to Education, Health and Nutrition. The **impact** is **abiding**, **Value – loaded** (positive values), **people friendly** (poor, disadvantaged families), **wide-spread** (whole State covered, 54 lakh students from 55,000 schools) and **lasting** (children remember this for long periods of their life – throughout life).

a) Specific Impact Route:

- 1 Enrolments have been steady, retention and transition have improved. Equity is achieved as these impacts are observed across sex and social composition of students.
- 2 Learning levels have improved. Milk has greater impact than MDM on learning levels, as per qualitative analysis. All correlations values in state and across divisions are positive even while some of the values across divisions are not significant.
- 3 Nutrition has improved as reflected in the feedback from students, parents and schools, as well as data on severe anaemia/malnutrition. SAM has become zero in 05 out of 06 districts of HK region, except Kalburgi district (06 cases) by 2019-20.
- 4 There is an incomplete impact, not wholesome/full impact on health of Children as per feedback from students, parents and schools.
- 5 There is a valuable impact on food security of children as reported by students and parents.

Overall, the impact of Milk/MDM is clearly positive though not complete. There is scope for improvement. Evidence-based recommendations have been made for improvement of Milk/MDM programmes. Compliance to the recommendations and follow-up activities by the Department, the officers, the NGOs, the ZP/CEO, the DHO and concerned others would step-up the impact of the programmes.

b) PERFORMANCE OF DISTRICTS on MDM/MILK [Based on Ranking]

- 1 Districts which are doing very well in the higher bracket are Haveri, Udupi, Mandya, Chitradurga and Madhugiri.
- 2 Districts which are lagging in performance are Bellary Sirsi, Bagalkote, Dharwad and Raichur [See Annexure No. X]

6. Recommendations

Recommendations have been classified as short term and long term. Short term recommendations can be complied with through Departmental circulars or accommodated through Annual Work Plan and Budget for next year. Some of the recommendations do not involve any cost implications. Long term recommendations may demand changes in policy or rules of conduct. Short-term recommendations are specific in content. They are the action points.

Districts have been identified in the body of the report with respect to their lapses/laxity/shortcomings in implementation of Milk/MDM programmes. Administrative actions from State through the districts can facilitate better implementation in the identified districts and problems in foci.

6.1 Specific Recommendations

1) There is a need for revisiting the **contingency grant** being given to schools for MDM management for various existing and fresh purposes. They are listed here:

(i) Coverage of schools for grant of contingency amount for purchase of cookware and maintenance of kitchen gardens in schools is not complete. A few schools have not received the grant. Purchase of cookware is essential for MDM management – specifically eating plates and drinking glasses are in short supply. In case of kitchen garden, schools which have adequate garden land, compound wall and water facility may be considered for contingency grant. Several schools which are currently maintaining kitchen garden have not received the one-time grant of Rs.3,500/-.

Schools can be encouraged, depending on feasibility to launch Terrace cultivation of vegetables – terrace kitchen garden – a modern method of horticulture.

(ii) Several MDM schools had been started well before 2010 as the scheme began in 2002. Such schools had purchased cookware – utensils; containers; lids; equipments – knives/scissors/grating instruments; and the like, during the year of launching MDM programme. There is a need to replenish the cookware of all types of schools.

(iii) As of now, the contingency amount given for purchase of cookware is uniform across all schools – Rs.5,000/-, a one-time grant. This amount needs to be staggered for adjustments to size of schools, that is, student strength. Grants to be allotted depending upon strength of students.

(iv) Give additional grants to all schools which have water problem for MDM cooking/washing/cleaning purposes. Nearly 11 per cent schools in this study have reported on water problems.

(v) Quite a few schools, especially large schools face/experience problems of security of MDM material/supplies. There have been stray cases of thefts also. Such schools need special purpose contingency grants for hiring locally available security staff on contract basis. SC/ST may be preferred for this assignment.

2) There are several concerns/aspects of MDM implementation which need to be addressed/reduced through improvements in Monitoring and Supervision (M and S) work. They do not have any cost implications. They are listed here.

(i) Maintenance of Registers. Registers have varying degrees of significance, even while all are important. Day's MDM attendance and stock registers are of utmost priority. Non-compliance or incorrect maintenance has implications for control of wastage of food and misappropriation. As of now, both these data need to be managed by adopting SATS/MDM software of the Department. Adopt SATS/MDM software for management of registers. Expand the scope and include all registers.

(ii) There is a need for improving M and S of micro management of following concerns. The nodal teachers/HT (Head Teacher) at school, the MC/MDM, the SDMC, the CRP/BRP/ADPI (MDM), need to be vigilant at various levels of operation. Concerns of micro management are:- Kitchen hygiene; hygiene before/during/after MDM service to kids; Cooks/ayahs wear Apron with pockets while cooking, cleaning, serving food, also masks; adequacy, quality and timeliness in supply of MDM food materials, milk powder and health tablets; compliance to Department's time-table for menu and its display at school; involvement of MC members.

(iii) There is a need for widespread and greater involvement of Mothers Committee (MC) members in M & S of MDM/Milk. As of now, involvement is in less number of schools. All NGO - served schools involve MC members; this is not so in all government sector schools. At many places, parents/students report that milk served in watery/thin. MC members can monitor this, apart from other M & S assistance to school, dormant MCs.

(iv). Quality of milk/milk powder supplied to the schools need to be monitored by every school. For this check whether there is GIS tag for the milk powder as indicated in the

packets. [Detailed reference to GIS tag is given in a note in Annexre No.XX [This has reference to findings and discussions on ppages 141-143]

3) There is a need for improved co-ordination in MDM management across various stakeholders. BRCs have to coordinate on MDM attendance, demand for MDM food with ADPI (MDM) at block level; BEOs need to review at every monthly meeting of CRPs/BRPs and take a feedback on concerns of MDM implementation in the block, ZP/TP need to coordinate with KSCFC/KMF/DMUs [abbreviations defined in the list of abbreviations] for timely and adequate supply of good quality MDM materials; EO/TP needs to coordinate with BEO for timely payment of contingency amount to schools and honorarium of cooking staff.

ECOs can also be directed to assist BRCs and ADPI (MDM) in co-ordination functions.

4) MDM food needs to be customized to regional food habits taking GPs into confidence, as units of planning and implementation. Millets like jowar, ragi, bajra can be used to cook and serve ragi mudde, bajra/jowar roti. Variants of Togaribele can be used such as hurulikalu, hesarukalu, kadalekalu, Kabuli chana, rajma (pulses – rich in nutrition). Broken wheat bisibelebath with vegetables can be served once in a way.

5) NGO involvement need to be improved in the following ways: encourage them to maintain school-based kitchens rather than central kitchens; NGOs need to keep the ADPI (MDM) of the taluk in the loop about their daily performance through internet communication, problems (if any) in conduct of their services, and other concerns of MDM.

6) There is a need to revisit the job chart of educational officers with specific reference to MDM implementation. Two areas of concern are web-based demand estimation techniques – assessment of demand for MDM in the taluk and support activities for the same; health concerns/tablets distribution and its values, nutrition potential/mineral content/protein content of varieties of food and vegetables. Such training is also needed for Master trainers of DIETs/DSERT – MTs at district/State level.

Educational Officers have to be given a customized copy of their job-chart wrst Milk/MDM management.

7) In a few large schools, lunch time with into school timings from 5 to 15 minutes. In such cases, there is a need for decentralized conduct of MDM. HTs can be given the freedom to stagger the working hours so as to compensate the loss of time in the afternoon through extension of school hours by 5 to 15 minutes as the case may be. SDMC may be

taken into confidence in regard to this adjustment of time. Uniform timings of schooling for the whole State are not an efficient arrangement, in view of MDM management.

Sensitisation is also needed for MC members/SDMC at Cluster Resource Centres (CRC) by the CRPs. This can be for one day. BRPs, Health Officers, nutrition experts at block level can be involved. Training of officers will be in a cascade mode. State Level Resource Persons, known as Key Resource Persons or Master Trainers shall train DIET faculty – District Resource Persons (DRPs). They will in turn train BRPs – Block Level Resource Persons in batches. BRPs will train CRPs. This is known as ‘CASCADE’ mode of training.

8) Provide breakfast to all students at school. There are many children who do not get breakfast at home. Begin this programme initially in drought prone taluks (108 taluks out of 240 taluks in State are declared as drought prone during 2018-19).

Adopt/adapt the Sathya Sai Trust model which serves breakfast to Government school children in 06 districts of the State.

9) Department’s ‘Newsletter – Shikshana-Varthe’ should show-case ‘good’ MDM schools every month, through brief write-up and photographs. ‘Shikshana Varthe’ can also showcase good, well maintained productive kitchen gardens with photographs.

10) Release of ‘contingency grants’ of all types of government sector schools should be conditional to their opening a dedicated MDM account. All transfers need to be through DBT – Direct Benefit Transfer arrangement. If some schools do not demand/utilize contingency grants for vegetables/fuel/processing of food/transportation etc., remove them from the list.

6.2. Long-term Recommendations

1) The most significant and far reaching recommendation is that there is a need to move away from ‘Small’ LPS schools, medium size 1 to 8 elementary schools and set up 1 to 10 comprehensive schools. This should be at the GP village (level). Children of feeding schools in satellite villages should be transported with escorts to this GP school. Ensure good roads, free transport. Scale economy in this respect will guarantee high levels of efficiency and impact in regard to provision of all facilities as well as MDM organization. Number of MDM schools will get reduced from the present figure of 55,000 to a new figure of 6 to 7 thousand schools. MDM organization and conduct can be MECHANISED (mechanized

cooking). GPs can be entrusted with M and S of Milk/MDM along with the existing machinery and digital management.

2) Adhere strictly to staffing pattern for MDM schools (till the time 1 to 10 comprehensive schools are set up) as per existing norms of staffing. Wherever there is shortage of CCH staff, existing CCH staff can be given monthly cash incentive of Rs.200/- each for cleaning eating places, (for those staff who clean). This can obviate cleaning of eating places before/after food by girl students of the school. **Sex-typing of MDM** cleaning work can be prevented. Senior girl students serve MDM food, as of now, in large schools. Ayahs can do this work.

3) Department of Women and Children's Welfare and Department of Education who manage Anganwadis and schools respectively need to work under a single umbrella. MDM is being given in both types of institutions. Anganwadi need to be attached with 1 to 5, 1 to 8, 1 to 10 schools at present, till 1 to 10 comprehensive/GP schools are set up. There are several issues of logistics in this regard like connectivity to schools, disposal of buildings/property of AWCs which are located at a distance, teacher deployment and the like. State-level, wide-ranging planning is needed for this measure. MDM for anganwadis and schools can be under the same canopy.

4) MDM schools are functioning at varying levels of efficiency across the districts/regions. There is a need to promote 'MDM Tourism' by organizing tours for HTs/Nodal teachers of 'other' schools to places where MDM 'good'/'model' are there. This can be done within the blocks/taluqas.

5) Incentives need to be given to HTs and Nodal teachers whose performance on parameters of MDM implementation including SoP guidelines is collectively rated to be good by all officers of the taluk; monitoring of documentation practices, and feedback from parents/students/MC members. Two good cases of schools can be given incentives in kind or cash in each block.

6. Compliance to FEFO has been difficult to the schools as there is no separate store room in almost all schools. They do not also have adequate storing place in the kitchen. There is a need to provide customized, wall mount, pigeon-holed almirahs with glass cases to all the schools. If funds are given to schools on the basis of validated local estimates of the SDMC, schools can get these almirahs from local carpenters.

FEFO means an arrangement of storage of perishable materials – First Expiry (Date),

first out. Oil, salt, milk powder, tablets have fixed shelf life. Further, other MDM materials like food grains can be stored and protected from cockroaches/lizards/mice. Cleaning/washing powders can be stored separately without getting mixed with food grains/tablets. Schools should be given large steel almirahs/cupboards with glass cases for storage of MDM/Milk materials, tablets and other consumables.

7) Some schools report delay in replacement of Gas Cylinders. The DoE with the good offices of ZP at district level/ and JD (MDM) at State level need to coordinate with gas supply companies – Indane/Bharat/etc., to advise their local dealers to replace gas cylinders to schools on priority. Whenever there is a need, multiple gas cylinders can be allowed.

8) There is a need for Block level internal surveys of the Department of Education with assignment of services to the CRPs of all MDM schools in regard to their needs and problems of MDM/Milk implementation – Cookware replenishment needs, water problems, security concerns, hygiene maintenance (ayah shortage), food grains supplies, tablet supplies, FEFO storage, etc. KEA can be requested by the DoE to get this survey done. Digital analysis is possible. This will facilitate Need-Based, customized Planning and Implementation.

9) A JRM/MHRD type review of MDM can be taken up by the CPI (DoE); DW and CW, SSA. One district in each division (4 districts in total) can be covered in each review. Reviews can be in-depth (intensive), comprehensive and holistic. There is no need to wait always for JRM reviews of MHRD and act on their reports.

10) Latest available **Social Audit** report of MDM is for the year 2016-17. Almost all the recommendations that have emerged from this study converge with the recommendations made in the Social Audit report. A few of them that converge with this study are mentioned here: Variety needs to be ensured in MDM; M and S needs to be strengthened – specific reference has been made of FEFO for tablets; drinking water needs to be provided at school [this study also has discovered that 2,280 out of 5,453 students (44.2 per cent students) bring water for MDM from home]; Community involvement – SDMC/MC – needs to be increased. Another recommendation, not made here, is that CCTV has to be installed in all schools.

Results of Social Audit are not comparable, in toto, with the results of this study as the 2016-17 audit team visited 40 schools, 20 each in Bengaluru and Belagavi districts in a span of 6 days. All these 40 schools are being served by NGOs.

Discourage Central Kitchens maintained by NGOs and encourage school-based

kitchen is a suggestion given in Social Audit Report of Karnataka (2016-17), the 4th JRM/MHRD/GoI, as well as this study. Mothers' Committees prefer school-based kitchens while HTs/Nodal teachers are happy with centralized kitchens. Their MDM duties get reduced. In fact, teachers' associations have recommended issue of MDM provisions to homes of children attending school regularly.

6.3. FINAL WORD

Milk/MDM programmes are being managed '**Very Well**' in the State. There are a few issues and concerns that are identified, analysed and discussed in this report. Such issues are not of any surprise or worry because milk/MDM is a **mega scale**, people friendly programme of the Government.

Recommendations have been made to address these issues/concerns. They are not phenomenal recommendations except the one on merger of small schools with 1 to 10 comprehensive GP schools which will facilitate automation of MDM services. Compliance to all other recommendations will make '**better**', the existing '**good**' managements.

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ANNEXURE I

MDM/MILK AND LEARNING ATTAINMENTS

I. CORRELATION ANALYSIS:

One of the significant assumptions in the provision of Milk/MDM to students is that they contribute to the improvement of learning levels in children. This assumption also constitutes one of the chief objectives of the programme. Stated in specific terms, it is believed that increasing level of attendance would have an impact on overall learning/attainment/results and also on the learnings in discrete subjects – (a) Kannada, English, Mathematics – all students; (b) EVS – students up to 5th standard; EVS1 (Science) and (c) EVS2 (Social Studies) – 6th standard onwards/upwards. Keeping in view this assumption, a null hypothesis has been set for the study, stated as follows:

N = 515 Schools

Null Hypothesis: There is no relationship between average attendance of students to school (MDM attendance) and results of students, overall and individual school subjects.

It is noted that as per qualitative analysis, MDM attendance and school attendance match everywhere.

Pearson's correlation technique was used to test this relationship. Data from all schools of the sample study, 515 schools, have been taken and used for the years 2016-17 and 2017-18. Average attendance and average results have been treated for the analysis. Results of correlation analysis are presented in Tables 1 and 2 here.

Table 1: Persons Correlations for Average Attendance and Results (MDM and Learning Attainments) for the year 2016-17

Subjects	r values	[Level of] Significance of Values (2 tailed) test results		Number of Samples
		0.01 (1%)	0.05 (5%)	
Kannada	0.292 ^{xx}	√ Yes	-	363
English	0.193 ^{xx}	√ Yes	-	346
EVS	0.235 ^{xx}	√ Yes	-	272
Science EVS1	0.244 ^{xx}	√ Yes	-	258
Social Studies EVS2	0.266 ^{xx}	√ Yes	-	255
Mathematics	0.238 ^{xx}	√ Yes	-	298
TOTAL	0.259 ^{xx}	√ Yes	-	368

Interpretation: Correlation Values are significant at 0.01, 1 per cent level. Hence, 0.05 level is not tested. It means that in 99 out of 100 repeat surveys of this study on other samples, with similar contexts; these results will be repeated. 99 per cent is the confidence with which these results can be accepted.

Table 2: Persons Correlations for Average Attendance and Results (MDM and Learning Attainments) for the year 2017-18

Subjects	r values	[Level of] Significance of Values (2 tailed) test results		Number of Samples
		0.01 (1%)	0.05 (5%)	
Kannada	0.306 ^{xx}	√ Yes	-	133
English	0.331 ^{xx}	√ Yes	-	125
EVS	0.105	x No	x No	50
Science EVS1	0.184	x No	x No	107
Social Studies EVS2	0.176 ^{xx}	√ Yes	-	106
Mathematics	0.358 ^{xx}	√ Yes	-	119
TOTAL	0.271 ^{xx}	√ Yes	-	147

Interpretation: There are positive and significant (0.01 level) correlations between average overall results and MDM attendance, Correlation Values being 0.259 for 2016-17 and 0.271 for 2017-18.

Hence, the null hypothesis set for the study “There is no relationship between MDM and results at school” has been rejected and alternative hypothesis is stated as follows:

Alternative Hypothesis: There is a strong, positive and significant relationship between MDM attendance and school results. [is accepted]

II. t-test Analysis

It is assumed that there is a difference between average attendance of students and the results they get in school examinations. It means that it is not true that all students of a school will get the same results irrespective of their percentage of attendance. If attendance varies, results vary. In order to test the validity and significance of this assumption, ‘t’ test was used.

“Variations in average attendance of students (MDM attendance) will not make a difference in their results.” ‘t’ test was used to test this hypothesis for Group Statistics (all children, attendance, results).

Further, Levene's test for equality of variables was used to test t-test for equality of means of 2 independence samples – attendance and results.

Results of 't' test analysis are presented below, in tables 3 and 4.

Table 3: t-test for Average Attendance and Results of all Students and all Subjects

Group Statistics					
Code: attendance and results of all subjects		N	Means (Values)	Standard Deviation	Standard Error of Mean
Values – attendance and results	(a) Attendance, 2016-17 – All subjects average	515	4.41	2.549	0.112
	(b) Results, 2016-17 – All Subjects average	515	5.40	1.703	0.075

Table 4: Independent Samples Test, 2016-17

Attendance Results (all subjects) Assumptions	Levene's test for Equality of Variance		t-test for Equality of Means				
	F	Significance	t	df	Signifi-cant 2 tailed test	Mean difference	Std. Error of Mean Differences
Equal Variables assumed	173.916	0.000 ^x	-7.332	1028	0.000 ^x	-0.990	0.135
Equal Variables not assumed	-	-	-7.332	896	0.000 ^x	-0.990	0.135

Interpretation of Results:

1. Results show a significant F value (173.916); hence, it is assumed that variations in distribution of attendance of students in sample schools are not the same as variations in distribution of results of same students in sample schools.
2. With a significant F value, there is a significant p value (at 0.000 degree of significance) being -7.332. Hence, we reject the null hypotheses that variations in average attendance will not make a difference in average results. An alternative

hypothesis is accepted and stated as follows: ‘Variations in average (MDM) attendance will make a difference in average results’.

3. There is already a well established (in research literature) wisdom that there is a relationship between attendance to school and learning among students. Absenteeism leads to learning loss and over a period of time, cumulative learning deficit. Results of this study strengthen this research insight. MDM/Milk also matter in learning. School attendance and MDM attendance march in harmony with each other. This is true for results in all subjects and overall results.
4. Results of this study (quantitative analysis) corroborate with the results of qualitative analysis. It is noted that both parents and students accorded high values to milk/MDM for facilitating concentration in studies and improvements in learning. Milk was relatively valued as superior to MDM in this respect.

It is already observed that variations in attendance in the total sample influence the variations in results. Such variations in attendance across divisions may or may not be associated with variations in results of divisions. To examine this proposition, differences in attendance and results across pairs of divisions – Bengaluru and Belagavi, Bengaluru and Kalburgi, Bengaluru and Mysuru, Belagavi and Kalburgi, Belagavi and Mysuru as well as Kalburgi and Mysuru are subjected to t test analysis. 6 combinations and 6 t values are possible for the 4 divisions. Paired t test analysis is adopted along with significance check for 2 tailed tests. Results of analysis are given for 2016-17 and 2017-18.

Detailed tables of ‘t’ test analysis are given in soft copy.

't' test analysis Results

1. 2016-17: Attendance rates and results thereon between Bengaluru and Belagavi divisions are at variance. Variance is not significant either at 0.05 or 0.01 level, 95 or 99 per cent confidence. Attendance and Results are significant at Bengaluru while it is not so at Belagavi. Even with high attendance rates, school results are not as expected. MDM has significance at Bengaluru as compared to Belagavi. This is the same case with Bengaluru and Kalburgi as well as Belagavi and Kalburgi. Attendance at Kalburgi is lower than that of Belagavi and school results in Belagavi do not match with that in Kalburgi. Belagavi is better than Kalburgi.
2. Variability across Bengaluru and Mysuru in attendance is significant at 0.01 level. That is not the case with school results. It means that the two divisions – Bengaluru and Mysuru differ on attendance but not on results.
3. 2017-18: There is improvement in attendance in 2017-18, as against 2016-17 everywhere, except across Bengaluru and Mysuru. It was already better in comparison in 2016-17. However, improvements in MDM attendance across divisions have not shown a bearing on improvement in results.
4. MDM along the other factors of learning is highly effective in attendance rates and school results of Bengaluru division. This is not the case with Belagavi and Kalburgi divisions. Belgaum and Mysore divisions reveal similar results.
5. High attendance and results are observed in Belagavi division as compared to Kalburgi division.
6. Attendance and results show similar trends across Kalburgi and Mysore as well as across Belagavi and Mysuru divisions.

(b) 2017-18: Relationship between attendance and results are not repeated in 2017-18 across all divisions except trends across Bengaluru and Belagavi divisions.

(c) The 4 divisions of the State differ in attendance rates and school results. MDM attendance and school results are highly correlated in Bengaluru division schools followed by Belagavi division and later by Mysuru and Kalburgi divisions.

IV) Correlations values between (SSLC) X standard results and average attendance of students in sample schools – [N = 163 for the State; Bengaluru division – 52 schools; Belagavi division – 40 schools; Kalburgi division – 31 schools; Mysuru division – 40 schools. Though there are 515 schools in the sample, students appear for X examination in only 163 schools. Sample has LPS, HPS schools also. [Source for results – KSEEB, DoE, GoK; Results are for 2018-19 latest year available.]

Even while Pearson's 'r' and Spearman's 'p' [Rho] are computed for the results, only 'p' [Rho] values are presented.

Results are given for boys, girls and total (all students).

Table 7: Correlation values between X Public Examination Results and Average Attendance in 163 samples schools of this study.

Spearman's Rho values, significance test is for 2 tailed tests. N, number of cases varies for the State and for the Divisions. Single asterisk mark means, value is significant at 0.05 levels, 95 per cent confidence. Double asterisk mark means, value is significant at 0.01 levels, 99 per cent confidence.

Table 7: Karnataka State (all Students) - X Results, 2018-19

Rho Pass Percentage and Average Attendance (Values)			
For Pass Percentage	Boys	Girls	Total
Correlation Coefficients	0.253 ^{xx}	0.257 ^{xx}	0.269 ^{xx}
Significant (2 tailed)	0.002	0.001	0.001
N	147	159	163

Result: Values are significant at 0.01 level

N refers to number of schools

Table 8: Bangalore Division - X Results, 2018-19

For Pass Percentage	Boys	Girls	Total
Correlation Coefficients	0.394 ^{xx}	0.337 ^x	0.427 ^{xx}
Significant (2 tailed)	0.009	0.017	0.002
N	43	50	52

Result: Values are significant for Boys and Total (All) at 0.01 level; for Girls at 0.05 level.

Table 9: Belagavi Division - X Results, 2018-19

For Pass Percentage	Boys	Girls	Total
Correlation Coefficients	0.075	0.179	0.044
Significant (2 tailed)	0.660	0.274	0.786
N	37	39	40

Correlation values are not significant at 0.05/0.01 levels.

Table 10: Kalburgi Division - X Results, 2018-19

For Pass Percentage	Boys	Girls	Total
Correlation Coefficients	0.226	0.259	0.296
Significant (2 tailed)	0.238	0.167	0.106
N	29	30	31

Correlation Values are not significant at 0.05/0.01 levels

Table 11: Mysore Division - X Results, 2018-19

For Pass Percentage	Boys	Girls	Total
Correlation Coefficients	0.230	0.262	0.236
Significant (2 tailed)	0.165	0.103	0.142
N	38	40	40

Correlation Values are not significant at 0.05/0.01 levels

Source of Basic Data: KSEEB, Government of Karnataka, Bangalore.

Tables 7/8/9/10/11: Abstract of Spearman's 'r' Values, 2018-19 [Rho]

Significance Divisions		Bengaluru	Belagavi	Kalburgi	Mysuru	State
Total	0.01 level	S	NS	NS	NS	S
	0.05 level	-	NS	NS	NS	-
Boys	0.01 level	S	NS	NS	NS	S
	0.05 level	-	NS	NS	NS	-
Girls	0.01 level	-	NS	NS	NS	S
	0.05 level	S	NS	NS	NS	-

Interpretation of Results:

1. Correlation, relationship between school attendance and X public examination results (SSLC) is significant only in Bengaluru division. High attendance rates and good results are observed in Bengaluru division. This is true of boys, girls and total students.
2. Such results are not observed across other divisions of the State. It means attendance may be slightly lower than Bengaluru division; still results can be good as in Belagavi and Mysore divisions. School attendance is not commensurate with SSLC results in Kalburgi division.

3. School attendance is a proxy for MDM attendance, in the sample schools of the study (163 schools). Attendance has high correlation with school results in Bengaluru division. It is not so in other divisions.
4. An insight of significance is that 'r' values are positive everywhere, may not be statistically significant everywhere.
5. As has already been discussed, MDM is a contributory factor in SSLC results, not a sole determinant factor. Perhaps, without Milk/MDM, results would have been very much lower than current situation.
6. Another insight from this analysis is that positive and significant correlations are observed between school results and school attendance (Milk/MDM) across subjects and overall scores, as revealed in tables 1 and 2.

However, this is not the case with school attendance (Milk/MDM) and X public examination (SSLC) results, except in Bengaluru division.

Standards of X public examination (difficulty value) and school examination differ. X is more difficult than school examination.

Learning concerns need to be addressed with higher levels of strictness at school, right from lower levels in order to get better results at X public examination. Milk/MDM are essential/necessary conditions in this direction, may not be sufficient conditions.

Reference Page No. 170 & 213

ANNEXURE II

COMPLIANCE TO SoP GUIDELINES

SUMMARY ACCOUNT

The Joint Director (MDM), Department of Education, has issued guidelines to all the schools on Standard Operating Procedures (SoP) for organization and conduct of MDM programme. There is a total of 62 variables/sub-variables within these guidelines. Discrete analysis of performance of districts/divisions/State is already presented and discussed. Here follows a summative, quantitative account of relative performance of divisions and State in regard to compliance to SoP guidelines. This analysis needs to be read as follows:

1. Variables along with Sl. Nos. are given in columns 1 (Sl. No.) and 2. This is followed by names of 4 divisions and the State.
2. Each of the variables are identified under Column 2 while percentage compliance is reported under division/State in the corresponding columns. One row is need for 1 variable. There are 62 rows for 62 variables under which percentage compliance is mentioned.
3. Percentage compliance is ranked as per the following classification. Ranks are identified under each percentage compliance.

Range	90 to 100	81 to 90	71 to 80	61 to 70	Below 60
Rank	1	2	3	4	5

4. There are a few variables with negative over loadings; for eg: cockroach on floor, lizards on wall etc. They are given reverse rankings as follows:
0 to 5 per cent incidence (observed in 0 to 5 % schools) = Rank 1
6 to 10 per cent incidence = Rank 2
11 and > than 11 incidence = Rank 3
Ranks 4 and 5 are not there, not needed.
5. Ranks obtained on each variable are scored as follows to get a summated score for the division. Rank 1 gets 5 points/scores as there are only 5 ranks. Rank 2 gets 4, Rank 3 gets 3, Rank 4 gets 2 and Rank 5 gets 1 score.

Illustration: [5] I Rank means 25 scores, [5] II Rank means 20 scores, [5] III Rank means 15 scores, [5] IV Rank means 10 scores, [5] V Rank means 5 scores. Like this.

$$[5] I + [5] II + [5] III + [5] IV + [5] V = 75 \text{ scores.}$$

Like this variables are scored for each division on their performance/rank and summated for 62 variables. Divisions with highest to lowest summated score are ranked on SoP compliance. This is repeated for the State also to get State average SoP compliance score.

Maximum score for 62 variables is – hypothetically calculated as follows: If the State or a Division gets I Rank on all 62 variables and gets 5 score on each variable; it means a total of 310 scores. Actual score obtained by the State/division against 310 is its percentage score. This is an Ordinal scale (shows direction) and not a nominal scale (differences in ranks are not precise measurements).

Sl. No.	Variables	PERCENT COMPLIANCE				
		Bangalore	Belgaum	Kalburgi	Mysuru	STATE
1>	<u>Rotation System</u>					
a.	Rotation System in Place	90.3	87.1	90.0	91.7	89.7
	Rank	1	2	1	1	2
b.	Rotation Time Table in place	89.9	88.4	91.4	77.5	86.8
	Rank	2	2	1	3	2
c.	Rotation teacher supervised cooking place	88.5	93.5	81.1	89.3	88.7
	Rank	2	1	2	2	2
d.	Cooks had been informed about attendance	90.3	84.9	87.8	90.9	88.5
	Rank	1	2	2	1	2
2>	<u>Health Concerns of MDM Staff</u>					
a.	MDM staff have no visible health problems	91.5	97.1	85.6	92.6	92.2
	Rank	1	1	2	1	1
b.	Medical checkup of Cooking Staff Done	72.1	86.3	82.2	76.0	78.6
	Rank	3	2	2	3	3
c.	Health Register Maintained	44.9	65.5	62.2	48.0	54.2
	Rank	5	4	4	5	5
3>	<u>Safety Measures</u>					
a.	Fire Extinguisher at a safe distance	87.3	84.2	70.0	79.3	81.6
	Rank	2	2	3	2	2
b.	Cookware cleaned before use	90.3	91.4	92.2	90.9	91.1
	Rank	1	1	1	1	1

Sl. No.	Variables	PERCENT COMPLIANCE				
		Bangalore	Belgaum	Kalburgi	Mysuru	STATE
c.	Equipments cleaned before use	92.1	93.5	98.9	92.6	91.8
	Rank	1	1	1	1	1
d.	Eating/other plates cleaned	89.7	92.1	94.4	92.6	91.8
	Rank	2	1	1	1	1
e.	Glasses cleaned	90.9	95.0	94.4	92.6	93.0
	Rank	1	1	1	1	1
f.	Shelves cleaned	90.3	92.8	97.8	95.9	93.6
	Rank	1	1	1	1	1
g.	Gas Stove cleaned	91.5	90.7	93.3	92.6	91.8
	Rank	1	1	1	1	1
h.	Kitchen Floor cleaned	93.3	93.5	94.4	91.7	93.2
	Rank	1	1	1	1	1
i.	Storing Places cleaned	90.9	92.1	93.3	91.7	91.8
	Rank	1	1	1	1	1
4>	<u>Cleaning of Kitchen</u>					
a.	Kitchen cleaned daily (as reported)	91.5	83.5	83.3	95.9	89.0
	Rank	1	2	2	1	2
b.	Cobwebs in Ceiling (observed)	7.27	7.91	4.44	4.13	6.21
	Rank	2	2	1	1	2
c.	Lizards on Walls (observed)	1.8	5.6	1.1	0.80	2.5
	Rank	1	2	1	1	1
d.	Kitchen Walls cleaned	93.9	93.5	96.7	96.7	95.0
	Rank	1	1	1	1	1
e.	Walls are Dirty (observed)	7.3	15.8	16.7	9.9	11.8
	Rank	2	3	3	2	3
f.	Water Storing Place not wet/swampy	78.2	71.9	91.1	81.0	79.5
	Rank	3	3	1	2	3
g.	Cockroaches on floor	Zero	4.3	1.1	1.7	1.7
	Rank	1	1	1	1	1
5>	<u>Management of Store Room</u>					

Evaluation of Impact of Mid Day Meal Scheme in Karnataka – (2016-17)

Sl. No.	Variables	PERCENT COMPLIANCE				
		Bangalore	Belgaum	Kalburgi	Mysuru	STATE
a.	FEFO observed	88.5	83.5	83.3	90.1	86.6
	Rank	2	2	2	1	2
b.	FEFO observed for oil	100	100	100	100	100
	Rank	1	1	1	1	1
c.	FEFO observed for Milk Powder	84.9	63.3	71.1	83.5	76.3
	Rank	2	4	3	2	3
d.	FEFO observed for Salt	85.9	63.3	71.1	83.5	76.3
	Rank	2	4	3	2	3
e.	FEFO observed for other items (Eg. Sāmbhar Powder)	6.7	17.3	Zero	6.7	8.5
	Rank	2	3	1	2	3
f.	Shelf Life Marked (Date)	61.8	60.4	62.2	52.9	59.4
	Rank	4	4	4	5	5
g.	Food Materials separated from Washing Soap/powder	36.4	34.5	33.3	33.1	31.4
	Rank	5	5	5	5	5
h.	FEFO for tablets (observed)	86.0	69.0	76.7	71.1	76.3
	Rank	5	5	5	5	5
6>	<u>Monitoring by Nodal Teachers</u>					
a.	Cooks wear apron	81.8	84.2	63.3	86.8	80.4
	Rank	2	2	4	2	2
b.	Kitchen widows are kept open	95.2	92.1	87.8	95.0	93.0
	Rank	1	1	2	1	1
c.	Gas cylinder placed at a distance	97.0	87.8	87.8	86.8	90.5
	Rank	1	2	2	2	1
d.	Food Materials have sufficient shelf life	80.6	79.9	77.8	89.3	82.0
	Rank	2	3	3	2	2
e.	Teachers Tasted Food	91.0	90.0	72.2	83.5	85.7
	Rank	1	1	3	2	2
f.	Students wash hands before/after food	95.2	92.1	83.3	93.4	91.8

Compliance To SoP Guidelines

	Rank	1	1	2	1	1
g.	No child near kitchen	77.6	67.7	80.0	89.3	78.1
	Rank	3	4	2	2	3
h.	Food grains cleaned before cooking	92.1	91.4	84.4	94.2	91.1
	Rank	1	1	2	1	1
i.	Kitchen cleaned before cooking	87.9	89.9	84.4	93.4	89.1
	Rank	2	2	2	1	2
j.	Kitchen cleaned after cooking	70.3	69.1	66.7	76.9	70.9
	Rank	3	4	4	3	3
k.	Equipments cleaned before cooking	89.7	84.2	83.3	91.7	87.6
	Rank	2	2	2	1	2
l.	Vegetables washed in salt/turmeric	84.2	76.3	72.2	69.4	76.5
	Rank	2	3	3	4	3
m.	Containers closed with lids	92.1	79.9	78.9	82.7	84.3
	Rank	1	3	3	2	2
7.	<u>Cleanliness during Cooking/Serving</u>					
a.	Foam Cleaned	93.3	85.6	81.1	93.4	89.1
	Rank	1	2	2	1	2
b.	Food served in Small containers	95.8	92.8	84.4	92.6	92.2
	Rank	1	1	2	1	1
c.	Water is Potable	94.6	94.2	84.4	92.6	92.2
	Rank	1	1	2	1	1
d.	Sitting place for MDM is clean	82.4	92.8	77.8	89.3	86.0
	Rank	2	1	3	1	2
e.	Teachers Monitor MDM Service	93.3	92.1	76.7	92.6	89.9
	Rank	1	1	3	1	2
f.	M & S Notes in 5 Point Registered observed	66.7	76.3	66.7	67.0	69.3
	Rank	4	3	4	4	4
g.	Rice examined before supply	57.0	73.4	61.1	58.7	62.5
	Rank	5	3	4	5	4

Annexure No. II (Contd.)

Sl. No.	Variables	PERCENT COMPLIANCE				
		Bangalore	Belgaum	Kalburgi	Mysuru	STATE
8.	<u>HTs, SMS Practices</u>					
a.	HT sends SMS daily to NIC	90.3	82.7	84.4	91.7	87.6
	Rank	1	2	2	1	2
b.	HT remembers Toll Free No.	86.1	76.3	75.6	75.2	79.0
	Rank	2	3	3	3	3
c.	HT gives attendance note to Cooks	97.6	89.9	86.7	75.2	79.0
	Rank	1	2	2	1	1
d.	MDM/School Attendance Match	95.2	99.2	90.0	93.4	92.4
	Rank	1	1	1	1	1
e.	MC members visit during MDM time	76.4	65.5	63.3	57.0	66.6
	Rank	3	4	4	5	4
f.	HT reports – MDM does not cut into teaching time	83.0	84.2	83.3	86.8	80.8
	Rank	2	2	2	2	2
9.	<u>HEALTH CARE OF STUDENTS</u>					
a.	Health Cards Issued to Students	96.4	87.8	90.0	95.0	92.2
	Rank	1	2	1	1	1
b.	Entries observed in Card (This or Last Year)	96.4	87.8	90.0	95.0	92.2
	Rank	1	2	1	1	1
c.	Folic Acid issued as per Norms	54.5	40.7	41.3	85.2	56.5
	Rank	5	5	5	2	5
d.	Vitamin A tablets issued as per Norms	62.5	54.9	56.7	50.8	56.7
	Rank	4	5	5	5	5
e.	De-worming tablets issued as per Norms	79.4	52.5	68.0	79.7	74.7
	Rank	3	5	4	3	3

Divisions – TOTAL RANKS

	Bangalore	Belgaum	Kalburgi	Mysuru	STATE
I Rank	28	22	19	33	22
II Rank	20	18	20	15	21
III Rank	07	10	12	06	11
IV Rank	03	08	08	02	03
V Rank	04	04	03	06	05
Total	62	62	62	62	62

Scores Obtained by Divisions/STATE

Bengaluru: $28 \times 05 + 20 \times 04 + 07 \times 03 + 03 \times 02 + 04 \times 01$
 $= 140 + 80 + 21 + 06 + 04 = 251$

Belagavi $22 \times 05 + 18 \times 04 + 10 \times 03 + 08 \times 02 + 04 \times 01$
 $= 110 + 72 + 30 + 16 + 04 = 232$

Kalburgi: $19 \times 05 + 20 \times 04 + 12 \times 03 + 08 \times 02 + 03 \times 01$
 $= 95 + 80 + 36 + 16 + 03 = 230$

Mysuru: $33 \times 05 + 15 \times 04 + 06 \times 03 + 02 \times 02 + 06 \times 01$
 $= 165 + 60 + 18 + 04 + 06 = 253$

STATE: $22 \times 05 + 21 \times 04 + 11 \times 03 + 03 \times 02 + 05 \times 01$
 $= 110 + 84 + 33 + 06 + 05 = 238$

TOTAL SCORES/OVERALL PERFORMANCE ON MDM

	Bengaluru	Belagavi	Kalburgi	Mysuru	STATE
Total Scores	251	232	230	254	238
% for 310>	80.96	74.83	74.19	81.61	76.77
No. of Districts	11	9	6	8	34

SoP Compliance:

1. Mysore division is the highest among all 4 divisions, closely followed by Bengaluru division.
2. Belagavi and Kalburgi fall short in SoP compliance by a larger margin.
3. State average SoP compliance is 76.77 per cent.

ANNEXURE III

A BRIEF NOTE ON M & S OF MDM SCHEME

Monitoring and Supervision (M & S) are integral to the management of any development project. They facilitate the effective and efficient realization of objectives of a project/programme/ scheme. Objectives are defined in terms of tangible, quantifiable and qualitative indicators. Traditional tools of monitoring activity are critical path method (CPM) and programme evaluation and review technique (PERT). They are not adopted in this study. Indicators wise M & S are done here.

M & S are synonyms. There are two types of synonyms-‘cognitive’ and ‘near’. M & S are ‘near’ synonyms. Cognitive synonyms are equivalent terms. ‘Near’ synonyms also called as plesionyms are ‘close’ to each other in meaning, but not ‘identical’. (1) **Monitoring** is, by and large, intended (i) to review progress of any activity/activities towards realization of programme objectives. (ii) To diagnose problems/impediments/obstacles/... to activities intended to realize programme objectives. Supervision is intended to oversee the implementation of a programme. It ‘is’/‘can be’ interactive/ it is based on Monitoring of programme. Both M & S are for performance tracking of a programme. (2), there are 3 types of monitoring (4) –compliance monitoring, diagnostic monitoring and performance monitoring. Compliance monitoring is ‘process’ monitoring, diagnostic monitoring is ‘process’ monitoring. Compliance of schools to SoP (Standard operating Procedure) guidelines issued by the DoE (Department of education) in regard to MDM management, including 5 point scale, is compliance monitoring. Analysis of problems in management of MDM, discussed in the report is diagnostic monitoring. Analysis of data on enrolments, retention and learning attainments in relation to MDM is an illustration of performance Monitoring.

Analysis of data received from parents, students, officers through FGDs and IDIs addresses supervision concerns.

Monitoring and supervision complement each other. Here are a few illustrations from MDM programme that differentiate between monitoring and supervision.

MDM programme

Sl. No	Monitoring	Supervision
1	Examine whether Health registers of MDM staff is maintained by a school	Observe whether MDM staffs have any skin or other health problem.
2	Examine whether tablets distribution registers maintained, whether entries are there and updated	Check with children whether they receive tables, whether they consume them, type of tablets received, periodicity of receipt.
3	Check whether there are toilets as per students / toilets, ratios/norms	Check whether, toilets are usable, water facility is there
4	HT has to issue provisions as per day's attendance, check quality of provisions. Check stock register.	Check with cooks whether they get adequate provisions and they are of good quality
5	Provisions to school should be adequate; no short supply.	Check with officers reasons for short supply (If any short supply is reported)

Selected references;

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3. MHRD: "Monitoring and supervision", GoI, [Department of school Education and Literacy]" pp. 1 and 2, 2005 (EMIS and QMT of SSA/MHRD were launched after this publication).
4. Ahmed Murtza Baddar: "Basic Concepts of Monitoring, Evaluation, Supervision Management Information System and Auditing" (academic.edu), 2013.

Reference Page No. 88 & 104

ANNEXURE IV

MDM/MILK PROGRAMME IN STATE

DATA from the Office of Joint Director/MDM, Department of Education

COVERAGE – ENROLMENTS

Milk in the morning as soon as the school begins for the day and hot cooked meal during lunch is served to children of Government and Private aided schools of 34 educational districts of the State (30 revenue districts) by the Department of Education, Government of Karnataka, through the Office of the Joint Director, MDM at Bangalore. Here is a division-wise update on the coverage of students from 1 to 10 standards.

Notes: [2019-20 update]

1. The State Government serves Milk and MDM to 56,17,126 students (56.17 lakhs); out of them, 42.89 lakh students are studying in Government and 13.18 lakh students in private aided schools of the State. It is also served to 10,567 CWSN students.
2. Across the 4 divisions of the State namely Bengaluru, 11 districts, Belagavi, 9 districts, Kalburgi, 6 districts and Mysuru 8 districts, the coverage is 13.61 lakhs, 18.86 lakhs, 14.81 lakhs and 8.89 lakhs respectively.
3. Average number of students per district who are given MDM/Milk is 1,65,209 students.

A word of circumspection should be in place. Coverage of students in a district depends upon the number and spread of government and private aided schools. Government had no control over the incidence and spread of private aided schools in the past. Private aided schools have evolved across the State with diverse evolutionary histories. Private unaided schools also cut into enrolments and institutions in both Government and private aided sectors. There are also Corporation schools/Municipal schools which are counted under Government sector schools. Hence, coverage of schools, balance in coverage across districts/divisions is not achieved through deliberate planning. Imbalance in spread is not due to conscious planning. There is also no control on genesis and growth of unaided private schools. Hence, average number of students served for milk/MDM in a district is subject to the 'given' status of Government/aided schools in conjunction with private unaided schools.

With the foregoing note of circumspection in reading data on MDM, here is presented average number of students served by MDM/Milk programme, in every district of the 4 divisions and the State average.

Average Number of Students served MDM/Milk in District [Divisions]

2019-20

Divisions	Bengaluru	Belagavi	Kalburgi	Mysore	Total
Average	1,23,686	2,09,602	2,46,915	1,11,089	1,65,209
Surplus/Deficit	- 41,523	+ 44,393	+ 81,706	- 54,129	-
No. of Districts	11	09	06	- 08	34

Note:

Size of districts also matter. There are districts like Bellary and Vijayapura which are large, while districts like Kodagu and Udupi are small. Still, it is observed that Milk/MDM coverage is quite high in Kalburgi division, followed by Belgaum division. It is lower than State average in Mysuru division followed by Bangalore Division.

Position across districts in Ranges

Ranges of students enrolments are considered under the following sizes: 3 lakhs and more than 3 lakhs, 2.5 to 3 lakhs, 2 to 2.5 lakhs, 1.5 to 2.0 lakhs, 1.0 to 1.5 lakhs, 50,000 to 1 lakh, less than 50,000 students.

- (a) Range 1 – 3 lakhs and more than that – Chikkodi (3.53 lakhs), Bellary (3.30), Vijayapura (3.24) and Kalburgi (3.14 lakhs) – 4 districts.
- (b) Range 2 – Bagalkote (2.70), Raichur (2.68), Belgaum (2.62) – 3 districts.
- (c) Range 3 - Mysuru – (2.19) and Koppal (2.06) – 2 districts
- (d) Range 4 – Haveri (1.97), Dharwad (1.96), Bangalore South (1.86), Bidar (1.84), Yadgiri (1.77), Chitradurga (1.68), Shimoga (1.57), Davanagere (1.509), Dakshina Kannada (1.508) – 09 districts.
- (e) Range 5 – Tumkur (1.36), Gadag (1.309), Bangalore North (1.303), Hassan (1.20), Mandya (1.17), Kolar (1.09) – 6 districts.
- (f) Range 6 – Chikkaballapura (0.90), Sirsi (0.887), Madhugiri (0.886), Chikmagalur (0.84), Udupi (0.815), Kodagu (0.814), Ramanagara (0.75), BNG Rural (0.68) and Uttara Kannada (0.63) 9 districts.
- (g) Range 7 – Kodagu (0.33) – One district.

2019-20 – Number of Districts in Ranges

Ranges	3 and > 3 Lakhs	2.5 to 3.0	2.0 to 2.5	1.5 to 2.0	1.0 < 05 to 1.5	0.50 to 1.00	< 0.50	Total
No. of Districts	04	03	02	09	06	09	01	34

Notes:

1. There are 'Modes' in the coverage – 1.5 to 2.0 lakhs – (09 districts) and 0.50 to 1.00 lakh (09 districts), coverage of students for Milk/MDM.
2. Out of 56,17,126 students served MDM/Milk in the State, the 66 NGOs serve 9,31,130 [9.31 lakhs] children across 14 Districts. Department of Education serves 46.86 lakhs children. In percentage terms, it is 16.57 per cent by NGOs and 83.43 per cent by the Department.

ANNEXURE V

MDM ENROLMENTS IN STATE SAMPLE [GROWTH RATES] SCHOOLS/DIVISIONS, LPS/HPS/HS.

A [I] LPS

Divisions	BENGALURU	BELAGAVI	KALBURGI	MYSURU	STATE
2013-14	27411	22427	14951	19935	84724
2014-15	26355	21598	14562	19325	81840
2015-16	25401	20850	14223	18755	79229
2016-17	24545	20180	13911	18252	76888
2017-18	23785	19575	13630	17815	74805
Gain/Loss					
2013-14	-	-	-	-	-
2014-15	- 1056	- 829	- 389	- 610	- 2884
2015-16	- 954	- 748	- 339	- 570	- 2611
2016-17	- 856	- 670	- 312	- 503	- 2341
2017-18	- 760	- 605	- 281	- 437	- 2083
Average Gain	- 907	- 713	- 330	- 530	- 2480

Loss [Years] 2013 to 2017-18

A [II] HPS

Divisions	BENGALURU	BELAGAVI	KALBURGI	MYSURU	STATE
2013-14	15480	12665	8443	11258	47846
2014-15	15824	12999	8688	11576	49087
2015-16	16222	13394	8965	11953	50534
2016-17	16665	13840	9286	12368	52159
2017-18	17163	14321	9657	12835	53976
Gain/Loss					
2013-14	-	-	-	-	-
2014-15	344	334	245	318	1241
2015-16	398	395	277	377	1447
2016-17	443	446	321	415	1625
2017-18	498	481	371	467	1817
Average Gain/ Loss 4 Years 2013-16 to 2017-18	+ 421	+ 414	= 304	+ 394	+ 1533

A [III] High Schools

Divisions	BENGALURU	BELAGAVI	KALBURGI	MYSURU	STATE
2013-14	9757	7983	5322	7096	30158
2014-15	9942	8152	5468	7267	30829
2015-16	10151	8345	5631	7464	31591
2016-17	10394	8550	5821	7687	32452
2017-18	10671	8791	6031	7941	33434
Gain/Loss					
2013-14	-	-	-	-	-
2014-15	185	169	146	171	671
2015-16	209	193	163	197	762
2016-17	243	205	190	223	861
2017-18	277	241	210	254	982
Average Gain Loss [Years] 2013 to 2018, 4 years	+ 229	+ 202	+ 177	+ 211	+ 819

A [IV] DIVISIONS/STATE [1 TO 10]

Divisions	BENGALURU	BELAGAVI	KALBURGI	MYSURU	STATE
2013-14	52648	43075	28716	38289	162728
2014-15	52121	42749	28718	38168	161756
2015-16	51774	42589	28819	38172	161354
2016-17	51604	42570	29018	38307	161499
2017-18	51619	42687	29318	38591	162215
Gain/Loss					
2013-14	-	-	-	-	-
2014-15	-527	-326	+2	-121	-972
2015-16	-347	-160	+101	+04	-402
2016-17	-170	-19	+199	+135	+145
2017-18	+15	+117	+300	+284	+716
Average Gain/ Loss 4 Years 2013-16 to 2017-18	-257	-97	+151	+76	-127

ANNEXURE VI

DISTRICT/DIVISION-WISE MILK/MDM ALLOCATIONS

Data from the Office of Joint Director, MDM, Department of Education

Notes:

- Allocations for 'KSHEERA BHAGYA' scheme for the year 2020-21 have been made, district-wise for the whole State. Enrolments of 2019-20, actual enrolments, have been considered as the basis of allocation of 2020-21; this is for every district and the State as a whole.
- 18 gms. of milk powder per child per day is taken as unit consumption requirement. As a matter of policy, this is the uniform requirement considered, irrespective of the age of the child, unlike the policy for MDM where two differential units are there for children 1 to 5 and 6 to 10 standards. Quantity of milk powder needed per district for the given enrolments, multiplied by the unit estimated per child requirements of milk powder is calculated keeping Rs.275/- as cost of 1 Kg WMP and Rs.272/- as cost of 1 Kg SMP. [WMP – White Milk Powder; SMP – Skimmed Milk Powder – perfumed].
- GST at Rs.14/- per KG is the value addition.
- Rs.0.59 (59 paise) is the processing cost per child.

So far so good.

Estimation of allocations is for 205 working days of the school. It is to be expected, in all good faith, that COVID-19 will not affect school working days in 2020-21.

Analysis of 2020-21 Allocations [State Only]

Division	Bengaluru	Belagavi	Kalburgi	Mysore	State
No. of Divisions	11	9	6	8	34
Enrolments (Lakhs)	13.60	18.86	14.81	8.88	56.17
Allocations (Rs. in Crores)	161.55	223.99	175.61	105.27	666.42
Percent to Final	24.24	33.61	26.35	15.80	100
Per District Allocations in crores)	14.69	24.89	29.27	13.16	19.60

Notes:

A total sum of Rs.666.42 crores is the allocation for 2020-21 for Milk distribution in the State. The respective allocations for the 4 divisions, Bengaluru, Belagavi, Kalburgi and Mysore, in figures are: Rs.161.55 crores, Rs.223.99 crores, Rs.175.61 crores and Rs.105.27 crores. In percentage terms, the allocations are: 14.69, 24.89, 29.27 and 13.76 per cent respectively, the State average being Rs.19.60 for the 34 districts.

Concern:

Depending on 2019-20 government sector enrolments in 1 to 10 standards. Kalburgi, Belagavi, district-wise allocation for the divisions are higher than State average while the allocations are lower than State average for Bengaluru and Mysuru divisions.

ANNEXURE VII

Evaluation questions and sub questions (as per ToR)

Sl. No	Questions
	Scheme
1.	Critically review the progress achieved in terms of Budget allocation, expenditure, coverage of schools and beneficiaries over the time period based on secondary data.
2.	Performance and attainment of objectives of the Scheme across the States and at all India level based on the review of literature review of earlier evaluation studies.
3.	Critically examine the processes (in various stages) and their effectiveness in the actual implementation of the scheme.
4.	To analyze the system of distribution of food materials, gas and other materials as well as utilization of funds in terms of purchase of contingency and other materials and bring out its impact on implementation and output delivery
	Implementation
5.	<p>(i) Flow of funds – adequacy – regularity and mode of transfer.</p> <p style="text-align: center;">Sub Questions</p> <p>(ii) (a) Have you maintained a bank account for managing this fund? Yes/No If yes, Name the Bank.....</p> <p>(b) How is the amount given to you? By cash (on fund), By Bank Transfer to account, School goes and Collects it every month</p> <p>(c) Is there delay in giving this amount? Yes/No If yes (d) How do you manage when there is delay? Own money is used/SDMC gives advance/take items on loan basis,</p> <p>(iii) Is the amount given to you adequate? Yes/No If No, How do you manage? SDMC gives/collect from parents/spend from own sources.</p>
6.	Examine the efficiency of Monitoring mechanism under Mid-Day meals at various levels.
7.	<p>To map the inclusiveness of the scheme in rural and urban areas in terms of SC, ST, OBC, Minorities as per the guidelines:</p> <p>a) Coverage of Students</p> <p>b) Pattern of distribution of food and milk among students</p> <p>c) Cooks and helpers and assess the contribution of Mid-Day meal scheme for social integration in the society.</p>

8.	Examine the supply chain from the point of adequacy, regularity, quality and leakages. Food : a) Rice, b) Pulses, c) Oil, d) Gas, e) Iodized Salt, f) Micro Nutrients, g) Vitamin A Caps, h) Deworming Tablets, i) Iron Folic Acid, Milk distribution, a) Non Flavored milk, n)Flavored milk
9.	Analyze the supervision of the process a) Supervision by Mother’s Committee, b) Tasting of food by teachers, c) Apron worn by the cook, d) Pattern of serving the food to children in regular period, e) Safe drinking water, f) During summer holidays (specific taluks)
	Impact
10.	To analyze the impact on teaching activity, in the school in terms of time spent by the school teachers and headmasters during school hours on management of mid-day meals.
11.	Examine any local contributions or initiatives, contributions by SDMC members and donors in terms of providing materials, vegetables etc., for the mid-day meals.
12.	To evaluate the impact of the scheme with respect to the children total, boys and girls separately – enrolled in 1st to 10th Std and their learning achievement, which fall in the categories below, the poverty line. (SC, ST, OBC, Minority community and general category students)
13.	To find regional variations in quality, delivery process and outcome parameters.
14.	Examine the availability of infrastructure – Kitchen utensils, wall display boards, drinking water, utensils cleaning arrangements, fire extinguishers, plates, kitchen gardens etc.
15.	Assess the impact on nutritional status a) Height of the student, b) Weight of the student, c) Waist and hip circumference, d) Hemoglobin levels
16.	Educational attainment across categories of students (SC/ST, OBC and Minorities and across the regions) from sample and school records a) Pass percentage in 7th, 8th, 9th and SSLC examination, b) Pass students with first class in SSLC, c) Distinction in SSLC
17.	Performance of the students on the basis of Learning Ability Test (LAT) to be conducted for IV the Std. 7th Std (Categories of students and across the regions) • Mathematics, b) English, c) Kannada, d) Science

18.	<p>What has been the change in the following (analysis on both primary and secondary data) – Categories of students, gender and across the regions</p> <p>a) Enrolment at primary higher primary and secondary level, b) Attendance – primary, higher primary and secondary, c) Transition rate – primary to higher primary, d) To secondary education and to higher education, e) Dropout rate, e) Children out of school</p>
19.	<p>Analysis of health issues</p> <p>a) Health cards issued, b) Distribution of folic acid – monitoring the consumption, c) Distribution of vitamin A tablets – consumption, d) Health checkups – regularly and follow ups, e) Malnutrition of the students</p>
<p>Sub Questions</p> <p>(i) Has a health card been maintained for every child in the school? Check with HT-Yes/No; If yes, ask for a specimen card and check last entry – this year/last year/no entry for last 2 years.</p> <p>(ii) When was the last time, there was a health check-up in school? Check with HT and examine School Health Register – Check for the year/month of last check up and record it in your diary (Questionnaire)</p> <p>(iii) (a) Has folic acid (iron tablets) been issued to the students? Yes/No; Check with HT / Register</p> <p>(b) How often is it issued? Weekly/fortnightly/monthly/quarterly/half-yearly/once in year. (Record response by ‘<input type="checkbox"/>’ tick)</p> <p>(iv) [Ask HT] Have you distributed Vitamin A tablets? Yes/No, If yes, how many times is it done? – 6 times a year/4 times a year/2 times a year/once a year. Note down response</p> <p>(v) Have you given de-worming tablets? [Ask HT] Yes/No, If yes, how often is it given – 6/4/2/1 time in a year. Note down response.</p>	
<p>Provision of Milk</p>	
20.	<p>As per the Go ED MMS 2017 dated 11.07.2017 the milk is supplied to the students five days in a week and perfumed milk for the children in the districts of Raichur and Mysore. What is the response of the students to it? Any differences in quality?</p>
21.	<p>The quality and quantity of milk, and impact of it on nutrition levels and learning capacity of the students.</p>

22.	Examine the opinion of the students regarding the taste and quality of milk at primary and secondary levels.
Other Issues	
23.	Document the Best practices in the implementation of the scheme
24.	Check the Maintenance of the following documents registers in the schools a) Taste Registers, b) Attendance registers, c) Stock register, d) Tablets distribution, e) Standard Operating procedure filled (SOP), f) SDMC supervision register, g) 5 point rating scale, h) Video clippings
25.	As per the circular Dt 7/3/2017 the mid-day meals are to be provided in drought affected districts during summer holidays also examine the adequacy of arrangements for supply or meals, attendance of students and quality of food.
26.	Examine the use of fortified rice in 5 districts under AkshyaPatraYojane and recently covered the four districts of Chamarajanagar, Koppal, Kolar and Belgaum
27.	Whether the SOP (Standard Operating Procedures) are followed strictly in all the Schools. Examine the duties discharged by the concerned officials as per SOP.
28.	Examine the functioning of Standard Operational Procedures (SOP) as per circulars dated 8/6/2016, 27/9/2016 and 9/2/2017 covering supply of substandard food grains, hygiene in kitchen, use of safe water and monitoring of cooking staff for the supply of clean and safe food to the children and the measures adopted to attain the same. Are there any complaints and deviations?
<p>Sub Questions</p> <p>CHECK LIST</p> <p>[VII] EVQ 27 General Tasks: Monitoring at School Level</p> <p>(i) (a) [SoP 1] Is a teacher appointed to supervise MDM on a rotation basis (Nodal Teacher) Yes / No If yes, FI to check whether Rotation Register is maintained at school [Record Yes/No]</p> <p>(b) Does supervision of MDM affect teaching-learning/classroom management work of teachers? Yes/No FI to check whether teachers are near kitchen shed during teaching hours; Yes/No Record observation in Diary.</p> <p>[SoP 2]EVQ 9 Is water available for cooking/drinking and is clean at the start of the day? FI to check with cooks/Ayahs.</p>	

[SoP 3] Cooks/Ayahs were subjected to Medical Check-up in the past – Yes/No FI to check with cooks/Ayahs FI to observe (without their notice) whether cooks/ayahs have any visible skin problems

Is a health record of cooks/ayahs maintained in school? Yes/No; FI to check

[SoP 4] MDM registers – Shuchi Ruchi and MDM formats – Are they maintained in school? Yes/No FI to check

[SoP 5] Have nodal teachers checked the upkeep of kitchen before cooking? Yes/No Check with cooks/ayahs and record response

[SoP 6] Check with cooks whether adequate quantity of provisions are given to them (as per norms) Yes/No

[SoP 7] EVQ 35 Check whether fire extinguisher/bucket of mud/bucket of water are located near kitchen shed. Check and record appropriate response. Yes/No

Was it used any time in the past Yes/No

[SoP 8] Check whether kitchen shed is deep cleaned (utensils / vessels / plates / shelves/floor space/gas stove/store room). Yes/No Check when was it last done – 1 month before/2 months before/>2 months – See ShuchiRuchi register and record your response – Yes/No

[SoP 9] Cleanliness: FI to check the kitchen shed – walls, ceiling (lizards / cockroaches / cob-webs and record)

[SoP 10] FI to check for upkeep (cleanliness) of storage, eating areas and record.

[SoP 11] When was sump/overhead tank cleaned? Check with HT and register; Record last date and next due date. If water tank is not there, check tap area or place where water containers are kept – Are they dry or swampy?

MDM Storage Maintenance

[SoP 12] Are the storage items arranged according to FEFO (First Expired/First Out) order? – oil/salt/milk power – and record Yes/No

[SoP 13] Have the containers of kitchen food materials marked with sketch pen to oversee FEFO? Check and record Yes/No

[SoP 14] Food Items like salt/oil should not be dumped alongside bleaching powder, utensils

<p>cleaning powder, soap etc; check and record. Are they kept like that? Yes/No</p> <p>[SoP 15] Tablets to be given according to expiry date (Eg: Folic Acid which is given weekly once) check, they are kept like that Yes/No</p> <p>Nodal Teacher’s Responsibility</p> <p>[SoP 16]EVQ 9 Cooks are wearing aprons-Yes/No. Ayahs are wearing aprons-Yes/No</p> <p>[SoP 17] Ventilators of kitchen shed are open-yes/No; Gas Cylinders are kept at a distance – Yes/No</p> <p>[SoP 18] Check the expiry dates of oil, salt, milk powder and record – They are within the expiry date – Yes/No</p> <p>[SoP 19] EVQ 9 Teacher has tasted food before serving and noted in the Taste Register – Check the Register – Record Observation – Yes/No</p> <p>[SoP 20] Students wash hands before and after food, even plates; observe children while MDM is served – Yes – All Children/Some/None. Record your observation.</p> <p>[SoP 21] No child should enter the kitchen – On the day of your visit, observe whether any child is in the kitchen when you visit the school – Yes /No</p> <p>Check with Cook/ayah, if children have the habit of entering kitchen and record your observation – Yes/No</p> <p>Preparatory Work</p> <p>[SoP 22] Kitchen Floor is mopped before and after cooking – observe and record – before – Yes/No; after Yes/No;</p> <p>[SoP 23] Check with cooks/ayah whether they clean the grains before use (Rice/Tur Dhal) – Record response – Yes/No</p> <p>[SoP 24] Check with cooks/ayah – knife used for cutting vegetables is cleaned in hot water – Yes/No; Vegetables in salt and turmeric water – Yes/No</p> <p>Cooking Time</p> <p>[SoP 25] Vessels used for cooking are sterilized and rinsed with hot water – check and record – Yes/No</p>

[SoP 26] Cooking vessels should be closed with clean lids – during cooking – observe and record – Yes/No

[SoP 27] Excess starch in cooked rice, if any, should be removed using stainless steel sieves (plates). This is being done – Yes/No Observe/check and record.

Serving Time

[SoP 28] Food – Rice/Sambar/Milk – should be served in small vessels after washing them in hot water. This is being done – Yes/No; observe and record

[SoP 29] EVQ 9 Drinking Water is clean / No; imparities–observe and record Yes/No

[SoP 30] EVQ 9 Students sit in clean area to consume MDM – Yes/No; Teacher supervises – Yes/No; Observe and record

(ii) Show the 5 point Rating Scale Register – recording of officers who visited school – Ask the HT. Examine, whether it has been used – Yes/No

(iii) Check whether the school has video clipping (13 Minutes) on the processes of cooking – Pre-cooking/Cooking/Serving/Storage/posters plus do’s and don’ts. Yes/No [Ask HT to show it to you]

(iv) Have you received fortified rice or regular rice? Check with HT and note response.

(v) EVQ 36 Do you send daily Monitoring Report to the Education Officer? Yes/No (to CRP/BRP)? Yes/No. If yes, do you remember the toll free number? HT remembers Yes/No [15544].

(vi) Does the HT/nodal teacher inform the cook every day, early in the morning of the school day regarding day’s attendance, so that food is prepared for students on day’s attendance. Check with the cooks – Yes/No – Record response.

Check whether on the day of your visit, the MDM attendance tallies with school attendance. Record your response – Yes/No

(vii) EVQ 9 Check whether Mother’s Committee members (any of them) visit school at the time of MDM service. Record response – Yes/No

(viii) Check whether MDM is served only during lunch hour specified by school – it does not cut into school time. Record your response – Yes/No

	Note: Like this there are number of sub questions in the questionnaire
29.	Examine the Social Audit reports of the scheme and their findings.
30.	Make some case studies about implementation of the scheme – cases where complaints about food poisoning, irregularity, poor quality are received.
31.	Document some best practices at the field level.
32.	Give concrete suggestions for improvement of the scheme for enhancing the outcomes.
33.	Rs.5000/- given to each kitchen centre to purchase stove/vessels / utensils. Has it been utilized? Are the kitchen vessels sufficient?
34.	Rs.3500/- given to 8923 schools to develop Bio-intensive gardens. (Another 10146 schools have land but no water facility) Have the 8923 schools maintained a bio-intensive garden? Are the sample schools of this study in this basket? Are they utilizing this grant? What do they grow – papaya / Drumstick / green leaves / vegetables / others?
35.	As per Supreme Court mandate, dt 13.04.2009, fire extinguishers has been given to each school. Does the school in this study sample, possess one? Was it used anytime in the past?
36.	Is the school sending SMS to MIS centre everyday through CRP? Is the CRP sending H to BRP, BRP to MDM Dy. Director, Dy to Director to State? Check

Reference Page No. 24

ANNEXURE VIII

TERMS OF REFERENCE OF THE STUDY

Evaluation of the Impact of Mid Day Meals Scheme in Karnataka State (2016-17)

1. Title of the study;

Evaluation of the Impact of Mid Day Meals Scheme in Karnataka State -2016-17

2. Departments implementing the scheme

The scheme is implemented by the Departments of Primary and Secondary Education, Health and Family Welfare, Karnataka Food and Civil Supplies & Consumer Affairs Department (KFCSC & CA), Karnataka Food and Civil Supplies Corporation (KFCSC) and Karnataka Milk Federation.

3. Background and context:

Education is now considered as the most critical element in the empowerment of the people. Through increasing their skills and knowledge and providing them access to productive employment in future it bridges the socio economic inequalities in a Country. Right to education is recognized as fundamental human right in the Universal Declaration of Human Rights (UNO 1948). The World Bank Policy Paper on Primary Education (1990, 1995, 1999) embraced human capital theory, observing that education, particularly at the primary level increases the productivity of the work force through improved literacy, numeracy, and health status

Education thus, has multidimensional effects that include the individual as well as social benefits. It helps the individuals to make rational choices about their lives through better knowledge and information. It also influences their work patterns, income and earnings and their values of personal and social life. It helps to break the vicious circle between underdeveloped region and backward people. It is thus a critical element in promoting 'Inclusive Growth' which is a basic agenda before the Five Year Plan in the country. India is expected to reap demographic dividend with high proportion of population in young age group but this young population has to be converted into human resources through education and skill development.

Compulsory and free education to all children is a constitutional mandate and commitment.

Hence it becomes obligatory to the State to encourage and incentivize education to promote Article 45 of the constitution. With the declaration of Right to Education as Fundamental Right of all children of school going age group, the responsibility of the State and Centre has further enhanced.

Keeping this in view, the Government of India as well as Karnataka has focused their attention on increasing enrolment in education at primary and secondary levels. 'Every child is in school and is learning' is the motto of Sarva Shiksha Abhiyan. Towards achieving Universalization of Elementary Education the Government of Karnataka has initiated many programmes and policies. One of the most important incentive driven programs of the government include supply of hot cooked meals under Mid Day Meal programme from 1 to 10th std. the programme is intended to achieve universal enrolment, retention and ensure ten years of quality education to all children. it is an integrated approach to promote increased enrolment and enhanced learning capacity through better food, health and nutrition.

The major developments through which the scheme was expanded are as follows:

- The Mid Day meals (Akshara Dasoha) Programme was started during the year 200203 in seven districts of North Eastern parts of Karnataka which were identified as educationally and economically most backward areas in the State. Under this programme, children who were studying in 1 to 5th STD in Government primary schools were served hot cooked Mid Day Meals. The basic motto was to increase enrolment, attendance and learning levels of the students from poor families.
- During 2003-04 the programme of Mid Day Meals was extended to the remaining 20 districts.
- This programme was further extended to Government aided primary schools from 01.09.2004.
- Further it was extended to all Government and aided primary school children of 6th and 7th standards from 01.10.2004.
- The same programme was further extended to all Government and aided high schools from 2007-08.
- This same programme was further extended to cover Madarasas and NCLP schools from 2009-10.

Broad Objectives of the Programme:

- To help the school children to attend the school regularly.
- To help them to increase their learning capacities.
- To avoid dropouts at the primary & secondary level.
- To improve their physical health by providing required nutrition through hot cooked meals along with nutritional tablets.

Supply of Nutrition Tablets

Under Midday Meal Scheme the nutrient tablets are distributed to the students of 17th standards studying in Government and aided schools in coordination with the Health and Family Welfare Dept.

Tablets	Specification	Quantities	Supplying Department
Vitamin A	2 Lakh IU	2 Tablets/year	Education Department
Iron & Folic acid (for I st to 5 th std children) (for 6 th to 10 th std)	45mg(Pink colour) 100mg (Blue colour)	one tablet per week on every Monday	Health Department
Albendozal (deworming tablets)	400mg	Twice a year 2 tablets	Health Department

Rashtriya Bal Swasthya Karyakrama (RBSK)

Rashtriya Bala Swasthya programme has been introduced during 2014-15. Earlier it was called as Suvarna Arogya Chaitanya Programme. Children of Govt, Aided and Unaided schools from Ist 10th std are getting medical treatment throughout the year. There are two medical teams in this programme, at taluka level. Each team is consisting of a Medical Officer and a nurse. Children have health check up by the team under N.R.H.M.

Ksheera Bhagya Yojane 2015-16

To fight with high incidence of malnutrition among in the State, the Government has introduced provision of milk to the children along with the mid day meals. Hon'ble Chief Minister has inaugurated the programme Ksheera Bhagya on 01-08-2013. The programme is undertaken in collaboration with Karnataka Milk Producers' Federation Ltd. (KMF). According to this programme every child of Government and Aided school from 1st to 10th standard is getting 150 ml milk that is prepared by 18 gms of whole milk powder on three days in a week on (alternative days). The Milk contains 89.64 Kilo Calories. Rs.39217.08 lakh grant is allocated for Ksheera Bhagya Yojane during 2016-17. Now the milk is given for five days a week.

Objectives of KBY

- It helps to eradicate anemia in school going children
- By giving balanced food to the children, malnutrition can be eradicated.
- To improve learning ability among the children.

Table-I Coverage of the Scheme

Sl.No.	Details	Schools	Anganwadi
1	Schools / Anganwadi covered	55,683 nos	64,000 nos
2	No. of School / Anganwadi Children	64 lakhs	40 lakhs
3	Beneficiaries	1 st to 10 standard in government and government aided schools in all over Karnataka	Children from 6 months to 6 years
4	Milk Powder required	WMP required per child is 18gms, ie., equivalent to serving 150ml of Milk. (given five times a week)	SMP required per child is 18gms, ie., equivalent to serving 150ml of Milk. (given five times a week)

Source : KMF website

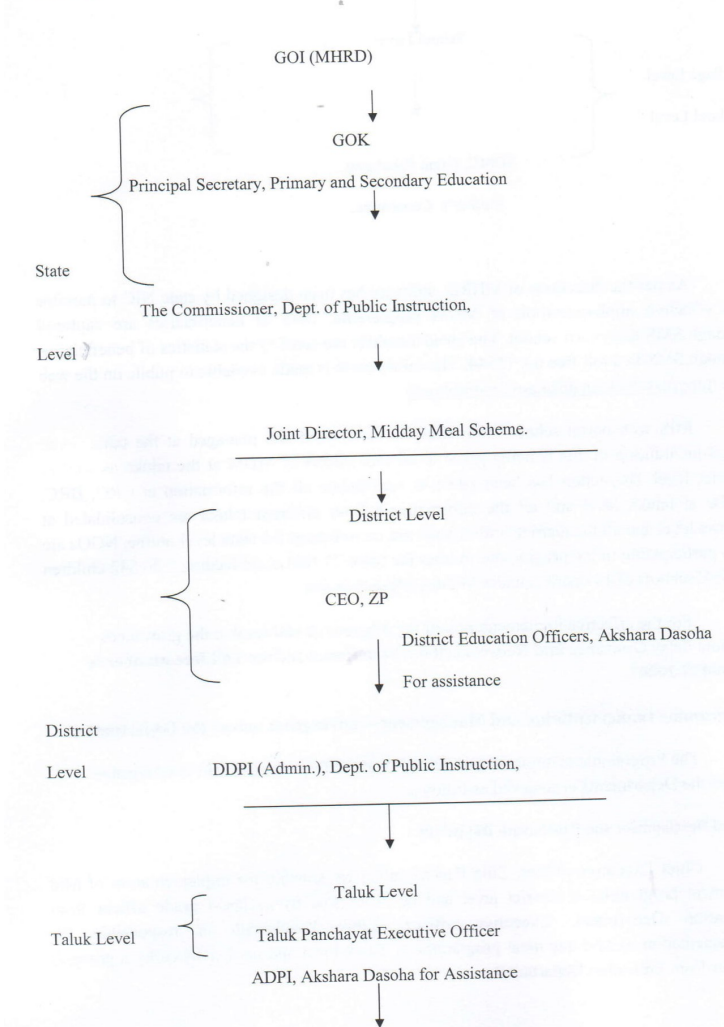
Table-2 Cost per Child per Time

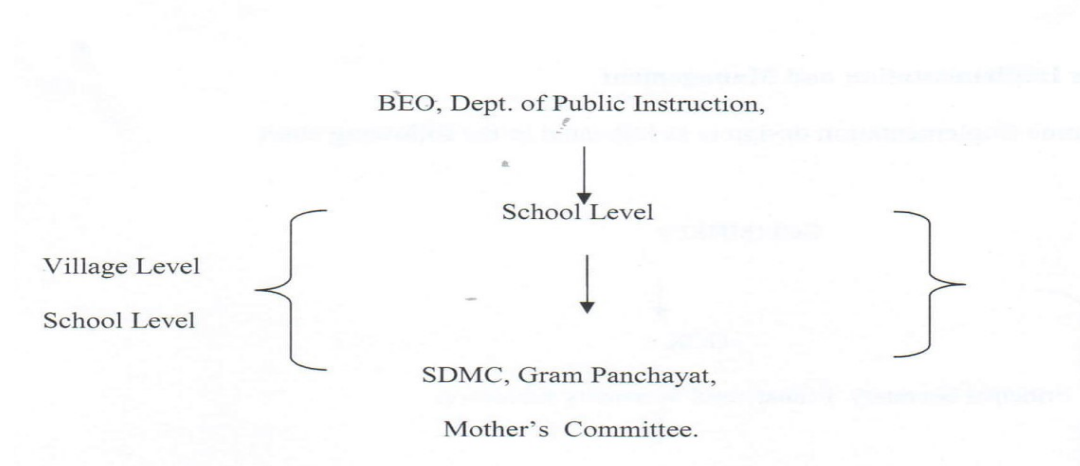
No.	Details	Quantity	Cost
1	Milk Powder	18 Grams	4.59
2	Sugar	10 Grams	0.32
3	Fuel		0.15
4	Other	0.12	0.12
Total			5.18
Honorarium to CCH / month			100

Source :KMF website

Programme Implementation and Management

The Programme Implementation design is as indicated in the following chart





As per the directions of MHRD, software has been designed by state NIC to monitor the effective implementation of MDM programme. Data of beneficiaries are captured through SMS from each school. The Head Teachers are sending the statistics of beneficiaries through SMS to a toll free no. 15544. The information is made available to public on the web site <http://dasoha.karnataka.gov.in-dashboard>.

MIS web portal school information is maintained and managed at the taluk level. Rigorous training in this is being given to all the officers of MDM at the taluka as well as district level. The action has been taken to consolidate all the information at CRC, BRC, BEOs at taluka level and all the information's from different taluka are consolidated at district level and all the districts information are consolidated the state level online. NGOs are also participating in the programme. Across the State 73 NGOs are feeding 8,86,842 children of 5545 schools of 14 districts under Midday Meals Scheme

For the effective implementation of the programme and resolve the grievances without delay Grievance and Redress cell has been started and the Toll free number is 1800-425-20007.

Programme Implementation and Management —convergence across the Departments

The Programme is implemented through various Departments. The convergence across the Departments is achieved as follows.

Rural Development and Panchayath Raj (RDPR)

Chief Executive officer, Zilla Panchayath is responsible for implementation of Mid day meal programme at district level and he is assisted by a class-I grade officer from

Education Department. Executive officer, Taluk Panchayath is responsible for implementation of Mid day meal programme at Taluk level and he is assisted by a group-B officer from Education Department.

Health Department

Apart from hot cooked mid day meal served to children, additional nutritional tablets are also provided. The tablets are procured and supplied to the schools in collaboration with Karnataka Drugs Logistics and Warehousing Society. The Society procures the tablets based on the indent placed by the Education Department, these tablets are supplied upto the taluk level, in turn they are-distributed to the schools.

Karnataka Food and Civil Supplies & Consumer Affairs Department (KFCSC & CA):

The Karnataka State Food and Civil Supplies Corporation and Consumer Affairs Department has the responsibility of supplying APL rice required for providing mid day meal to children of classes 9th and standard Karnataka Food and Civil Supplies Corporation (KFCSC):

The Karnataka State Food and Civil Supplies Corporation, Bangalore has been appointed as an agency to supply materials like edible oil, Double fortified salt, tur dal etc. required for this programme to Taluka level. For smooth execution of the scheme without any disturbance the responsibility of supplying good quality food articles from time to time also rests with the Corporation. The Chief Executive officer Zilla panchayath is empowered to release two month's monetary demands to the Corporation to purchase the materials and to make subsequent payments according to the bills submitted by the Corporation without adjusting to the money paid in advance. .

Karnataka Milk Producers' Federation-(KMF)

The Ksheera Bhagya scheme is implemented by the Government with the help of KMF. Ksheera Bhagya is the programme of distributing milk to school and anganawadi children by the Karnataka State Government in collaboration with Karnataka Milk Federation, District Milk Unions, Department of Primary & Secondary Education and Department of Women and Child Development. Karnataka is the first state in the country to provide milk to children for five days a week.

4. Evaluation Scope, purpose and Objectives

The programme is being implemented in all govt. and aided schools and Madarasas all over the State since 2009-10. The evaluation is for the year 2016-17. It covers different components of the programme — hot cooked meal, milk (Ksheera Bhagya), Health (Rashtreeya Bal Swastha Karyakrama), Nutrient tablets etc. the programme is an integrated approach for better health through food and nutrition leading to enhanced learning capacity of the child in school and thus promoting human resource development in the early childhood.

The purpose of evaluation is to examine the impact of the scheme on education of the children in the state. Whether it has increased enrolment, reduced drop outs and enhanced the transition rate and has increased the health and nutrition status of the children. The impact is to be assessed across the social categories and inclusiveness of education promoting social and economic equality.

Objectives of evaluation

1. To examine the extent of coverage of MDM scheme in the State across the regions and social groups.
2. To understand and examine the functioning of supply chain and processes that are involved in implementation of MDM;
3. To assess the availability and adequacy of infrastructure facilities including manpower for implementation of cooked mid-day meal scheme and also for providing universal education to the children.
4. To assess the extent to which MDM has succeeded in achieving its objectives of making a positive impact on enrolment, attendance, retention, transition and nutritional status of children at various stages of education.
5. To assess the impact on food security of the children all over the year.
6. To assess if MDM has had any adverse effect on teaching/ learning activities in the schools due to involvement of teachers in the management of MDM;
7. To assess the extent to which MDM and its associated components are relevant to the target group;
8. To assess the extent to which community participation and social equity are achieved;
9. To study the intervention means and strategy adopted for the implementation of MDM

- To examine the impact on health and nutrition status of the children as indicated by BMI index and other norms.
- To understand the constraints faced in implementation of the scheme.
- To suggest remedial measures and strategies for effective implementation of the scheme to attain the desired outcomes.

Evaluation questions Related to Scheme

- Critically review the progress achieved in terms of Budget allocation, expenditure, coverage of schools and beneficiaries over the time period based on secondary data.
- Performance and attainment of objectives of the Scheme across the States and at all India level based on the review of literature/ review of earlier evaluation studies..
- Critically examine the processes (in various stages) and their effectiveness in the actual implementation of the scheme.
- To analyze the system of distribution of food materials, gas and other materials as well as utilization of funds in terms of purchase of contingency and other materials and bring out its impact on implementation and output delivery.

Implementation of the Scheme

- Flow of funds — adequacy- regularity and mode of transfer.
- Examine the efficiency of Monitoring mechanism under Mid Day meals at various levels.
- To map the inclusiveness of the scheme in rural and urban areas in terms of - SC, ST, OBC Minorities as per the guidelines:
 - Coverage of students
 - Pattern of distribution of food & milk among students
 - Cooks and helpers
- and assess the contribution of Mid Day meal scheme for social integration in the society.
- Examine the supply chain from the point of adequacy, regularity, quality and leakages Food; Rice, Pulses, Oil, Gas, Iodized salt, Micro nutrients: Vitamin A Caps, Deworming Tablets, Iron Folic Acid, Milk distribution, Non Flavourised milk, Flavourised milk
 - Analyse the supervision of the process — ● supervision by mother's Committee,
 - tasting of food by teachers, ● apron worn by the cook, ● pattern of serving the food to children in regular period, Safe drinking water,
 - During summer holidays (specific talukas).

Impact of the Scheme

- To analyze the impact on teaching activity, in the school in terms of time spent by the school teachers and headmasters during school hours on management of mid day meals.
- Examine any local contributions or initiatives, contributions by SDMC members and donors in terms of providing materials, vegetables etc. for the mid day meals.
- To evaluate the impact of the scheme with respect to the children total, boys and girls separately - enrolled in 1st to 10th std. and their learning achievement, who fall in the categories-below, the poverty line, (SC/ST, OBC, minority community and general category students.)
- To find regional variations in quality, delivery process and outcome parameters.
- Examine the availability of infrastructure- Kitchen utensils, wall display boards, drinking water, utensils cleaning arrangements, fire extinguishers, plates, Kitchen gardens etc.
- Assess the impact on nutritional status
Height of the student, Weight of the student, Waist and hip circumference, Hemoglobin levels
Educational attainment across categories of students (SC/ST, OBC & Minorities and across the regions) from sample and school records; Pass percentage in 7th 8th th & SSLC examination; Pass students with first class in SSLC; Distinction in SSLC
Performance of the students on the basis of Learning Ability Test (LAT) to be conducted for IV the std. 7th Std (Categories of students and across the regions); Mathematics, English, Kannada, Science
- What has been the change in the following (analysis on both primary & secondary data)- Categories of students, gender and across the regions, Enrolment at primary higher primary and secondary level, Attendance-Primary, Higher Primary and secondary, Transition rate- primary to higher primary, To secondary education & to higher Education, Dropout rate,Children out of school
- Analysis of health issues: health cards issued, distribution of folic acid tablets-monitoring the consumption, distribution of vitamin A tablets-consumption, health checkups- regularity and follow ups, malnutrition of the students .

Provision of Milk

- As per the GO ED MMS 2017 dt. 11/07/2017 the milk is supplied to the students five days in a week and perfumed milk for the children in the districts of Raichur and Mysore. What is the response of the students to it? Any differences in quality?
- The quality and quantity of milk, and impact of it on nutrition levels and learning capacity of the students.
- Examine the opinion of the students regarding the taste and quality of milk at primary and secondary levels.

Other Issues

- Document the Best practices in the implementation of the scheme.
- Check the Maintenance of the following documents/ registers in the schools
Taste Registers; Attendance registers; Stock register; Tablets distribution; Standard Operating procedure filled (SOP); SDMC supervision register; 5 point rating scale; Video clippings.
- As per the circular Dt 7/3/2017 the mid day meals are to be provided in drought affected districts during summer holidays also examine the adequacy of arrangements for supply of meals, attendance of students and quality of food.
- Examine the use of fortified rice in 5 districts under Akshya Patra Yojane and recently covered the four districts of Chamrajnagar, Koppal, Kolar and Belgaum
- Whether the SOP (Standard Operating Procedures) are followed strictly in all the Schools. Examine the duties discharged by the concerned officials as per SOP.
- Examine the functioning of Standard Operational Procedures ((SOP) as per circulars dated 8/6/2016, 27/9/2016 & 9/2/2017 covering Supply of substandard food grains, hygiene in kitchen, use of safe water and monitoring of cooking staff for the supply of clean and safe food to the children and the measures adopted to attain the same. Are there any complaints and deviations?
- Examine the Social Audit reports of the scheme and their findings.
- Make some case studies about implementation of the scheme cases where complaints about food poisoning, irregularity, poor quality are received.
- Document some best practices at the field level.
- Give concrete suggestions for improvement of the scheme for enhancing the outcomes.

6. Evaluation Methodology

The Study has to collect the data both from primary and secondary sources. The data requirement and methodology is presented below.

Primary and Secondary data

Type of data	Method of data collection	Source of information	Method and Tools
Primary data	1. Quantitative data	Beneficiaries, Stakeholders	Survey, Observations EGD,
	2. Qualitative data	State level, district level, taluk level, GP level, school level	IDI-interview schedules
Secondary data	Data from the department, annual Reports	Department levels district and taluka levels.	On selected indicators relevant for the evaluation

Sample Design

Table 3 : No. of Schools —Government & Aided

Upper Primary Schools	22540	2684	25224	22324	2680	25004	22382	2791	25173	22327	2781	25108
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Schools	2013-14			2014-15			2015-16			2016-17		
	Govt.	Aided	Total	Govt.	Aided	Total	Govt.	Aided	Total	Govt.	Aided	Total
Primary	22000	223	22223	21819	234	22053	21656	247	21903	21478	248	2171
High Schools	4580	3657	8237	4826	3870	8696	4401	3875	8276	4581	3813	8394
Madarasa	92	0	92	67	0	67	65	0	65	50	0	50
NCLP	106	0	106	53	0	53	47	0	47	29	0	29
TOTAL	49318	6564	55882	49089	6784	55873	48551	6913	55464	48465	6842	55307

Table -4 Sample Talukas from the Districts

Sl.NO	Name of the Districts	Name of the Sample Talukas
1	Bagalkot	Jamakhandi, Bilagi, Hunagund
2	Bellari	Hadagali, sandur, Bellary (East & west)
3	Belagavi	Kittur, Ramdurga, Belagavi (City & Rural)
4	Chikodi	Kagwad, chikodi, Mudalagi
5	Bangalore Rural	Davanahalli, Nelamanagala, Doddaballapura
6	Bangalore North	Bangalore North 1, 2, 3
7	Bangalore South	Anekal, Bangalore South 2, 4
8	Bidar	Bhalki, Humnabad, Bidar
9	Chamarajnar	Yelandur, Hanur, Chamarajanagar
10	Chikkaballapura	Gudibanda
11	Chikmangaluru	Sringeri, Moodigere, chikmangaluru
12	Chitradurga	Holalkere, Hosadurga, challakere
13	Dakshinakannada	Moodbidre, Belthangadi, Mangaore (S & N)
14	Davangere	Jagalur, Harihara, Davanagere (S & N)
15	Dharwad	Kundgol, Kalatagi, Dharwad (City & Rural)
16	Gadag	Naragund, shirahatti, Gadag (R & C)
17	Hassan	Alur, Holenarasipura, Arasikere
18	Haveri	Byadagi, Hirekeruru, Hanagal
19	Kalaburagi	Sedam, Chincholi, Gulbarga (N & S)
20	Kodagu	Madikere, Somarpet, Virajpet
21	Kolar	KGF, Malur, Kolar
22	Koppal	Yelburga, Koppal, Gangavathi
23	Mandya	Srirangapattana, Nagamangala, Mandya (S & N)
24	Mysuru	K R Nagara, H.D Kote, Mysore S&N)
25	Raichur	Devadurga, Sindhanuru, Raichur
26	Ramanagara	Magadi, Ramanagara, Kanakapura
27	Shimoga	Thirthahalli, Soraba, Shimoga
28	Tumkur	Turuvekere, Kunigal Tumkur
29	Tumkur(Mudhugiri)	Koratagre, Pawagada, sira
30	Udapi	Kundapura, Udupi, Byndoor
31	Uttara Kannada	Karwar, Bhatkal, Kumta
32	Uttarakannada-Sirsi	Joida, Siddapura, Haliyal
33	Vij ayapura	Chadachan, B Bagewadi Vijayapura (Rural & city)
34	Yadagiri	Shorapur, Yadgir, Shahpur

Criteria for the selection of Districts- Talukas and beneficiaries

1. 4 divisions —Bengaluru, Belgavi, Kalaburagi and Mysuru divisions & all 34 Educational Districts. (30+4)

2. One bottom taluka one median taluka and one top taluka as per enrolment in Govt. and Aided schools from each district.
3. 15 schools from a district 5 from each taluka=15x34= 510 Govt. and Aided Schools proportionately in the sample.
4. Coverage of LPS, HPS and HS-urban and Rural, -Kannada Medium, English Urdu Medium & Marathi Medium schools proportionately.
5. Proportionate distribution across NGO & non NGO category

10 students from each school 510x10=5100 (5 girls & 5 boys)

1. Social class viz., SC/ST/OBC/Others- Differentiated analysis some weightage to be given to SC/ST dominated areas — example: Kolar & Chamrajnagar and Gulbarga.
2. 12 schools as special case studies — where irregularities are reported
3. Best Practices
Anthropometric measurements ('Weight-for-age', 'Height-for-age' and 'BMI-forage') and Hemoglobin levels for all sampled 5100 children to be measured.
4. Nutrition Analysis of Mid Day Meal samples need to be carried out at the school level for all the 510 sampled schools.

The year of reference for this study would be 2015-16 and concurrent study would be 2016-17 and concurrent study for the year 2016-17.

Table-5 Qualitative data

<p>FGD = one school in each taluka= 102 In Depth Interviews of officers= 68 @2 per district & at least 5 at State level=73</p>	<p>FGD members are -SDMC, Parents, teachers & GP members knowledgeable persons Implementing officers from Dept.s involved in implementation of MDM, 5 State level officers</p>
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7. Deliverables and time schedule

The Department of women and Child Development and KEA will provide the necessary information pertaining to the study and also co-operate with the consultant organization in completing the assignment task within the stipulated time period. The concerned district and taluk officials will be instructed by the Department of Women & Child

Development for providing the required information/data at the taluk and GP levels.

It is expected to complete the present study in 5 months time line, excluding the time taken for approvals at KEA.

Table 6: Timelines and deliverables

a. Inception Report	1 month after signing the agreement
c. Field Data Collection	4 months date of work plan Approval
d. Draft report submission	1 month after Field Data Collection
e. Final report	1 Month after Draft report submission
Total duration	7 Months

8. Qualities expected from the Report

The evaluation report should generally confirm to the United Nations Evaluation Guidelines (UNEG) "Standards for Evaluation in the UN System" and "Ethical Standards of Evaluations".

The report should present a comprehensive review of the Scheme/ programme in terms of the content, implementation process, adequacy, information and access to beneficiaries.

The Report should provide a scientific assessment of the impact of the Mid Day Meals scheme including Ksheerabhagya scheme on Health and Nutrition status, enrolment, attendance, transition rate and learning capacity of the children.

The qualitative data should be used in unbiased manner to support or for further analysis of the reflections from the quantitative data. The analysis should provide adequate space for assessing the variations across the regions and social categories. Case studies to be presented to bring out the realities at the household level.

The report should come out with specific recommendations based on adequate field evidence for any modifications in the programme design, content, implementing procedures, and any other modifications to improve the access and impact of the Scheme/Programme.

Structure of the report

The following are the points- only inclusive and not exhaustive- which need to be mandatorily followed in the preparation of evaluation report:

By the very look of the evaluation report it should be evident that the study that of Education Department and Karnataka Evaluation Authority (KEA) which has been done by the Evaluation Consultant Organization. The report should be complete and logically organized in a clear but simple language. Besides confirming to the qualities covered in the Terms of Reference, report should be arranged in the following order:

Preliminary Part • Title and Opening Page

1. Index
2. List of acronyms and abbreviations
3. Executive Summary- A section that describes the program, purpose and scope of evaluation, research design and methodology, key findings, constraints and recommendations.
4. Background- A section that briefly covers the history or genesis of the sector under which the programme/scheme being evaluated covered. It should give recent fact sheets taken from reliable and published sources and review of the progress of the scheme at Taluka/District level.
5. Objectives and performance of the program - This section includes the stated objectives of the program and the physical and financial achievements of the selected program in the period of evaluation. It should cover the description of the target group, aim of the program and method of selection of beneficiaries and the physical and financial achievements.
6. Review of literature/past evaluation reports and their findings.
7. Evaluation Methodology - This should include research design, sample design and size, questionnaire design and pilot test, data collection and quality assurance plan.
8. Limitations/constraints in the evaluation study.
- 6 Case Studies & Best Practices
9. Findings of the evaluation study.
10. Recommendations that flow from the evaluation.

Annexure

11. Sanctioned Terms of Reference of the study.

12. Survey tools and questionnaires
13. List of persons with addresses personally interviewed.
14. Place, date and number of persons covered by Focus Group Discussion (if applicable).
15. Table showing details of major deviations, non-conformities, digressions of the program.

9. Administrative arrangements

The core team should comprise of the following technical members and should possess requisite qualification and experience as stated below:

Table 7 : Team to carry out the study

No.	Subject Experts Requirements	Subject Experts Requirements	Educational Qualification
1.	Principal Investigator	Ph.D in Social sciences/ Education /I Class Post Graduate in Social Sciences/ Education/ Public policy	05 years of experience in Education/ Nutrition and related sectors.
2.	1 st Core team member	Post graduate in Education/ Social Sciences.	Should also possess a minimum of three (3) years of experience in Education/ Nutrition/ social science / allied sector projects
3.	2 nd Core team member	Post Graduate in Statistics/ Economics with knowledge of Statistical analysis	3 years experience in data analysis

And such numbers that the evaluation is completed within the scheduled time period as prescribed by the TOR.

10. Cost and Schedule of Budget release

The Output based budget release will be as follows-

The first installment of Consultation fee amounting to 30% of the total fee shall be payable as advance to the Consultant after the approval of the inception report, but only on execution of a bank guarantee of a scheduled nationalized bank, valid for a period of at least 12 months from the date of issuance of advance.

1. The second installment of Consultation fee amounting to 50% of the total fee shall be payable to the Consultant after the approval of the Draft report.
2. The third and final installment of Consultation fee amounting to 20% of the total fee shall be payable to the Consultant after the receipt of the hard and soft copies of the final report in such format and number as prescribed in the agreement, along with all original documents containing primary and secondary data, processed data outputs, study report and soft copies of all literature used in the final report.
3. Taxes will be deducted from each payment, as per rates in force. In addition, the evaluating agency/consultant is expected to pay service tax at their end.

11. Selection of Consultant Agency for Evaluation

The selection of evaluation agency should be finalized as per provisions of KTPP Act and rules without compromising on the quality.

12. Contact persons for further details

Nodal officer — S R. Chandraiah Office of the Jt. Director MDMS Dept. of Primary and Secondary education. Contact No. 9480835502

ANNEXURE IX
REVIEW OF LITERATURE AND PREVIOUS EVALUATION
REPORTS BRIEF REVIEW [1968 to 2010]

MDM Evaluation and Reviews of Studies

Chandrashekar (1968) – no appreciable improvement in height / weight as compared to non-fed children; but significant improvement in clinical / bio-clinical status.

Sail (1920) – (b) NCERT (1981 – 82) – Study of 13 States – in care supported schools / Impact of MDM not visible / no evidence / Retention rates improved in Karnataka; (b) Reo 1983; (b) Verma (1986); (b) Sharma (1989); (b) Polith (1990)

5. Nutrition useful for equal performance and reduction of wastage; (b) M Lockheed, Verspoor et.al (1991) – Protein Energy Malnutrition (PEM) / Vitamin A in important for performance ; (b) NIN, Hyderabad (1991) – Nutritional status of children and MDM schools better than those in non-MDM schools – immense potential for ednl performance; (b) Diwan (1992); (b) Henrique (1994); (b) Tara Consultancy Services (1994); (b) Baskaran (1995)

(b) NCERT (2000) – Noon meal scheme in Tamil Nadu and supply of food grains in Uttar Pradesh improved enrolment and retention of girls. (b) Benton (2001); Morris and Sarll (2011); (b) Centre for Equity (2003) – Chattisgarh / Rajasthan / Karnataka – Positive impact, variety in Karnataka mean – improved attendance / enrolment, (b) ORG – with UNICEF – Study in 10 States of India including Karnataka; positive impact on attendance and retention particularly among girls; (b) Upadhyay (2003); (b) Agrahar (2004); (b) Grewal (2004); (b) Misra and Behera (2004); (b) Parikh and Yasmeen (2004); (b) Thoraf and Lee (2004) – Indian Institute of Dalit Studies – New Delhi – Study in Uttar Pradesh / Bihar, (b) Afridi (2005) (b) Blue (2005); (b) De et.al (2005) – Study in 410 schools of MCD /NGOs managed – bad food, more students ill, inadequate, (b) Jain and State (2005); (b) Kumar (2005); (b) Mathur (2005); (b) Naik (2005) – Study in Karnataka – Akshara Dasoha Scheme – No dissemination in food service, positive results; (b) NCERT (2005) – positive impact; (b) Normaha and Samson (2005); (b) Praticchi Trust (2005); (b) Rana (2005); (b) Zaidi (2005); (b)Ganga Dharma (2006); (b) Gupta (2006); (b)Kamnani and Gopal Das (2006); (b) Latha (2006); (b) NIPCCD (2005 – 06) - 06) – Karnataka – Positive impact; (b) Ravi (2006); (b) Bishat (2007); (b) CUTS (2007); (b) Deodhar (2009); (b) Fritz (2007); (b) NIPCCD – Madhya Pradhesh – Positive impact; (b) Parida (2010) – Orissa – Bad implementation

Reference Page No. 13 & 42

ANNEXURE X

RANKING OF DISTRICTS OF THE STATE ON PERFORMANCE OF MILK/MDM SERVICES

RANKING METHODOLOGY

Information/Feedback on a variety of concerns, components of Milk/ MDM services in schools are used for the purposes of ranking of districts on Milk/MDM performance. Information collected during field work from 515 schools across 34 districts is subjected to ranking analysis. Ranking of districts is 'Beyond' the Descriptive, Quantitative and Qualitative analysis, already presented in earlier Chapters. Ranking gives a summative, snapshot picture of performance of districts.

Discrete information from every school in a district – 15 schools in 31 districts, 16 schools in 02 districts, and 18 schools in Haveri district, which constitute the sample of the study, are consolidated for a district using BINARY responses – Yes or No. Every district will get a total score from zero to 15/16/18 depending on the number of schools. For instance, if, for purposes of illustration, not a single school maintains a Taste Register, then the district gets zero score. If all schools maintain this register, the district may get 15 scores (if 15 schools are there in the district). Later, all schools are arranged in descending order of the numerical value of the scores. District with highest compliance from schools is considered to be getting First Rank and lowest compliance, the last rank. Sometimes, more than one district may log the same numerical value of the score. At that time, the districts are simply arranged with the same rank for each district. Average scores are not taken and rankings given, which is the practice of working in statistics problems. Same rank for each district will get fed into total ranking on all questions. Hence, this technique will not affect summated score for ranking.

Ranks for each district on each variable are summated and average of ranks is taken. The final average rank is considered for questions on Tool 1 – Head Teacher/School Schedule, Tool 2 – Parents' Schedule and Tool 3 – Students Schedule. Average summated Rank of Tool 1, Tool 2 and Tool 3 will give TOTAL/FINAL Rank of the District. All the districts are arranged in descending order of Summated Ranks on Tools 1/2/3 and overall Milk/MDM performance.

The method of Summated Average Rankings is the standard “DELPHI” technique use in research (See any standard book on ‘Statistics – in Education’ or Google Search for additional information on DELPHI Technique].

Every district will get 4 summated ranks – on Tools 1, School/HT questionnaire questions/concerns, Tool 2 – Parents’ questionnaire/feedback, and Tool 3 – Student’ feedback apart from overall score/rank summated from Ranks of Tools 1/2/3.

All the questions are positively loaded. For example, students’ Tool – Is the MDM served to you adequate for you, Yes/No. Yes is positive loading. Highest number of students responding with ‘Yes’ in a district get top billing (rank). However, there are a couple of questions with negative loading, only a couple of questions. In case of such questions, a ‘No’ response gets a score of 1, and total ‘No’ response gets a score of 1, and total ‘No’ will get score of 1, and total ‘No’ will get total score of the district on the basis of which districts are arranged for ranks. Eg: Tool 2, Parents Questionnaire/Interviews (FGD) Qn.7.4 - Have you complained to HT/SMDC about inadequacy/poor quality/hygiene (earlier questions 7.1 series to parents) these concerns. If a school HT/SDMC had given a complaint, it is of negative value/loading. This applies for all three concerns – quality, hygiene, Adequacy. Such questions are exceptions. Highest complaints/grievances get lowest rank for the district. List of Questions for Ranking is given in annexure.

A District Report Card on Milk/MDM performance can be issued (generated) by the DoE to every district giving the rank of the district on each question in a tool, each tool and summated/overall rank.

ANALYSIS AND INTERPRETATION OF PERFORMANCE OF DISTRICTS ON MILK/MDM SERVICES

There are total 76 questions on the basis of which ranks of districts are arrived at. These questions belong to three sources/areas – School/HT (38 questions, Sl. No. 1 to 36), Parents (15 questions, Sl. No.39 to 53) and Students (23 questions, Sl.No.53 to 76).

Questions are classified under: (a) Documentation – Efficiency in management, (b) Micro Management in the areas of health, nutrition, Hygiene, Satisfactions of Parents, Satisfactions among students, MDM and academic work in school, Monitoring concerns, Responsiveness of parents, Social Integration etc. They address concerns of transparency (documentation), efficiency, equity and consumer satisfaction.

There are questions separately for Milk and MDM management.

RANKS OF DISTRICTS

Highest ranked and lowest ranked 5 districts are identified here on School/Parents and Students concerns (Tools 1/2/3).

	<u>SCHOOL</u> TOOL 1	<u>PARENTS</u> TOOL 2	<u>STUDENTS</u> TOOL 3	Overall Rank
	Districts	Districts	Districts	Districts
Highest	Haveri	Udupi	Haveri	Haveri
Ranked	Hassan	Bangalore South	Mandya	Udupi
	Uttara Kannada	Uttara Kannada	Chitradurga	Mandya
	Bangalore South	Chickmagalur	Madhugiri	Chitradurga
	Chikkaballapura	Koppal	Kolar	Madhugiri
Lowest Ranked 5 from last to first				
	Bellary	Chikkaballapura	Bellary	Bellary
	Dharwad	Sirsi	Sirsi	Sirsi
	Bagalkote	Haveri	Bagalkote	Bagalkote
	Chamarajanagar	Kolar	Raichur	Dharwad
	Madhugiri	Ramnagar	Vijayapura	Raichur

Notes:

1. There are 3 perspectives of Milk/MDM management – School/HT, Parents and Students. There is no convergence on ‘quality’ management of Milk/MDM across all 3 perspectives. It means that none of the districts in the lists of tools 1, 2 and 3. Haveri, Uttara Kannada and Bangalore South are 3 districts which are in 2 lists. Finally, in terms of overall performance of Milk/MDM Haveri, Udupi, Mandya, Chitradurga and Madhugiri are rated among top 5.
2. Likewise, there is no convergence across 3 analysis of vision in regard to bottom 5 districts. Bellary, Sirsi and Bagalkote are in 2 lists. Finally, in terms of overall performance, bottom 5 districts are: Bellary, Sirsi, Bagalkote, Dharwad and Raichur. 3 out of these 5 districts are in Belagavi division.
3. There is no district among top 5 from Kalburgi division.

Concern: Information on question-wise ranking and overall ranking of districts – tools 1/2/3 and total – would be useful for – (i) Re-sensitization of HTs/CRPs/BRPs/ADPIs on concerns of management of Milk/MDM, (ii) entering into a continuous dialogue with students/parents (periodical dialogues) on their satisfaction levels and areas of concern. (iii) Agenda Notes for MC/SDMC meetings.

District Report cards of this study may be shared by the DoE with all stakeholders, apart from the reports and its findings.

AREAS OF CONCERN

Tool 2: PARENTS

Sl. No.	Qn. No.	Question Type	Areas of Concern
1	2	3	4
1	20	Taste Register	Documentation
2	20.1	MDM Attendance Register	Documentation
3	20.2	Stock Register	Documentation
4	20.3	Tablets Distribution Register	Documentation
5	20.4	Sop Register	Documentation
6	20.5	Supervision Register	Documentation
7	20.6	Five Point Vigilance Register	Documentation
8	22.4.2	Bank Account Opened for MDM cash receipt, Cash received Direct to Banks	MDM Fund Management
9	23.3	MDM Monitoring affects classroom teaching	MDM and Academic work in School
10	24.1	Health Register of Cooks	Documentation
11	24.2	Taste Register	Documentation
12	24.5	Fire Extinguisher/Bucket (Sand/Water) near Kitchen – Easy	Micro Management (Implementation)
Table Contd.			
13	24.7	Kitchen Cleaned – Daily	Micro Management
14	24.8	Walls Dirty (No)	Micro Management
15	28.9	Cob-webs in Ceiling (No)	Micro Management
16	28.10	Lizards on Walls	-do-
17	28.11	Cockroaches on Floor (No)	-do-
18	30	FEFO Compliance	-do-
19	30	Oil	-do-
20	30	Salt	-do-
21	30	Milk D	-do-

Ranking of Districts of the State on Performance of Milk/MDM Services

22	30	Other Items	-do-
23	30.1	Marker Pen Used for FEFO	-do-
24	30.2	Food materials not stored with detergents	-do-
25	31	Tablets as per FEFO	-do-
26	33.1	Students wash Hands, before/after food, wash plates	-do-
27	33.3	Students do not visit kitchen – Ayahs report	Monitoring by HT/Nodal Teachers
28	34.4	Vegetables washed with salt/turmeric powder	Hygiene Micro Management
29	36.2	Students sit at clean places and consume food	Hygiene Micro Management
30	36.9	Students Classroom attendance and MDM attendance match – observation/cross-checking by Field Investigators	Monitoring
31	37.1	MDM does not cut into teaching time (observation)	Efficiency (Academic Work)
32	38	Health Card Issued to every Child	Health concerns
33	38.1	Entries observed in Health Card	Efficiency
34	38.3	Folic Acid given/ <u>once a week</u>	Health Efficiency
35	38.5	Vitamin A given/once in 6 months	Health Efficiency
36	38.7	De-worming Tablets given/once in 6 months	

A NOTE ON RANKING

3sets of variables on MDM are used for Ranking of Districts-Schools, Parents and Students. Incidentally, all the three have large samples: 515 schools, 2621 parents and 5158 students.

Tool 1- Schools 38 variables are analyzed;

Tool 2-Parents, 15 variables are analyzed;

Tool 3 - students, 23 variables are analyzed.

Districts are ranked on each of the 76 variables [Tables given separately, not in the report], on pooled variables for Schools [38], parents (15) and students (23), as well as on summated (76) variables of all three sets of variables. Highest ranked 5 and Lowest ranked 5 districts are identified and discussed in the report Detailed analysis, scoring and ranking of districts are in soft copy.

Total Ranking – Tool – 1: MDM and SCHOOLS

Division	District	Tool-1 Total Score	Tool-1- Average	Tool-1 Ranking
Belagavi	Haveri	497	13.08	1
Mysore	Hassan	449	11.82	2
Belagavi	Uttara Kannada	449	11.82	3
Bangalore	Bangalore South	444	11.68	4
Bangalore	Chikkaballapura	438	11.53	5
Bangalore	Davanagere	436	11.47	6
Bangalore	Ramanagar	433	11.39	7
Bangalore	Shivamogga	433	11.39	8
Mysore	Udupi	432	11.37	9
Mysore	Mysore	427	11.24	10
Kalaburagi	Raichur	427	11.24	11
Belagavi	Belagavi	427	11.24	12
Belagavi	Chikkodi	427	11.24	13
Bangalore	Bangalore Rural	423	11.13	14
Kalaburagi	Bidar	422	11.11	15
Bangalore	Chitradurga	422	11.11	16
Belagavi	Sirsi	421	11.08	17
Bangalore	Tumkur	421	11.08	18
Belagavi	Vijayapur	409	10.76	19
Mysore	Kodagu	408	10.74	20
Kalaburagi	Yadgir	408	10.74	21
Mysore	Mandya	406	10.68	22
Kalaburagi	Kalaburagi	404	10.63	23
Kalaburagi	Koppal	401	10.55	24
Belagavi	Gadag	401	10.55	25
Bangalore	Bangalore North	400	10.53	26
Bangalore	Kolar	400	10.53	27
Mysore	Chikkamagalur	393	10.34	28
Mysore	Dakshina Kannada	390	10.26	29
Bangalore	Madhugiri	388	10.21	30
Mysore	Chamaraj Nagar	361	9.50	31
Belagavi	Bagalkote	357	9.39	32
Belagavi	Dharwad	346	9.11	33
Kalaburagi	Bellary	271	7.13	34

NOTE: TOTAL QUESTIONS - 38

Total Ranking –Tool – 2: MDM and PARENTS

Division	District	Tool-2 Total Score	Tool-2- Average	Tool-2 Ranking
Mysore	Udupi	1176	69.18	1
Bangalore	Bangalore South	924	54.35	2
Belagavi	Uttara Kannada	911	53.59	3
Mysore	Chikkamagalur	856	50.35	4
Kalaburagi	Koppal	853	50.18	5
Mysore	Mandya	847	49.82	6
Mysore	Dakshina Kannada	843	49.59	7
Mysore	Chamaraj Nagar	842	49.53	8
Belagavi	Chikkodi	834	49.06	9
Belagavi	Dharwad	831	48.88	10
Bangalore	Bangalore Rural	828	48.71	11
Bangalore	Shivamogga	821	48.29	12
Bangalore	Chitradurga	818	48.12	13
Bangalore	Davanagere	815	47.94	14
Mysore	Mysore	815	47.94	15
Belagavi	Belagavi	815	47.94	16
Kalaburagi	Kalaburagi	812	47.76	17
Kalaburagi	Raichur	810	47.65	18
Kalaburagi	Yadagir	804	47.29	19
Bangalore	Tumkur	801	47.12	20
Belagavi	Vijayapur	801	47.12	21
Bangalore	Madhugiri	797	46.88	22
Mysore	Hassan	790	46.47	23
Bangalore	Bangalore North	790	46.47	24
Mysore	Kodagu	786	46.24	25
Belagavi	Gadag	784	46.12	26
Kalaburagi	Bidar	781	45.94	27
Belagavi	Bagalkote	780	45.88	28
Kalaburagi	Bellary	779	45.82	29
Bangalore	Ramanagar	771	45.35	30
Bangalore	Kolar	763	44.88	31
Belagavi	Haveri	746	43.88	32
Belagavi	Sirsi	718	42.24	33
Bangalore	Chikkaballapura	711	41.82	34

NOTE: TOTAL QUESTIONS 15

Total Ranking – Tool – 3: STUDENTS and MDM

Division	District	Tool-3 Total Score	Tool-3- Average	Tool-3 Ranking
Belagavi	Haveri	2753	125.14	1
Mysore	Mandya	2607	118.50	2
Bangalore	Chitradurga	2588	117.64	3
Bangalore	Madhugiri	2568	116.73	4
Bangalore	Kolar	2471	112.32	5
Bangalore	Shivamogga	2465	112.05	6
Bangalore	Tumkur	2436	110.73	7
Belagavi	Uttara Kannada	2378	108.09	8
Belagavi	Chikkodi	2378	108.09	9
Kalaburagi	Koppal	2327	105.77	10
Belagavi	Gadag	2311	105.05	11
Kalaburagi	Yadagir	2297	104.41	12
Belagavi	Belagavi	2295	104.32	13
Bangalore	Davanagere	2291	104.14	14
Kalaburagi	Bidar	2289	104.05	15
Mysore	Hassan	2288	104.00	16
Mysore	Udupi	2282	103.73	17
Bangalore	Ramanagar	2282	103.73	18
Mysore	Chikkamagalur	2281	103.68	19
Mysore	Mysore	2270	103.18	20
Bangalore	Bangalore North	2266	103.00	21
Mysore	Chamaraj Nagar	2255	102.50	22
Bangalore	Chikkaballapura	2230	101.36	23
Kalaburagi	Kalaburagi	2227	101.23	24
Bangalore	Bangalore South	2207	100.32	25
Mysore	Dakshina Kannada	2189	99.50	26
Mysore	Kodagu	2118	96.27	27
Bangalore	Bangalore Rural	2113	96.05	28
Belagavi	Dharwad	2086	94.82	29
Belagavi	Vijayapur	2083	94.68	30
Kalaburagi	Raichur	2047	93.05	31
Belagavi	Bagalkote	1965	89.32	32
Belagavi	Sirsi	1945	88.41	33
Kalaburagi	Bellary	1818	82.64	34

NOTE: TOTAL QUESTIONS 23

**Total Ranking – All Tools (Tool- 1, 2 & 3) SCHOOLS/PARENTS/STUDENTS and
MDM – OVERALL RANKS**

Division	District	Tool-1,2 & 3 Total Score	Tool-1,2 & 3 Average	All tools Ranking
Belagavi	Haveri	3996	51.90	01
Mysore	Udupi	3890	50.52	02
Mysore	Mandya	3860	50.13	03
Bangalore	Chitradurga	3828	49.71	04
Bangalore	Madhugiri	3753	48.74	05
Belagavi	Uttara Kannada	3738	48.55	06
Bangalore	Shivamogga	3719	48.30	07
Bangalore	Tumkur	3658	47.51	08
Belagavi	Chikkodi	3639	47.26	09
Bangalore	Kolar	3634	47.19	10
Kalaburagi	Koppal	3581	46.51	11
Bangalore	Bangalore South	3575	46.43	12
Bangalore	Davanagere	3542	46.00	13
Belagavi	Belagavi	3537	45.94	14
Mysore	Chikkamagalur	3530	45.84	15
Mysore	Hassan	3527	45.81	16
Mysore	Mysore	3512	45.61	17
Kalaburagi	Yadagir	3509	45.57	18
Belagavi	Gadag	3496	45.40	19
Kalaburagi	Bidar	3492	45.35	20
Bangalore	Ramanagar	3486	45.27	21
Mysore	Chamaraj Nagar	3458	44.91	22
Bangalore	Bangalore North	3456	44.88	23
Kalaburagi	Kalaburagi	3443	44.71	24
Mysore	Dakshina Kannada	3422	44.44	25
Bangalore	Chikkaballapura	3379	43.88	26
Bangalore	Bangalore Rural	3364	43.69	27
Mysore	Kodagu	3312	43.01	28
Belagavi	Vijayapur	3293	42.77	29
Kalaburagi	Raichur	3284	42.65	30
Belagavi	Dharwad	3263	42.38	31
Belagavi	Bagalkote	3102	40.29	32
Belagavi	Sirsi	3084	40.05	33
Kalaburagi	Bellary	2868	37.25	34

NOTE: TOTAL QUESTIONS 38+15+23 =76

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ANNEXURE XI

Demand Estimation of Milk/MDM

Sl. No.	Districts	Direct from School	Through CRPs	No Information
1	Bagalkote	✓ (1)	0 (1)	-
2	Bangalore	-	-	✓
3	Bangalore Rural	-	✓	-
4	Belagavi	✓	✓	-
5	Chikkodi	✓	✓	=
6	Bellary	-	✓	-
7	Bidar	-	✓	-
8	Chamarajanagar	-	-	✓
9	Chikmagalur	-	✓	-
10	Chitradurga	-	✓	-
11	Dharwad	✓	✓	-
12	Haveri	-	-	✓
13	Kolar	-	-	✓
14	Mandya	-	✓	-
15	Raichur	✓	-	-
16	Ramanagara	✓ (1)	✓ (2)	-
17	Udupi	✓ (1)	(1)	-
18	Uttara Kannada	-	-	✓
19	Vijayapura	-	-	✓
20	Yadgir	-	✓	-
	Total	8	12	5

Note:

6 Districts, Double count → Belagavi, Chikkodi, Dharwad, Chikmagalore, Ramanagar, Uttara Kannada --- Both the lists.

5 districts – No Information – BNG, Chamarajanagar, Haveri, Kolar, Vijayapura.

Schools Direct → 2 Districts; CRP Direct → 7 districts.

ANNEXURE XII
COVERAGE OF SCHOOLS AND STUDENTS BY NGO-2019-20

Sl. No.	Districts	Schools			Students			No. of NGO's
		Government	Aided	Total	Government	Aided	Total	
1.	Bangalore City	1420	595	2015	173095	131793	304888	15
2.	Dharwad	870	233	1103	135645	61457	197102	02
3.	Belagavi	686	266	952	104820	70335	175155	11
4.	Bellary	465	73	538	104863	22672	127535	01
5.	Kalburgi	85	128	213	11673	23823	35496	12
6.	Mysuru	91	97	188	10389	10577	20996	01
7.	Dakshina Kannada	96	41	137	9364	5059	14423	01
8.	Chamarajanagara	61	12	73	5857	1591	7448	01
9.	Haveri	18	55	73	2309	10025	12334	03
10.	Bagalkote	59	10	69	12273	2790	15063	05
11.	Yadgiri	45	09	54	9866	2431	12297	13
12.	Chikkaballapura	27	11	38	5869	2731	8600	01
13.	Ramanagara	18	02	20	1259	835	2094	01
14.	Uttara Kannada	11	06	17	3780	1907	5687	03
	STATE TOTAL	3952	1538	5490	591062	348026	939118	70

Notes:

- Some NGOs are serving more than one taluka in a district and their names have appeared more than once. In the total count here, they are treated independently while in Government record, double count is not taken. Hence, in the count here there are 71 NGOs for all 3 years 2017-18, 2018-19 and 2019-20, while in Government data they are counted as 66 and 68. This anomaly may be noted.

- How is it that during the 2 years under reference, 2017-18 and 2018-19, the total number of schools covered and students covered is the same, for all districts where NGOs are working, for both Government and Private schools and total schools, for each NGO and for all NGO in the State. Not a (single digit) variation is there.

Either the data maintained at the JD/MDM office is not updated or accepted as reported by the NGOs. Is this an issue of significance that merits attention in an evaluation study of MDM? Yes, it is, because, reimbursement of expenditures of NGOs is calculated on the basis of coverage of students. Department may like to look into this amusing fact in greater details.

- Further, it is observed from 2019-20 data on NGOs, as provided by the Office of the JD/MDM that number of schools covered by them is reduced by 49 schools which are private-aided, 48 schools which are government sector (Government + Corporation) and a total reduction of 97 schools in 2018-19. However, number of students covered has increased from 9,31,130 to 9,39,118, an increase of 7,938 students from 2018-19 to 2019-20, even with a decrease of 97 schools. Is everything in place, things as they can be? Fine, if it is to. Otherwise, the Department can look into this, as there are financial implications. Again, it is reiterated that NGOs are rendering a valuable service. No doubt about it.

STUDY SAMPLE – NGOs – DETAILS, 2019-20

Sl. No.	Districts	No. of Schools			Students			Total
		Aided	Government	Total	LPS	HPS	HS	
1.	Bangalore	261	910	1171	81280	44272	35446	160998
2.	Dharwad	62	721	783	70047	41578	19469	131094
3.	Belagavi (i)	59	124	183	14275	10137	10975	35387
4.	Belagavi (ii)	21	53	74	2957	4322	5788	13067
5.	Belagavi (iii)	12	36	48	3561	3759	4484	11804
6.	Kalburgi (i)	43	34	77	1900	779	6390	9069
7.	Mysuru	23	21	44	2400	1913	1472	5785
8.	Kalburgi (ii)	21	03	24	2076	819	880	3775
9.	Yadgir (i)	02	03	05	25	516	1050	1591
10.	Yadgir (ii)	00	03	03	00	192	449	641
	TOTAL	504	1908	2412	178521	108287	86403	373211

[A] Aided: Government < Students

21: 79

[B] LPS : HPS : HS < Students

48: 29 : 23

Notes:

1. The 10 NGOs studied herein serve 3,73,211 students of 2,410 schools in 6 districts namely, Bangalore (43 per cent), Dharwad (35 per cent); other 4 districts (22 per cent). In terms of students covered, there are large, medium and small NGOs.
2. Ratios of private aided to government schools covered is around 2 : 8.
3. Of the total schools covered, by these 10 NGOs, 48 per cent are from 1 to 5 (LPS) standards, 29 per cent and 23 per cent, total 52 per cent are from HPS and HS.

Concern:

1. The ratios of private aided to government schools served is acceptable, from the view of total ratio of such schools in the State.
2. The unit cost of MDM differs across 1 to 5 and 6 to 10 standards. It is less for 1 to 5 standards. It is believed that the Office of the JD (MDM) keeps in view the proportion of 1 to 5 and 6 to 10 students covered by an NGO, not total students, while calculating payments/reimbursements to NGOs.
3. All 10 NGOs prepare food at a central kitchen and carry food to schools.

LIST OF NUMBER OF NGOS IN KARNATAKA STATE

Sl. No.	Districts	No. of NGOs	No. of Schools	No. of Students (in Lakhs) Served
1	Bangalore Urban [Bangalore North + South]	15	2104	291101
2	Dharwad	2	1103	198602
3	Belagavi	11	954	176625
4	Bellary	1	538	130035
5.	Kalburgi	12	221	35555
6.	Chamarajnagar	1	188	21166
7.	Bagalkote	5	69	15063
8.	Dakshina Kannada	1	137	14423
9	Haveri	2	73	12434
10	Yadgiri	13	52	12297
11	Chikkaballapura	3	38	8600
12	Mysore	3	17	5687
13	Uttara Kannada	3	17	5687
14	Ramanagara	1	20	2094
	TOTAL STATE	73	5531	929369

Source: Department of Education, Government of Karnataka, 2019, website.

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Annexure XIII : ಪರಿಷ್ಕೃತ ಆಹಾರ ಸೂಚಿತ ಪಟ್ಟಿ

ಕ್ರ.ಸಂ	ದಿನ	ಊಟದ ವಿಧ	ಬಿಸಿಯೂಟಕ್ಕೆ ಬಳಸಬೇಕಾದ ಸೊಪ್ಪು ಮತ್ತು ತರಕಾರಿ
1	ಸೋಮವಾರ	ಅನ್ನ, ಸೊಪ್ಪು ಮತ್ತು ತರಕಾರಿ ಸಾಂಬಾರು	ಆಲೂಗೆಡ್ಡೆ, ಈರುಳ್ಳಿ, ಟೊಮ್ಯಾಟೊ, ಬದನೆಕಾಯಿ ಮತ್ತು ಸೊಪ್ಪು (ಪಾಲಕ್, ಮೆಂತ್ಯೆ, ದಂಟು, ಹರಿವೆ, ಸಬ್ಬಸಿಗಿ, ಬಸಲೆ ಇತ್ಯಾದಿ)
2	ಮಂಗಳವಾರ	ತರಕಾರಿ ಪಲಾವ್ ಮತ್ತು ದಾಲ್ ತೊವ್ವೆ ಅಥವಾ ಟೊಮ್ಯಾಟೊ ಬಾತ್ ಮತ್ತು ತರಕಾರಿ ಪಲ್ಯ	ತರಕಾರಿ ಪಲಾವ್ ಗೆ ಬಳಸಬೇಕಾದ ತರಕಾರಿಗಳು : ದೊಡ್ಡ ಮೆಣಸಿನಕಾಯಿ, ಹಸಿ ಬಟಾಣಿ, ಬೀನ್ಸ್, ಕ್ಯಾರೆಟ್, ಆಲೂಗೆಡ್ಡೆ, ಈರುಳ್ಳಿ, ಗೆಡ್ಡೆಕೋಸು ಹಾಗೂ ಟೊಮ್ಯಾಟೊ ದಾಲ್ ತೊವ್ವೆ : ತೊಗರಿಬೇಳೆ, ಹೆಸರುಬೇಳೆ, ಹಸಿ ಮೆಣಸಿನಕಾಯಿ, ಕೊತ್ತಂಬರಿ ಸೊಪ್ಪು ಟೊಮ್ಯಾಟೊ ಬಾತ್ ಗೆ ಬಳಸಬೇಕಾದ ತರಕಾರಿಗಳು : ಹಸಿ ಬಟಾಣಿ/ತೊಗರಿ ಕಾಳು, ಈರುಳ್ಳಿ, ಹಾಗೂ ಟೊಮ್ಯಾಟೊ. ತರಕಾರಿ ಪಲ್ಯಕ್ಕೆ ಬಳಸಬೇಕಾದ ತರಕಾರಿಗಳು : ಹುರುಳಿಕಾಯಿ, ಕ್ಯಾರೆಟ್, ಬೀನ್ಸ್, ಆಲೂಗೆಡ್ಡೆ, ಈರುಳ್ಳಿ, ಮತ್ತು ಇತರೆ ತರಕಾರಿಗಳು
3	ಬುಧವಾರ	ಅನ್ನ ಬೇಳೆ ರಸಂ ಮತ್ತು ಕಾಳು ಪಲ್ಯ / ತರಕಾರಿ ಪಲ್ಯ	ಬೇಳೆ ರಸಂ : ತೊಗರಿಬೇಳೆ ಮತ್ತು ಟೊಮ್ಯಾಟೊ. ಕಾಳು ಪಲ್ಯ : ಕಡಲೇಕಾಳು, ಹೆಸರುಕಾಳು, ಅವರೆಕಾಳು, ಅಲಸಂದೆಕಾಳು, ಬಟಾಣಿ, ಈರುಳ್ಳಿ. ತರಕಾರಿ ಪಲ್ಯ : ಸಿಹಿ ಕುಂಬಳಕಾಯಿ, ಈರುಳ್ಳಿ, ಸೋರೆಕಾಯಿ, ಹುರುಳಿಕಾಯಿ, ತೊಂಡೆಕಾಯಿ, ಹೀರೇಕಾಯಿ, ಮೂಲಂಗಿ, ನುಗ್ಗೆಕಾಯಿ, ಹಾಗೂ ಇತರೆ ತರಕಾರಿಗಳು.
4	ಗುರುವಾರ	ಅನ್ನ ಮತ್ತು ಮಿಶ್ರತರಕಾರಿ ಸಾಂಬಾರು	ಬೂದು ಕುಂಬಳ, ಕ್ಯಾರೆಟ್, ಬೀನ್ಸ್, ಆಲೂಗೆಡ್ಡೆ, ಈರುಳ್ಳಿ, ಟೊಮ್ಯಾಟೊ ಮತ್ತು ದ್ವಿದಳ ಧಾನ್ಯಗಳು
5	ಶುಕ್ರವಾರ	ಬಿಸಿ ಬೇಳೆ ಬಾತ್ ಮತ್ತು ಖಾರ ಬೂಂದಿ	ಗೆಡ್ಡೆಕೋಸು, ಕ್ಯಾರೆಟ್, ಬೀನ್ಸ್, ಆಲೂಗೆಡ್ಡೆ, ಈರುಳ್ಳಿ, ಟೊಮ್ಯಾಟೊ ಮತ್ತು ದ್ವಿದಳ ಧಾನ್ಯಗಳು.
6	ಶನಿವಾರ	ತರಕಾರಿ ಉಪ್ಪಿಟು ಅಥವಾ ಗೋಧಿ ವಾಂಗೀಬಾತ್ ಅಥವಾ ಗೋಧಿ ಪೊಂಗಲ್ ಅಥವಾ ಚಪಾತಿ ಸಾಗು ಅಥವಾ ಪೂರಿ ಸಾಗು	ಈರುಳ್ಳಿ, ಬೀನ್ಸ್, ಕ್ಯಾರೆಟ್, ಎಲೆಕೋಸು, ಸಬ್ಬಸಿಗಿ ಸೊಪ್ಪು ಮತ್ತು ಇತರೆ ದ್ವಿದಳ ಧಾನ್ಯಗಳು.

ANNEXURE XV

ANNUAL EXPENDITURE OF MID DAY MEALS SCHEME FROM 2013-14 TO 2018-19 (including KsheeraBhagya)

YEAR	SANCTION GRANT (RS IN LAKHS)	EXPENDITURE
2013-14	127943.39	119268.75
2014-15	142400.71	143281.91
2015-16	150094.30	155689.79
2016-17	164633.07	136706.49
2017-18	158736.10	132487.08
2018-19	170958.43	146476.76

ANNEXURE XVI

MDM CASE STUDIES: DESCRIPTIVE ACCOUNT

Here is a descriptive account of performance of MDM programme in the State bases on case studies. Quantitative analysis of performance is already completed through CASE STUDY Analysis, performance analysis on SoP guidelines and also through Ranking of districts. This is a qualitative analysis on various parameters of MDM management.

Two schools are selected for this qualitative analysis → Case 1 of a ‘good’ school and Case 2 of ‘Other’ school.

CASE 1: ‘Good’ School

1) Balakiyara Sarkari Padavi Purva College (High School Section), B.H Road, Shimoga town, Shimoga district has emerged as the best school in the study. DISE code is 29150539609 and performance score is 97.52 percent.

2) The school was established in 1994. It is government school, only for girls. High school (section) is in the sample 128 students take MDM/Milk daily.

There is sufficient Cookware (as per HT/Nodal teachers/cooks report). Menu display board with details is exhibited. Fire extinguisher, eating plates, drinking glasses are there – sufficient infrastructure in a dedicated kitchen.

Cooks clean kitchen, students clean their plates. There is sufficient water for cooking, washing and drinking. The school had received one time grant of Rs 5000/- by the DoE for purchase of cookware.

All the 9 registers including video cassettes on conduct of MDM is maintained in the school. Entries are there in all registers except the SDMC register.

The school has opened a dedicated account in SBI for receiving MDM contingency amount. It is received through DBT without delay. Amount is reported to be adequate for MDM/Milk management.

3) **Compliance to SoP guidelines** Rotation time table is maintained and observed. Teachers/HT report that MDM does not affect their teaching duties. Health checkup of cooking staff is completed and they have no visible health problems. Their health register is also maintained. Along with entries.

Kitchen is cleaned daily and this is supervised by the nodal teachers. HT had issued MDM provisions to cooks as per day's attendance in the morning itself.

As observed by the FIs, walls were clean, there were no cob-webs on ceiling, no lizards in kitchen, no cockroaches on floor (in kitchen), storing space was clean, eating places were clean, cooking area was dry, the sump and water tanks had been cleaned a couple of months before the day of visit (as per records)/

FEFO for all food materials was observed –oil, salt, milk powder. Marker pen had been used to indicate exit date of food materials, washing powder **had not been** separated from food materials in the storage spaces. FEFO had also been observed for tablets.

Cooks were wearing apron, kitchen windows were kept open, gas cylinder had been kept at a distance from fire/cooking place

Nodal teachers had tasted food and entered their feedback in the Taste Register. Students wash hands/eating plates before and after food. Kitchen had been cleaned before and after MDM service. Cooking cereals/ pulse were cleaned before use, likewise kitchen equipments were cleaned. Cooked food had been covered with lids. Foam generated while cooked was decanted.

During MDM service in the afternoon, food was served in small containers. Drinking water was potable. Eating place was clean. Rice used was not fortified.

HT sent day's MDM attendance to NIC after MDM service in the afternoon. HT remembers the toll free SMS number. FI reports that the day's school attendance and MDM attendance are in harmony. MDM did not affect afternoon teaching schedule. Mothers' committee members supervised MDM service. Health Checkup of children had been completed during the year (December 2018). Children had been issued Folic Acid (**not as per norms**), Vitamin A Tablets (as per norms) and deworming tablets (**not** as per norms).

4) School does not face nay problem in regard to water, security, school (MDM) hygiene maintenance and availability of cooks.

MDM supplies are of good quality, adequate and timely.

5) There are no dropouts and learning levels of children are highly satisfactory (School results/LAT tests)

6) Parents/Students are ‘very happy’ about the perceived values of milk/MDM services especially the milk service.

CASE 2: ‘Other’ School

This is Government Higher Primary Kannada Medium School located at Shivabasavanagara in Belagavi town of Belagavi taluk of Belagavi district. The school had been established in 1995-96. It is a co-education school. DISE code is 29010304702. Quantitative score of this school on MDM performance is 53.72 percent. LPS/HPS are there. There are 422 students. 52 percent being girls. Average Milk/MDM attendance is over 90 percent, 381 students. NGO services the MDM.

- 1) Menu display without day and date details is there. [HT] cooks report that kitchen ware, eating plates/drinking glasses are **not in adequate** stock. Children bring from home.
- 2) Kitchen is cleaned by cooks; children clean their plates; sufficient water is there; school has a kitchen garden that supplements MDM service. The school has **not received** Rs 5000/- one time **grant** for purchase of cookware.
- 3) The school maintains **only 3 out of 9** MDM **registers**-Taste, MDM attendance and tablets distribution.
- 4) School has opened a Bank account and gets MDM contingency amount through DBT. **Bank name is not revealed.**
- 5) **SoP:** Rotation system is followed for nodal teachers, properly. HT/ Teachers report (as observed also) that MDM cuts into afternoon classes by a few minutes. Water is potable and adequate for cooking/drinking/washing.

Health checkup of cooks has **not been done**. Health register is also not maintained. There are no visible health problems for cooks

Nodal teachers had checked kitchen hygiene and issued MDM materials needed for the day.

Fire prevention equipment **not kept** near the kitchen.

Walls are **dirty, cob-webs observed**, no lizards, **cockroaches** observed. HT doesn't remember the time of getting sump /Tanks cleaned (last time).

FEFO for MDM materials/tablets **not observed**. Kitchen windows are kept open, gas cylinder is at a distance, nodal teachers has tasted day's food and recorded feedback.

Kitchen is cleaned before/after MDM; all children wash hands before/after food. Cooking materials and equipment are cleaned before use. Vegetables are not washed with turmeric /salt powder. Cooked food is covered with lids.

Food is served in small containers. Eating place is clean.

HT sends SMS to NIC information on day's MDM attendance; **does not remember** toll free number. MDM attendance matches with school attendance (FI observation) MC members were present during MDM service.

Health card is issued to every student. Entries are **not observed**. Folic acid is given as per norms. This is also true of vitamin A and de-worming tablets.

6) There are no problems in regard to water, safety of MDM materials, MDM hygiene maintenance and availability of cooks.

7) There are no problem of drop-outs, but regular attendance of children is a marginal problem (insignificant proportion). Learning levels of children are 'satisfactory'.

8) Parents/students are 'very happy' about the values of milk/MDM.

Additional Notes: this school has 1 to 7 standards. A local doctor has 'adopted' the school. Most of the children belong to scheduled tribes. The doctor provides plantain fruit, sprouted corns to children daily in the evening. Once in a week, they are also served sweet pan cake (Holige).

Reference Page No. 124

ANNEXURE XVII

MDM HEALTH AND NUTRITION CARE

Health and Nutrition Outcomes from Milk/MDM Schemes

Milk/MDM address nutrition and health needs of children 6 to 19 years, under the Rastriya Bala Swathya Karyakrama (RBSK). Basically the schemes prevent severe anaemia (anemia), severe anaemic malnutrition (SAM) and anaemia in general. The scheme is intended to increase the density of hemoglobin (hb count) in blood. Normal hb count reduces fatigue and promotes concentration for learning [Iron content in blood - hb count – red blood cells; It should be minimum 14 gms per deciliter. Severe and persistent anaemia leads to kidney failure. Iron – poor diet leads to anaemia]. Milk/MDM scheme, balanced diet can reduce incidence of anaemia, promote nutrition levels and help learning and health among children (especially fitness levels). Data from health department on severe anaemia and severe acute malnutrition (SAM) among children 6 to 18 years for the period 2017-18 to 2019-20 is available. This is the age-group served by Milk/MDM scheme of the government [Education Department/CPI/JD (MDM)]. Data are analysed/processed here, in this report.

The Department of Education, Office of the Joint Director (MDM), coordinates with the Health Department for supply of iron tablets IFA pink for students of classes 1 to 5 and IFA Blue for students of classes 6 to 10. Pink tablets are of lower strength – 45 mg of iron and 400 mg of folic acid. Blue tablets are of higher strength – 100 mg of iron and 500 mg of folic acid. Tablets are to be given once a week for consumption immediately after the mid-day lunch. Distribution for the year 2019-20 of these tablets is processed in the report.

Likewise, de-worming tablets are also issued, once in 6 months, for all students. Worms like hook worm and flukes eat away blood leading to blood loss. These tablets kill the worms, prevent blood loss and control anaemia. 2019-20 state level up-date of distribution of de-worming tablets is also processed in the report.

Like this health care (tablets) and nutritional support (MDM/Milk) regulate incidence of anaemia. Blood count (hb) norms are as follows:

No anaemia	5 to 11 years > 11 count
	12 to 19 years > 12 count
Moderate anaemia	8 to 10 count
Severe anaemia	< 8 hb count in blood

Department of Education also engages in ‘Referral Services’ for severely anaemic children. Data is processed in the report.

Distribution of IFA Tablets under MDM Scheme
2019 – 20

State Update	Number distributed [Children] [in Lakhs]		
Numbers (Children)	PINK		
Classes 1 to 5	B	G	T
Numbers (Children)	13.8	14.8	28.6
	BLUE		
	B	G	T
Classes 6 to 10	13.3	13.3	26.6
PU Stage	3.0	3.6	6.6
SW Girls Hostels	-	0.2	0.2
(All) Total (Pink + Blue	-	-	62.0
Total School Stage [1 to 10]	27.1	28.1	55.2

Source: Office of the JD (MDM).

A total of 62.0 lakh children are served IFA tablets of which 55.2 lakhs children are in 1 to 10 standards.

Distribution of De-Worming Tablets under MDM Scheme (2019-20)

A total of 60.81 lakh children were given de-worming tablets by the Department across 30 revenue districts of the State, 90.42 per cent achievement.

Source: Office of the JD (MDM)

Outcomes of Health/Nutritional Support to Children under MDM Scheme

State Level update (Source of Data: RBSK Scheme/JD (MDM))

(a) Severe Anaemia – 6 to 18 years under RBSK programme: Incidence (No. of Children)

2017-18	2018-19	2019-20	% Reduction 2017-18 to 2019-20
10685	9242	4228	60.43

There are 55 lakh children who are under the MDM scheme. RBSK survey spotted 10685 children who had severe anaemia in 2017-18, 0.19 per cent of total students. This figure got reduced to 0.08 per cent in a span of 2 years. This data is for ‘Severe Anaemia’.

The NFHS 2019-20 data for Karnataka State for “Anaemia” reveals that in 15-19 years girls, anaemia is around 26 per cent. The two sets of data, read together indicates the positive impact of MDM on nutrition as well as need for extension of MDM to include MBF, Morning Breakfast. SDG goals on poverty/food security, health and reduction of regional disparities in health and nutrition, target zero per cent (by 2030) anaemia in the State. MBF along with current milk and MDM schemes including distribution of tablets would facilitate this.

There is another parameter known as SAM, severely acute malnutrition. Incidence is reported to be 1257 among 55 lakh children in 2017-18. It got reduced to 41 in 2019-20, due to impact of MDM. 19 out of 30 districts reported SAM in 2017-18. 1091 out of 1257 was in 04 districts, viz., Davanagere, Mysuru, Bellari and BBMP areas (Bengaluru). The incidence of 41 was in 4 out of 30 revenue districts of the State in 2019-20 across Vijayapura (21), Bagalkote (12), Kalburgi (06) and Bangalore Urban (02).

RBSK Health Screening (Referral) Services: 66 lakh children were targeted for health check-up during 2019-20. 58 lakh children, 88 per cent, was the coverage; out of them nearly 3 lakh children had significant health care problems (over 5 per cent). 2.5 lakh out of 3 lakh children got treatment for their health care concerns (83 per cent fit cases). However, in regard to testing of eyes, 53.71 lakh children was the coverage (92 per cent coverage). As a follow up, 86,220 children who needed spectacles were given spectacles by the health department. Platform for all these services and the RBSK programme is the MDM scheme and the Government schools.

Regional Analysis

NFHS data on malnutrition refers to 2015-16. Data presented in this report refers to

- (iii). NFHS data of 2019-20 and
- (iv). RBSK data provided by the DSERT for the year 2019-20. Here is data across regions, specifically the HK Region.
- (d) There are 55 lakh children under MDM scheme. NFHS data does not specifically address 6 to 16 years which is the Milk/MDM catchment range, 1 to 10 standards of schooling of this study [Anganwadi is outside the scope of ToR]. RBSK data covers 6 to 16 years range.

RBSK identified 10685 children who had severe anaemia, 0.19 percent of total students in 2017-18. Within a span of 2 years this figure got reduced to 4228 students, 0.076 percent; a **clear impact of milk/MDM services**.

It is surmised that anaemia will get reduced to zero well before 2020, the short term target year of SDG goals 3/4/10.

- (e) There is another parameter known as severely acute Malnutrition, SAM. The incidence of SAM in 2017-18, as per RBSK data was 1257 among 55 lakh children in 2017-18. It got reduced to 41 cases by 2019-20. **This can be definitely attributed to impact of Milk/MDM**
- (f) Severely Acute Malnutrition, SAM was in 19 out of 30 revenue districts (1257 cases) in 2017-18. Due to impact of Milk/MDM, is got confined to only 4 out of 30 revenue districts (41 cases).

Regional spread of SAM (RBSK data)

It is noted that out of 6 districts of HK region, viz; Bidar, Bellary, Kalburgi, Koppal, Raichur and Yadgiri, incidence of ‘anaemia’ in 2017-18 was noted in only one district.

2017-18: 1257 cases in 30 districts; 87 percent in 04 districts → [SAM] Mysuru (Mysore division). Davanagere and Bengaluru city (Bengaluru division), Bellary (Kalburgi division).

However, SAM got reduced to 41 cases by 2019-20, 97 percent reduction in 2 years, due to **clear impact of Milk/MDM scheme.**

Incidence of SAM in Bellary/HK region 2019-20 became zero. Other districts had very low incidence in 2017-18 and became zero by 2019-20, except in Kalaburgi district of HK region where 06 cases were reported (out of total 41 cases in state). Bagalkote (12) and Vijayapura (21) of Belgaum division reported a total of 33 out of 41 cases (over 80 percent of total cases in 2019-20). Bengaluru city reported 02 cases.

It is clear that out of 06 HK Division/region districts, it is only Kalburgi which reported 06 cases of SAM (out of total 41 cases in State).

There is no incidence of SAM in 2019-20 in Bidar, Yadgiri, Koppal, Raichur and Bellary.

Milk/MDM has deep impact on SAM in HK region as revealed in status in 2019-20 and improvements from 2017-18 to 2019-20 (RBSK data / DSERT)

Nutrition care under Milk/MDM scheme in the State has been quite effective so far. It will continue to be so and facilitate full realization of SDG goals 3/4/10 by 2020

Reference: 140 &174

ANNEXURE XVIII

FEASIBILITY OF MORNING BREAKFAST SCHEME (MBF) AS AN ADJUNCT TO MDM IN KARNATAKA STATE

Sri Sathya Sai Annapoorna Trust, known in short form as SAI has served morning breakfast to over 50 million children of 6,000 Government schools across 17 States, 03 Union Territories of India (data upto 2019-20). Located in Muddenahalli, Chikkaballapur district in Karnataka, SAI serves morning breakfast to 26,489 children of 301 government schools across 6 districts of the State, viz., Chikkaballapur (175 schools, 10,312 children), Kalburgi (75 schools, 9,922 children), Bengaluru Rural (30 schools, 3,030 children), Dakshina Kannada (06 schools, 1,922 children), Bengaluru Urban (11 schools, 1,245 children) and Mandya (1 school, 58 children). Children in need for MBF are identified and served [2019-20 data].

SAI is a non-profit NGO supported by BENEVITY (a global conglomerate of Corporate Houses) and others. SAI was awarded Dr APJ Kalam award for excellence on 27.07.2020. SAI can be reached at mail id [info@annapoorna.org.in] or 91 9845 351 249 (M). SAI's vision is to build the nation through Nutrition, Health Care and Education.

SAI is a very good model of NGO participation in school education and development for serving MBF. SAI work needs showcasing and advocacy. SAI has shown that MBF is feasible. Serving MBF to all government school education (those who need it) will be an ideal proportion.

SAI Nutrition/Health Supplement - SAISURE

SAI also provides a multigrain Vitamin mix, multi-nutrition supplement to children which is to be served with milk. Milk is served under the Ksheerabhagya scheme so all government school children before the school begins.

Saisure is a Malt-based composition. It is approved by FASSI and CFTRI. It contains Soya flour, moong dhal, whey, a little rice and other supplements. It is issued in 3 flavors – Vanilla, Chocolate and Almond.

Saisure is served to 3,34,799 students of 4,715 schools across 15 districts of the State.

94 per cent of schools are in the 05 districts of the State, viz., Chikkaballapura (1,380 schools), Ramanagara (1,343), Tumkur (1,060), Hubli/Dharwad (372) and Bangalore Urban (291 schools). Likewise, out of 3,34,799 students, 96 per cent students are in 06 districts of the State, viz., Tumkur (78,298), Hubli-Dharwad (71,116), Chikkaballapura (67,560), Ramanagara (57,725), Bangalore Urban (38,979) and Kalburgi (7,433 students).

A pilot study of the impact of the scheme – Saisure in milk, showed that hemoglobin levels increased by 6 to 13 per cent in the experimental group. Saisure gives micronutrients.

Reference Page No. 57 & 139

ANNEXURE XIX

CALORIFIC VALUE OF MILK, MDM AND UNIT COSTS

MDM: Mid-day meal is a wholesome food which contributes to calories, carbohydrates, proteins, fibers (iron), minerals and vitamins. As children consume the meal in differential quantities, unlike milk which is 150 ml irrespective of age of the child and consumption capacity, it is difficult to calculate contribution of MDM to various inputs of nutrition. It varies across children, across boys and girls. Some children eat less while others may eat more. However, unit consumption and unit costs of MDM are estimated/calculated at the same rate for all children with a 2 slab differential for children 6 to 11 (1 to 5 standards) and 11 to 16 (6 to 11 standards) years of age.

Milk: Milk is served in the morning for all 1 to 10 standard government sector school children. 150 ml milk is served at a unit cost of Rs.5.54 + GST. The cost break-up is Rs.4.95 + GST for the milk powder, Rs.0.32 for sugar, Rs.0.15 for fuel and Rs.0.12 for other services.

Milk contains calories, protein, sugar, carbohydrates (carbs), fat and water, Nutrition needs of children in general and fulfillment under the Ksheera Bhagya scheme is given here. Calculus is for 150 ml. milk.

Milk also carries minerals – calcium, phosphorous, (good for bones/teeth), Vitamin B 12 (for anaemia prevention), Vitamin A (for promoting immunity, prevention of skin problems, for good eyesight).

Milk has immense health and nutrition benefits for children. Most of the children who attend government schools are from homes who cannot afford this wholesome food.

Table: MDM Food Grains and Costs

Sl. No.	Food Grains	1 to 5 Standard		6 to 10 Standards	
		Quantity (in gms)	Cost (in Rs.)	Quantity (in gms)	Cost (in Rs.)
1.	Rice	100	-	150	-
2.	Dal	20	2.00	30	2.95

3.	Vegetables	50	1.36	75	2.04
4.	Oil	05	0.42	7.5	0.67
5.	D F Salt	02	0.03	4	0.06
6.	Fuel	-	0.79	-	1.19
7.	Condiments	-	0.37	-	0.54
	Total	-	4.97	-	7.45

Rice is provided under the Anna Bhagya Scheme (not costed)

Calorific Values of MDM

Standards	Calories	Protein (gms)
I to V standards	450	12
VI to X standards	700	20
% Fulfillment		
1 to 5 standards	30 per cent	25 to 30 per cent
6 to 10 standards		

Plus: Minerals/Vitamins, Carbs, fat etc.

It is observed that Milk/MDM scheme satisfies 40 to 45 per cent of health and nutrition needs of children.

Reference Page No. 51

ANNEXURE XX

GIS TAG FOR MILK PRODUCTS

Milk production, procurement and distribution is a national level, mega scale, complex and gigantic exercise. As such, grassroots level monitoring of quality of milk/milk products (e.g.: milk powder supplied to schools) is a highly challenging task. Milk powder supplied from far off places, supplied after a long gestation of time from the time of production, as well as the powder supplied being of low quality would result in the poor quality of milk being supplied to children everyday under the Ksheera Bhagya scheme. It may lead to supply of thin, watery and outdated milk from the milk powder supplied to schools.

How can schools who receive the milk powder ensure that they receive ‘good’ quality of milk/milk powder? In fact the ‘goodness’ in the quality of milk/milk powder depends on the quality of the cattle feed given to the cows, health status of the cows and artificial insemination services to the cattle. These are referred to as technical inputs in cattle management.

The solution, way-out for getting ‘good’ quality milk /milk powder, which is not thin/watery/ or smelling is to ensure that the milk/ milk powder supplied has a GIS tag [Geographical Information System tag].

GIS for milk/milk products including milk powder supplied to schools is given to the Milk Unions after testing for technical quality. It is /can be renewed periodically/annually.

GIS tag is given by the NDDB, National Dairy Development Board, Anand, Gujarath, free of cost to Milk Unions.

NDDB has branches all over the country, outlets in every region/district.

After testing the quality of milk/milk products supplied by the district cooperative society or KMF milk unions, the NDDB gives a tag of certification of quality of milk/milk powder (supplied to schools) to the union. Schools can insist on this tag while they receive the milk/milk powder from their respective societies/milk unions. This will ensure that they can get milk powder from their nearest distribution centre, the powder has sufficient shelf life and its technical quality has been certified. Schools can maintain a periodical record of

supplies along with GIS details. Students benefit from the scheme to the maximum level. There can be no complaints.

Adopt GIS (Geographical Information System) tag for milk products to ensure quality of milk supplied to schools. Fix a regular time for supply of milk/milk products.

Reference 140

ANNEXURE XXI

PHOTOS/IMAGES OF MDM SCHEME IN THE SAMPLE SCHOOLS





**EVALUATION OF IMPACT OF MID-DAY MEALS SCHEME IN KARNATAKA
STATE (2016-17)**

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