

# Study on Mid-Day-Meal Analytics Scheme for School Children

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**Abstract:** - This paper focuses on the Mid-day Meal Scheme may be a school meal programme of the govt. of India and is meant to enhance the nutritional standing of school-age children nationwide. Student teams are expected to create machine vision solution to watch the activities under the Mid-day Meal Scheme. Solution Expected: because the Mid-Day Meal program runs in schools across the country, continuous auditing and monitoring of the program could be challenging. Typical Auditing and Monitoring could involve: Ensuring number of scholars that took meal is same number reported. Lunch served is same as published/reported menu. Alerting just in case of discrepancy and capability to centrally see past records / proof (numbers and visual) for any school. To style modules supported the above-mentioned activities, video feed shall be provided to the scholar teams.

**Key Words:** — Mid-Meal, School, Children, Lunch.

## I. INTRODUCTION

The National Programme of Mid-Day Meal in schools, popularly called the Mid-Day Meal Scheme (MDMS) is one among the key flagship programmes designed to enhance the nutritional status of youngsters within the age bracket of 6 to 14 years and studying in primary and upper primary classes.

The Programme encourages children to return to high school and participate within the learning process without fear for his or her meal. The Programme was conceived on the idea of the philosophy that “when children need to sit in school with empty stomachs, they can’t specialize in learning”.

The programme in its holistic manner helps to reinforce enrolment, attendance and retention of faculty children while simultaneously contribute to their physical and mental development. Mid-Day Meal Scheme may be a centrally sponsored programme [5][6][7].

### A. Origin of the Scheme

Mid-Day Meal scheme was launched as a Centrally Sponsored Programme on the 15<sup>th</sup> of August 1995 by Government of India. The scheme originally covered the youngsters of primary schools (studying in school I to V) in Government, Local Body controlled and Government Aided Schools. The Scheme, since then had undergone several revisions like the revisions in September 2004, July 2006, October 2007, July 2009 and February 2019. Food norms have undergone drastic revisions to make sure balanced and nutritious diet to children. With effect from 1.4.2018, upper primary children are brought under the ambit of the Scheme, Today, the Scheme ensures a nutritional norm of 450 calories and 12 grams of protein per meal per day for primary children

and 700 calories and 20 grams of protein for upper primary children. Food norms are revised accordingly by fixing 100 grams of food grains and 20 grams of pulses to primary children and 150 grams of food grains and 30 grams of pulses to upper primary children.

### B. Organizational Structure

Process of Plan Formulation at State and District level. A bottom up approach is taken for plan formulation for MDM. The flow of data for plan formulation starts from the varsity level. The varsity sends the proposal to dam offices. The Block office consolidates /scrutinizes the proposal and sends to Collector at District level, who after compilation / scrutinizing forwards it to Commissioner of MDM. the proposal received from concerned districts is compiled/ scrutinized as per norms prescribed by Government of India, and sent an equivalent to Department of Education for approval. After approving the plan, the government forwards an equivalent to Government of India. District level they're include are,

### C. Management Structure at District Level (For MDM)

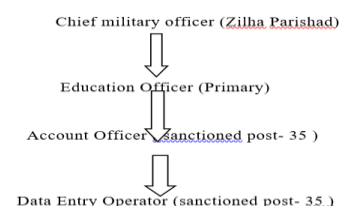


Fig.1. Management Structure at District Level (for MDM)

#### D. Financial Assistance to Colleges

Department of Agriculture provides an amount of Rs.3500/- to colleges for fixing agricultural clubs. Department of Agriculture provides financial assistance at the speed of Rs.4000/- to those schools having 10 cents of land available for cultivation of vegetables. Functional assistance @ Rs. 1000/- is additionally provided for fixing irrigation units in schools. Seed kits/Seedlings, potted seedlings etc. are distributed to colleges freed from cost.

## II. RELATED WORK

The researcher acknowledged that the foremost appropriate to the research topic handling student are paraend complaint using Android Architecture was Android Based Complaint Management System Was: Teams are expected to get their own database supported the region of interest and features they want to extract to develop ML models. Alongside the expectations of Auditing & Monitoring the scholar teams should also propose innovative ideas (backed with research) to extract additional information from above snapshots / photos. While designing the whole system, teams may explore the scalability factor of the system. To style modules supported the above-mentioned activities, video feed shall be provided to the scholar teams. These feeds shall come from the Meraki security camera (The Cisco Meraki MV product family may be a line of indoor and outdoor-networked cameras that are exceptionally simple to deploy and configure, thanks to their integration into the Meraki Dashboard and their use of cloud augmented edge storage. The MV family eliminates the complex and dear hardware required by traditional solutions, thereby removing the restrictions typically placed on video surveillance deployments). Typically, these shall come from the particular /imitated site i.e. schools, food-serving area etc. Student teams are expected to explore the capabilities of Meraki camera's inbuilt Machine learning (ML) modules and develop solutions around it [5][9][10].

## III. MODELING AND ANALYSIS

### A. Food Security Allowance

The Committee was informed that draft MDM rules under National Food Security Act, 2013 are prepared for vetting by the Ministry of Law & Justice. The representative from Ministry of WCD informed that they need also drafted rules for ICDS. However, the NFSA provides for payment of Food Security Allowance to the youngsters if the government is unable to serve the meals to them. This issue being common to MHRD and Ministry of WCD, he suggested that a joint

Committee of both the Ministries alongside Ministry of Consumer Affairs, Food & Public Distribution being the nodal Ministry could also be setup to make a decision upon the uniform modalities for payment of Food Security Allowance [8][9][10].

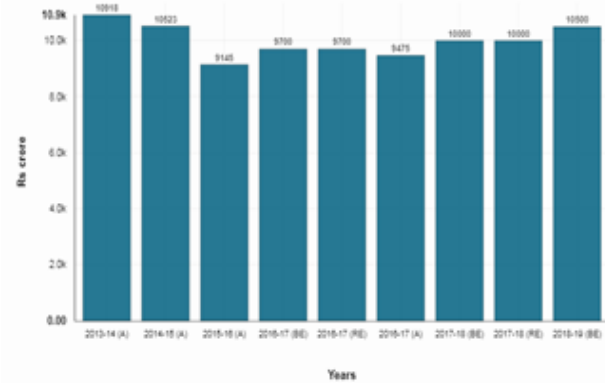


Fig.2. Mid-Day Meal Food Allowance

## IV. TESTING

### A. System Testing

System testing involves unit testing, integration testing, white-box testing, black box testing. Strategies for integration software components into a functional product include the bottom-up strategy, the top-down strategy, and sandwich strategy. Careful planning and scheduling are required to make sure that modules which will be available for integration into evolving software package when needed a significant of testing are performed for the proposed system before the system is prepared for user acceptance testing [1],[2],[3].

### B. Unit Testing

Unit testing focuses verification effort on the littlest unit of software design i.e. the module. Unit testing exercises a selected path during a module's control structure, to make sure complete coverage and maximum error detection. This test focuses on each module individually, ensuring that it functions properly as a unit. Hence, the naming is Unit Testing [1],[2],[3].

## V. RESULTS AND DISCUSSION

### A. General Information

As per Government of India Guidelines, under Mid-day Meal Scheme all the youngsters are covered studying in primary

and upper primary classes. Basic Information: (Year 2018-19)  
as illustrated in table.1. [5][6][7].

Table.1. General Information

S. No.	INDICATORS	STATUS		
1	No. of Institutions	PRY	U PRY TOTAL	TOTAL
i)	Existing Institutions	27073	16210	43283
ii)	Covered during the year	27073	16210	43283
<b>2. No. of Children</b>				
i)	Approved by MDM-PAB	2528269	2014484	4542753
ii)	Average No. of children availed MDM during 2018-19	2472071	1969357	4441428
<b>3 Coverage of youngsters as per Quarterly report (QPR)</b>				
i)	Average no. of children availed MDM as per QPR-1	2527285	2020418	4547703
ii)	Average no. of children availed MDM as per QPR-2	2526848	2020050	4546898
iii)	Average no. of children availed MDM as per QPR-3	2425043	1938157	4363200
iv)	Average no. of children availed MDM as per QPR-4	2424754	1937971	4362725
<b>4. No. of Working Days</b>				
i)	i) Approved for 2018-19	210	220	
ii)	Covered during 2018-19	210	220	
<b>5. Per unit cooking cost Per child per day (in Rs.)</b>				
AVERAGE UNIT COOKING COST PCPD		4.35	6.51	
State's contributions in cooking cost per child per day		1.74	2.60	

Review of the Performance of the scheme during 2018-19  
Coverage of children and PGI points:

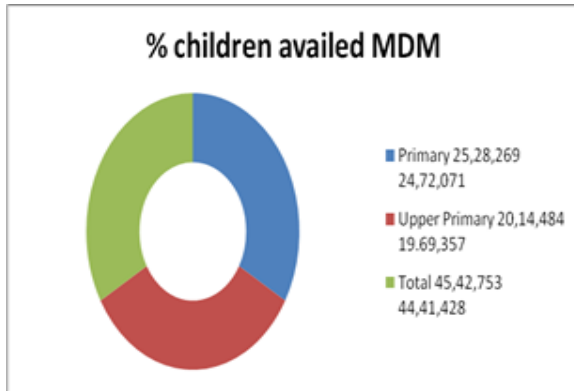


Figure.3. Coverage of youngsters and PGI points

#### B. Prescribed Nutritional Content per Meal per Child

The Mid-Day Meal Guidelines make sure that the meal is meant in such a way that child get sufficient amount of proteins, carbohydrates, also as micronutrients, like iron and vitamin B, C. The aim is to assist within the physical growth and cognitive development of youngsters. The meal comprises cooked rice or wheat (depending on the local staple), mixed with lentils or jaggery, and supplemented with oil, vegetables, fruits, nuts, eggs or dessert at the local level. The youngsters of primary classes are entitled to 100 grams of food grains, 20 grams of pulses, 50 grams of vegetables and 5 grams of oils and fats. The youngsters of upper-primary schools, on the opposite hand, are entitled to 150 grams of food grains, 30 grams of pulses, 75 grams of vegetables and seven .5 grams of oils and fats.

#### C. School nutrition (Kitchen) Garden

This learning is critical because most of the people feel that a nutrition garden requires an outsized plot of vacant land. However, the fact is that healthy vegetables, fruits etc., can be grown in pots and containers on terraces, roofs or maybe within the entrance area of the varsity.

#### D. Planning and Monitoring

The Eco clubs established within the school shall be headed by the principal /head master/head teacher. Preferably, two teachers per school and one class responsible will assist in completing activities. All the students, teachers, and parents of the youngsters could also be members of Eco clubs. A committee could also be formed at district level under the chairpersonship of district collector CEO of zilla parishad with the subsequent members:

- District Collector/CEO of zilla parishad-chairperson

- KVK in-charge from the district
- Representative from forest department
- Representative from Rural development
- Representative from Agriculture/horticulture department
- Child development project officers
- District Education officer-convenor

#### E. Procedure for Conducting the Evaluation Study of Mid-Day Meal Scheme

The National Programme of Mid-Day Meal in Schools, popularly referred to as the Mid-Day Meal Scheme (MDMS), is an ongoing Centrally-Sponsored Scheme which covers all school children studying in Classes I-VIII of state, Government-Aided, Special Training Centers including Madrasas and Maqtabas supported under SSA.

#### F. Methodology

Sampling Frame Information are going to be collected to check the varied parameters inherent within the objectives. The sampling frame will include States, Districts, Tehsils/Blocks, Villages and Schools and every unit of sampling frame are going to be selected by using representative sampling method.

#### G. Criteria for Selection of Samples

- Selection of States For the sake of administrative convenience and timely completion of fieldwork, entire country has been divided into 5 zones as given below
- Zone 1 – Punjab, Jammu & Kashmir, Bihar, Uttar Pradesh.
- Zone 2 – Andhra Pradesh, Kerala, Tamilnadu, Karnataka, Puducherry
- Zone 3 – West Bengal, Odisha, Assam, Mizoram, Jharkhand.
- Zone 4 – Maharashtra, Gujarat, Dadra & Nagar Haveli
- Zone 5 – Rajasthan, Madhya Pradesh, Chhattisgarh
- Private participation within the implementation of the programme
- The implementation of MDM is supported by some non-governmental organisations (NGOs) in various states under the public-private partnership with government, for instance, Akshaya Patra Foundation that helps in running the scheme in 12 states, Annamrita, Nandi organisation, and ISKON among

others. As per Ms. Deepa Anand, the states can collaborate with NGOs but the important thing to specialise in is to supply fresh and hot meal to children.

Table 2: private participation within the implementation of the programme

Organization	District name
Akshayapatra	Corporations of Ahmedabad
	Corporations of Bhavnagar
	Corporations of Surat
	Corporations of Jamnagar
	Corporations of Vadodara
	Gandhinagar (3 blocks)
	Vadodara Gandhinagar (3 blocks)
Nayak Foundation	Navsari District
Stree Shakti	Corporations of Ahmedabad (E)
	Corporations of Valsad (4 Blocks )
Paras Agro	Corporations of Rajkot

## VI. CONCLUSION

During this paper, we proposed the thought to make a mobile application, which may help us with registering the complaints (feedback) through online system. There does not have to get up in queues for hours. Only one click and those we can login a complaint anywhere, anytime intended. This application within the sort of idea, which can make makes complaints easier to coordinate, Monitor and resolve for the meal analytics within the government schools.

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