

CREATING AN INDEX TO ASSESS IMPLEMENTATION OF A SCHOOL NUTRITION PROGRAMME

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1 INTRODUCTION

JET evaluated a school nutrition programme implemented at scale, providing:



A nutritious meal daily to



9.1 million school children



attending primary and secondary schools in disadvantaged areas.

The programme is conceptualised primarily as an **educational intervention** aimed at:



Promoting punctual school attendance;



Alleviating short term hunger and improving concentration



Contributing to general health development.

The overall **purpose** of the programme is to improve the health and nutritional status of the poorest children (DBE and DPME 2014).

Two implementation models are followed and there are implementation variations per region.

CENTRALISED MODEL:

Food is delivered to schools by centrally-appointed and centrally-paid service providers.



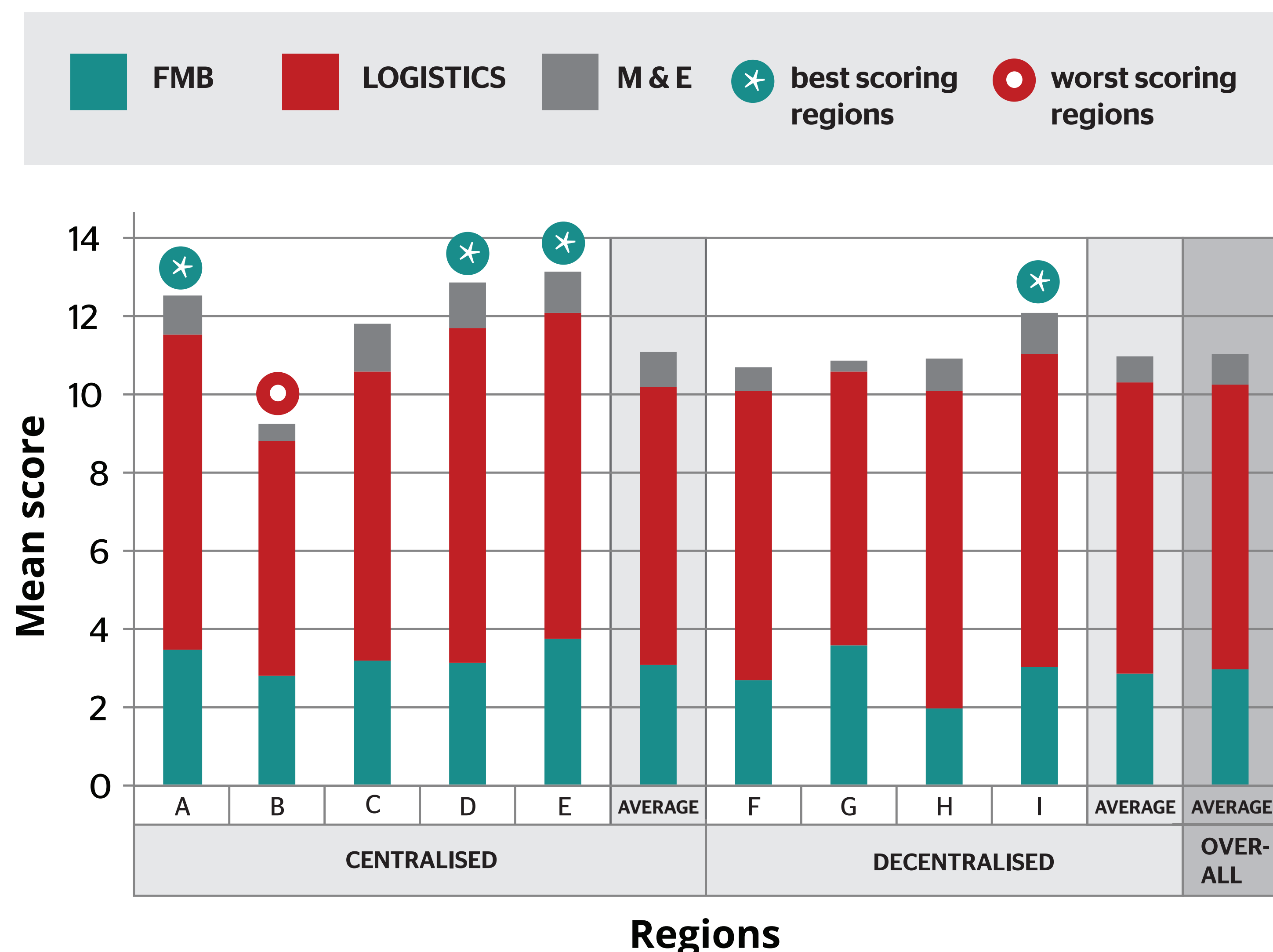
DECENTRALISED MODEL:

Money is transferred to schools who appoint their own service providers.



4 FINDINGS

The figure below presents the mean score per region, model and overall.



Three regions using the centralised model and one region using the decentralised model scored best, achieving mean scores above 12. However, there is considerable room for improvement, as the maximum score is 19. A region using the centralised model scored worst, achieving a mean score of 9.22. There was less variation amongst regions using the decentralised model. The overall mean score of each model is very similar, although the centralised model scored marginally better with a mean score of 11.05 as compared to 10.95 for the decentralised model.

Performance per region and model was disaggregated per component and sub-component (see previous table). Regions using the centralised model and one decentralised region scored slightly better in terms of food modalities and basket, whilst regions using the decentralised model and one centralised region scored slightly worse in terms of serving a nutritious meal (comprising three food groups) by 10:00 am. Regions using the decentralised model scored better in terms of procurement and logistics, specifically, disbursing funding and ordering, delivery and payment. On indicators related to food preparation and serving, regions using the centralised model performed best. Performance in indicators relating to M&E were similar for both models.

The implementation index provides a high-level overview of the extent to which learners are receiving quality meals and services (evaluation question 3). The index also assists in answering evaluation question 4 - What are the variations in implementation? - as it highlights variations between individual schools, regions and models. There is more variation between regions using the same model than between models, indicating that region-specific factors account for the greatest part of the differences. This confirms the literature review findings that an array of options are possible in the logistics and implementation of school nutrition programmes, that contextual factors matter and that no particular model is better (Drake et al, 2016).

2 ABOUT THE EVALUATION

The evaluation assessed whether the programme is being implemented in a way that is likely to result in significant health and educational benefits (DBE and DPME 2014).

The key evaluation questions were:

- Is the programme being implemented as planned?
- Are procedures effective for timely delivery?
- Are learners receiving quality meals and services?
- What are the variations in implementation?
- Is the programme reaching intended beneficiaries?
- Is there evidence that the programme enhances learning behaviour (likely impact of the programme)?
- Should it be upscaled? How can it be improved?
- Are there other spinoffs of the programme?

A mixed methods evaluation design was followed, comprising various data collection methods:

- A document and literature review;
- Refinement of the programme theory;
- Interviews with key government stakeholders and partners at various levels;
- Surveys with various school-level stakeholders (principals, programme co-ordinators, volunteer food handlers (VFHs), school governing body (SGB) members and learners) and observations in a representative sample of schools;
- Surveys with service providers;
- Analysis of cost and output data.

5 DISCUSSION

The index was developed by the evaluation team in the final stages of data analysis. The commissioners of the evaluation and programme implementers were not substantively engaged. The index is therefore tentative and requires refinement and validation, including face validation by members of the programme implementation team and experts - Are the indicators and the index appropriate? Are any components/indicators unnecessary? Are any additional components/indicators required? The reliability of the three components should also be checked.

Thereafter, the index could be used to create an implementation tracking tool, drawing on routine data collected regularly, and integrated with other programme monitoring tools. It could also be adapted for application to other school nutrition programmes and the concept could be applied more broadly to performance monitoring and implementation evaluations in other contexts. The index could be applied in the following ways:

- For planning;
- To identify strengths, weaknesses, gaps and challenges in implementation;
- As a comprehensive monitoring/tracking tool;
- As a methodological approach for evaluation synthesis which allows for quick decision making and influencing policy.

3 ABOUT THE IMPLEMENTATION INDEX

An implementation index was developed following preliminary data analysis to assist in synthesising data, summarising key findings and demonstrating the extent to which implementation is successful and likely to lead to benefits.

The methodology used to create the index was informed by the work of Green, Ellis and Lee (2005). Using variables identified in a logic model to derive evaluation questions, data sources and indicators, they compiled a performance index which compared the approach, deployment, results and overall performance of agencies providing after-school programmes to youth.

Our index was informed by the literature review which identified key characteristics and contextual factors that determine the effectiveness of school nutrition programmes and the programme theory.

Bundy et al (2009) cite six indicators used to assess nutrition programmes, three of which are relevant to implementation:

- Appropriate menus, meals, number of days food is provided and meal times;
- Appropriate procurement and logistics arrangements: management and implementation arrangements, transport, storage of food, infrastructure and equipment for preparation;
- Appropriate M&E system in place and functioning.

We constructed an index to summarise performance - relative to standards outlined in the programme theory - in these areas (or components) using the indicators we had identified from the surveys and observation conducted in the schools. The index is based on the following indicators and components:

	QUESTION/INDICATOR	INSTRUMENT	RATING SCALE
FOOD MODALITIES AND BASKET (FMB)	# of food groups prepared and served	Observation	3 food groups, 2 food groups, 1 food group
	% of the required protein served	Observation	80-100%+, 60-79%, 40-59%, 25-39%, 0-24%
	% of the required vegetables served	Observation	80-100%+, 60-79%, 40-59%, 25-39%, 0-24%
	% of the required starch served	Observation	80-100%+, 60-79%, 40-59%, 25-39%, 0-24%
	Time by which the last learner was fed	Observation	By 10:00am, After 10:00am
PROCUREMENT AND LOGISTICS ARRANGEMENTS	Funding disbursement		
	(For schools in centralised regions): In the previous year, were the funds deposited in time to purchase gas and pay the food handler?	Principal survey	Always, Sometimes, Never
	(For schools in decentralised regions): In the previous year, were the funds deposited in time to purchase food?	Principal survey	Always, Sometimes, Never
	Ordering, delivery and payment		
	Does your stipend get paid on time?	VFH survey	Yes, No
	Rate the delivery system: dry food	Programme Coordinator survey	Excellent, Good, Poor
	Rate the delivery system: vegetables/fruit	Programme Coordinator survey	Excellent, Good, Poor
	Are deliveries made on time? Dry food	VFH survey	Always, More than half of the time, About half of the time, Less than half of the time, Never
	Are deliveries made on time? Vegetables/fruit	VFH survey	Always, More than half of the time, About half of the time, Less than half of the time, Never
	Food preparation and serving		
Rate the preparation facilities	Observation	Excellent, Good, Poor, Very poor	
How is the water availability at the schools?	Programme Coordinator survey	Excellent, Erratic, There is no water	
Is dry food stored off the floor?	Observation	Yes, No	
Are fruit and vegetables stored off the floor?	Observation	Yes, No	
Have you attended training on food handling?	VFH survey	Yes, No	
Were there any days that no feeding took place this year?	Programme Coordinator survey	Yes, No	
M&E SYSTEMS	Is there evidence that the school checked the quantities delivered against the order?	Observation	Yes, No
	How often did the programme monitor's visit your school in the previous year?	Programme Coordinator survey	8+ times, 4-7 times, 3 times, 2 times, 1 time, 0 times

Each indicator was converted into a scale ranging from 0 to 1, with 1 indicating best performance and 0 worst. Nineteen variables were identified and principal component analysis was run to check the extent to which the variables were related.

The index was then created by summing the indicator variables for each school. Mean scores were calculated for each region and for the centralised and decentralised models.