

**THE IMPACT OF NATIONAL SCHOOL NUTRITION PROGRAMME
(NSNP) IN TSIMANYANE CIRCUIT, SEKHUKHUNE DISTRICT OF
LIMPOPO PROVINCE**

BY

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This piece of work is dedicated to my mother, Aphi Mampuru. Even though she did not have formal education, she never stopped sharing her wisdom, knowledge, support and love. I am really grateful to her and I wish she was still alive to witness this achievement.

**SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR
THE DEGREE MASTER OF DEVELOPMENT STUDIES**

FACULTY OF MANAGEMENT AND LAW

TURFLOOP GRADUATE SCHOOL OF LEADERSHIP (TGSL)

UNIVERSITY OF LIMPOPO

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COMPLETED: NOVEMBER 2011

DECLARATION

I declare that the research paper hereby submitted to the University of Limpopo for the Degree of Master in Developmental studies has not previously been submitted by me for a degree at this university or any other university. That it is my own work in design and execution and that all material contained therein has

This piece of work is dedicated to my late mother, Phophi Maria Matoane. Even though she did not have formal education, she never stopped sharing her wisdom, tutelage, support and encouragement to study. I am really grateful to her and I wish she was still alive to witness this achievement.

Date: 23/02/2012

ACKNOWLEDGEMENTS

A research project of this magnitude can only succeed through various contributions from a wide range of sources. Firstly, I would like to express my wholehearted thanks to the Almighty God for His strength and the wisdom to execute this work. Without His guidance and power this mini-dissertation would not have been possible.

I would like to take this opportunity to acknowledge the many people who have contributed in different ways to this report.

I would like to sincerely thank my supervisor, Dr O. Mtapuri, for his guidance, encouragement and support throughout this study, and especially for his confidence in me. He has been consistent in assisting me from the very first day he was assigned to guide me. I am humbled and grateful indeed for his remarkable energy in assisting me to go through all the work.

To Dr. Rosemary McCabe and Rev Dr Lutz Ackermann your valuable assistance in editing my work is much appreciated. Thank you so much for your prompt response to editing my work.

To my wife Rosina, I am most grateful for all your love, patience and support- this helped me get through some difficult times in the course of this study. Thank you so much for understanding. There were times when I felt that I am dedicating too much time to this course and little time for you and our daughters. Despite my hectic schedule in my endeavour to complete this work, you were remarkably supportive.

To my daughters Naledi, Palesa and Masechaba thank you so much. This achievement is yours too. I hope that when you are grown up to understand all about life, this achievement will inspire you to also do well.

I also want to thank my siblings, Michael and Mokgadi for their support. I know

that it was not easy for us when our mother passed away but we remained attached to one another. As big brother I was not able to meet all your needs because of my studies but you understood. God Bless you.

To my circuit Manager, Mr Mohlapamaswi E, thank you so much for allowing me to attend contact sessions during the duration of the course. I am really grateful and may the good Lord bless you.

I also would like to thank the school governing body (SGB) and all the teachers of Majatladi Secondary school for their support, patience and understanding when I was involved in this course. God bless you all.

To my colleagues at Elandskraal Primary School where I am currently stationed and the school governing body (SGB), thank you so much for all your support. I would not have made it if it was not for your encouragement and support. I am really proud of you. I hope that the knowledge acquired through this course will assist us in taking our institution to greater heights.

I would be making a great mistake for not mentioning my wife's uncle, who is also my uncle, Mr Japhtha Rabodiba for his immense contribution in this work. Your expertise especially with pie charts and tables is highly acknowledged. You have been very patient with me. I thank you.

God bless you all.

EXECUTIVE SUMMARY

The study investigated the impact of National School Nutrition Programme (NSNP) in Tsimanyane circuit, Greater Sekhukhune District of Limpopo Province. The study, through a literature review looked at how other countries of the world are implementing the programme in their respective countries, including African countries.

The study also looked at policy framework for the implementation of the programme in South Africa.

The study critically analysed how the programme is currently implemented in South Africa. This analysis includes the challenges faced by this programme since the beginning of its implementation. The literature used in the study was fundamental in analysing the data collected.

The findings of this study will assist the Department of Education with interventions that are necessary for the improvement in the implementation of the programme.

Some of the key findings include the following: that the programme improves the health status, attendance to school and the academic performance of learners; a majority of the learners participate in the programme; overall, the quality of the meal provided is of good nutritional value despite that fact that some unscrupulous service providers do not comply with menu prescriptions of the department; some storage facilities are in poor and others in a very bad condition and sadly, respondents are of the view that the support from the department to the participating schools is lacklustre if not poor.

The recommendations made in this study will also assist in the improvement of the implementation of the programme and help strengthen the vision of the programme in relieving hunger. Furthermore, recommendations on how service providers can improve their services and ensure that there is value for money are also made, such as that dishonest service providers should be brought to book, the department should give support to participating schools, kitchenettes should be built to ensure proper

food hygiene, the department should regularly organise workshops for food handlers aimed at addressing hygiene issues, the storage facilities should also be in good healthy condition so as to ensure that food is not contaminated with germs and poison, the service providers from a particular district should bid for their respective district to ensure speedy attention to problems if they arise, a service provider should not supply for more than two terms for purposes of giving others a chance and so forth.

The conclusion of the study focused on the summary of key points in the study for a perfect ending.

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FAO	Food and Agricultural Organization	
FEB	Fund for Education	
GFSA	Global Fund to Fight AIDS, Tuberculosis and Malaria	
GAO	Governor General of the Republic of the Congo	
IDA	International Development Association	
IFSS	Integrated Food Security and Nutrition Assessment	
IFSNP	Integrated Food Security and Nutrition Programme	
INF	International Network of Food Banks	
IQ	Intelligence Unit	
MDG	Millennium Development Goals	
RNSP	Rural Nutrition and Food Security Programme	
RNIF	Rural Nutrition and Food Security Programme	
NGO	Non-Governmental Organization	
PSNP	Productive Safety Net Programme	
RFI	Rural Food Initiative	
SPC	Small Producers' Cooperative	
UNICEF	United Nations Children's Fund	
WFP	World Food Programme	
WHO	World Health Organization	

CHAPTER 3 LIST OF ACRONYMS

AHA	-	American Heart Association
DRC	-	Democratic Republic of Congo
DoE	-	Department of Education
FAO	-	Food and Agricultural Organisation
FFE	-	Food for Education
GPoA	-	Government Programme of Action
GAO	-	Government Accounting Office
IDA	-	Iron Deficiency Anaemia
IFSS	-	Integrated Food Security Strategy
IFSNP	-	Integrated Food Security and Nutrition Program
INP	-	Integrated Nutrition Programme
I Q	-	Intelligence Quotient
MDG	-	Millennium Development Goal
NSNP	-	National School Nutrition Programme
NSLP	-	National School Lunch Programme
NFCS	-	National Food Consumption Survey
PSNP	-	Primary School Nutrition Programme
SBP	-	School Breakfast Programme
SFPS	-	Sustainable Food Production in Schools
UNICEF	-	United Nations Children’s Fund
WFP	-	World Food Programme
WHO	-	World Health Organisation

CHAPTER 1

1.1 The background to the study

The National School Nutrition Programme (NSNP) is a constitutional mandate of the Republic of South Africa, Chapter 2 of the Bill of Rights, section 28 subsection 1, states that 'every child has the right to basic nutrition, shelter, basic health care services and social services'. The National Department of Education is the lead implementing agency. The programme was introduced in 1994 as one of the presidential lead projects under the Reconstruction and Development Programme. Its aim was to enhance the educational experience of needy primary school learners through promoting punctual school attendance, alleviating short-term hunger, improving concentration and contributing to general health development.

It has also been introduced to Quintile 2 secondary schools across the country since April last year (2009). This study focuses on primary schools where the programme has been existing for some time. Criteria for participation in the PSNP are the following:

- Age: The identified needy child must be between the ages of six and 14.
- Number of dependants in household: the teacher should determine the number of children, elderly persons, disabled and unemployed adults in the household of the identified child.
- Highest qualification of the caregiver, this is done to assess possible earnings.
- Employment status of the caregiver.
- Food support: Any support that the family receives in procuring food has to be indicated.
- Income: Calculation of the total income of the household is required, including salary, pension income and disability grant.

The programme targets orphans and vulnerable children by providing them with a menu comprising maize, rice, soya mince, maize meal, cabbage and oranges. The participating schools are usually encouraged to establish food gardens to complement the department's nutrition programme. The vegetables grown in these gardens are sold to the service providers supplying food to these schools for provision to the learners. The vegetables are also distributed to the orphans and needy learners for eating at their homes as an

endeavour to eradicate hunger. As from April 2009, the programme was extended to secondary schools. Schools from quintile 1 to 3 and schools in identified nodal areas are also participating. Quintile is a designation or a category given to schools whose learners are orphans and come from poverty stricken areas.

When the programme was first introduced, it was jointly managed by the National Department of Health and the Department of Education. In September 2002, Cabinet resolved that the school nutrition programme should be transferred to the Department of Education, which assumed full responsibility in April 2004. The Limpopo Department of Education adopted the national guidelines for the implementation of the nutrition programme. The researcher, as an implementer of the programme at both primary and secondary levels, has observed that since its implementation in 2004, the programme faces serious challenges such as capacity constraints and the lack of basic infrastructure at many of the implementing schools.

***Policy and legislation in South Africa**

According to the 2007/2008 Financial Year Report For Sustainable Food Production in Schools produced by the National Department of Education, the right of access to sufficient food is enshrined in the Constitution of the Republic of South Africa 1996, 27(1) (b). The State must by legislation and other measures, within its available resources, ensure that all citizens have access or are enabled to meet their basic needs for food.

The Cabinet Lekgotla in July 2002 endorsed the Integrated Food Security Strategy (IFSS) and the subsequent Integrated Food Security and Nutrition Programme (IFSNP) as priority of the Social Sector Cluster action plan. The overarching goal of IFSS is aligned to the Millennium Development Goal (MDG), which is, to reduce the number of food-insecure households by half by 2015.

The fundamental pillars of IFSNP, include

- (a) to increase household food production and trading in order to ensure that food is available to all, now and in the future;
- (b) to match income of people to food prices to ensure access to sufficient food for every citizen;
- (c) to improve nutrition and food safety education in order to empower citizens to make optimal choices for nutritious and safe food;
- (d) to ensure that there are adequate safety-nets and food emergency management systems in order to provide people that are unable to meet their food needs from their own efforts and mitigate the extreme impact of natural or other disasters on people;
- (e) to improve analysis and information management systems;
- (f) to provide capacity building; and
- (g) to hold stakeholder dialogues.

According to this 2007/2008 Financial Year Report for Sustainable Food Production in Schools, the Cabinet Decision (23 January 2003) and Government Programme of Action (GPoA) mandated the Department of Education (DoE) to implement and manage National School Nutrition Programme (NSNP) and to lead in mobilising civil society as well as social sector departments to set up school vegetable gardens as food security initiatives. NSNP strategic objectives are therefore aligned to all the pillars of IFSNP as well as FAO's report by ensuring that hunger does not become a barrier for children to access education.

The key objectives of Sustainable Food Production in Schools (SFPS) sub-programme of the NSNP are to promote and support establishment as well as sustenance of food production initiatives in school. These initiatives could be in the form of vegetable and herbs gardens, fruit orchards, poultry, small stock and fish rearing.

Malnutrition is one of the key priorities that the new South African democratic government undertook to address in 1994. An integrated nutrition strategy for South Africa was formulated and adopted in the Department of Health's white paper for the transformation of the health system in South Africa. The strategy was subsequently developed into the Integrated Nutrition Programme (INP) for South Africa. The INP adopted the United Nations Children's Fund (UNICEF) nutritional-conceptual framework 3 and 4 (Labadarios et al, 2005)

1.2 Statement of the problem

In terms of current performance, based on the researcher's personal observation, the NSNP programme seems to be deficient in the following areas:

- a) it provides poor quality food;
- b) the storage facilities at the schools are inadequate/absent in worst cases; and
- c) learners are shunning the food for various reasons.

The following key issues have been identified around the research topic:

- a) Monitoring of the programme by the department;
- b) The quality of the food supplied to schools by suppliers;
- c) Storage of the food once delivered to the schools; and
- d) Learners who do not take part in the programme for various reasons.

1.3 Aim of the study

The aim of the study is to investigate the impact of the National School Nutrition Programme (NSNP) in the Greater Sekhukhune district, in particular the Tsimanyane circuit primary schools in terms of reducing short-term hunger and contributing to the general health development of learners as well as improving their class attendance.

1.4 Objectives

The objectives of this research are the following:

- 1.4.1 to evaluate the impact of school gardens;
- 1.4.2 to analyse the impact of the programme in alleviating hunger and contributing to the health and development of learners;
- 1.4.3 to analyse the intervention's impact on school attendance and learning capacity; and
- 1.4.4 to recommend strategies for improvement of the implementation of the programme.

1.5 Research questions

The research questions unpack the research problem. According to Badenhorst (2007), the research questions also give the reader some idea of the scope of the project.

The following research questions are relevant to this study:

- a) Does the Nutrition Programme add any nutritional value/impact on the learners?
- b) Does the programme benefit needy learners from poverty-stricken homes?
- c) Do self-supporting school food gardens assist in alleviating hunger and poverty among these needy learners?
- d) To what extent is the quality of food supplied contributing to learners' interest in taking part in the programme?

1.6 Significance of the study

Donald and Sally (1998) indicate that although school feeding programmes have been in existence for many years, evaluations have been few and have generally lacked scientific rigour. The significance of this study is to add social value to the society especially with regard to alleviating hunger as well as to subsequently improve the learning experiences of our children in schools. On the contrary, literature used in this study shows that more

evaluations on school feeding programmes have been done both in Africa and elsewhere in the world.

This study adds to the existing body of knowledge about the topic being investigated. The findings of the study could assist in an improved implementation of the programmes which will in turn translate into substantial benefits to our children in terms of their own health and scholastic achievements.

It is also important to note that the researcher was a primary school principal for four years and is now a high school principal where the school nutrition programme was introduced this year for the first time. The programme aims at alleviating hunger in order to enhance the learning experience of secondary school learners. The researcher has worked in primary schools for the better part of his life and has been involved in the school nutrition programme. Over the years, the researcher has seen how the programme is being implemented and the challenges the department is experiencing with regard to its implementation. Hence the research study focused on investigating the impact. There are also benefits which are being brought about by the programme which the study highlights and identifies.

The research topic is a good development topic as it addresses some of the Millennium Development Goals and the recommendations and commitment of the World Declaration on Nutrition made in December 2002 in Rome.

1.7 CONCLUSION

The current government and administration, through its constitutional mandate, has the political will to deal with malnutrition. It has clear targets to achieve the Millennium Development Goals. It is an indication that the democratic government of the Republic of South Africa is serious about addressing the problem of hunger. The government even went a step further to introduce the programme to the Quintile 2 secondary schools across the country.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter provides a brief review of the existing literature that represents the most authoritative scholarship on the research problem that the researcher identified with and is relevant to the research topic. The researcher highlights issues relating to school nutrition programme and its impact to school children. An extensive approach to literature review is adopted to get a broader sense of the issues globally. The review considered experiences from some African, Asian and European countries.

The contextual factors in these countries may be different in relation to school nutrition programme, but they may have the same experiences and challenges in this regard. The literature review assists in clarifying these issues. The review also considered, most importantly, policy and legislative frame work regarding school nutrition in South Africa. The work of some of the international food programmes and institutions like the WFP in Africa was considered in the literature review.

2.2 Nutrition, education and the Millennium Development Goals

Del Rosso (1996) points out that nutrition and health status are powerful influences on a child's learning capacity and on how well that child performs at school. Children who lack certain nutrients in their diet particularly iron and iodine, or who suffer from protein-energy malnutrition or hunger do not have the same capacity for learning as do healthy and well nourished children. Weak health and poor nutrition among school-aged children diminish their cognitive development either through physiological changes or by reducing their ability to participate in learning experiences or both. He argues that by simply alleviating hunger in school helps children perform better in school.

The International Conference on Nutrition which was held in Rome in December 1992 declared its determination to eliminate hunger and to reduce all forms of malnutrition. The conference agreed that hunger and malnutrition are unacceptable in a world that has

both the knowledge and resources to end this human catastrophe. There was also recognition by the conference that globally there is enough food for all and that inequitable access is the main problem. The countries represented in the conference acknowledged that the right to an adequate standard of living including food, contained in the Universal Declaration of Human Rights, should be enjoyed by all. They pledged to act in solidarity to ensure that freedom from hunger becomes a reality.

The conference highlighted that despite appreciable worldwide improvements in life expectancy, adult literacy and nutritional status, they all view with deepest concern the unacceptable fact that about 780 million people in developing countries - 20 percent of their combined population - still do not have access to enough food to meet their basic daily needs for nutritional well-being.

The world leaders at the United Nations Millennium Summit in 2000 approved eight Millennium Development Goals. The first two goals, which are relevant to this study, are the following:

a) **Goal one:** Eradicate extreme poverty and hunger.

- Reduce by half the proportion of people living on less than a dollar a day.
- Reduce by half the proportion of people who suffer from hunger.

b) **Goal 2:** Achieve universal primary education.

- Ensure that all boys and girls complete a full course of primary education

The aims and objectives of the NSNP clearly link with these Millennium Development Goals because it seeks to enhance the educational experience of the needy learners through the provision of delicious and quality meals to the deserving learners across the country. This should ultimately have an impact in terms of hunger reduction, school attendance, general health development and academic performance of the learners.

2.3 Benefits of Nutrition Programme

According to Jukes et al. (2008), the school health and nutrition programmes have the greatest benefits for the poorest children and also increase the likelihood that further improvements in educational quality will bring benefits to all. Glewwe et al. (1999) point out that in recent years, policymakers have increasingly promoted early childhood nutrition programmes as a way to raise living standards in developing countries (World Bank, 1993) as well as among the U.S. poor (GAO, 1992). Proponents of such programmes argue that improved diet, particularly in the crucial first years of life, enhances intellectual development and, ultimately, academic success. Their view is that, in addition to having direct health benefits, early childhood nutrition programmes could also be an instrument of education policy.

Steyn et al (2009) highlight that children represent a large population that is present and hence accessible over prolonged periods in a setting that is relatively sheltered and where education and learning are the norm. The ability to influence children in their formative years is a potential mechanism for influencing the culture and health beliefs of society. An additional potential benefit is that by improving the health of schoolchildren, educational performance and learning may be enhanced. Positive educational outcomes linked to good health in school children include improved class performance, school attendance, participation in school activities and student activities. There is some evidence that school health promotion programmes that involve families and communities can positively influence the wider community.

According to Steyn et al (2009) schools are an established setting for health promotion activity as they have the theoretical advantages of influencing health-related beliefs and behaviours early in the 'health career' so that these beliefs and behaviours become established as adult patterns. The importance of school health promotion for the prevention of chronic disease was underlined in a recent scientific statement by the American Heart Association (AHA).

Abidoye et al (2000) further assert that nutrition is critical to the development of the brain through the supply of substrates or nutrients and the generation of energy required for continuous functioning. Nutrient lack certainly affects the development and function of

the brain as it does to the body tissues and organ systems. Improvement of the intellectual functioning and mental capacity is very important for the survival of the human species. Intelligence and neo-cortex are amongst the most important evolutionary possession of human kind that distinguishes them from the rest of the species. Without this, man could not have achieved so much in so short a time of his evolutionary age.

According to Carin et al (2009) school feeding programmes are a good strategy for addressing malnutrition amongst primary school children if they are monitored regularly. Commitment from the community and volunteer workers can assist in executing a well run and managed programme. The infrastructure however, will have to be provided with financial resources available to enhance a constant flow of ingredients or food items in order to provide a consistent supply of food to the children.

Girls who are better nourished are more attentive and more involved during class, and boys have improved classroom behaviour and increased activity levels. Stunted children enrol in school later than other children. School food programs have been successful in improving school attendance. (Bundy et al, 2005)

2.4 Consequences of child malnutrition

Sherman et al (2007) indicated that chronic malnutrition is widespread among school children in many developing countries. The few available data on low-income countries show that the nutritional and health status of school children reflects that of preschool children. Under-nutrition and micronutrient deficiencies continue to impede growth of children when they reach school, reduce their capacity and motivation to learn, and lead them to drop out of school early. The main nutritional problems are stunting, underweight, and wasting, resulting from poor nutrition in utero and from inadequate dietary intake and infectious diseases during early childhood. Micronutrient deficiencies particularly of iron, iodine, and vitamin A slow children's growth and mental development and increase susceptibility to infection.

Steyn et al (2009) point out that nutrition remains a persistent problem among school children globally. This was confirmed in their sample of children in the assessment survey, where 28% stunting, 25% wasting and 12% underweight were found indicating a

chronic food shortage. Although various strategies have been adopted to address micronutrient deficiencies, these were still prevalent amongst these groups of children.

According to Bundy et al (2005) stunting (low height for age) is a physical indicator of chronic or long-term malnutrition, whereas underweight (low weight for age) is an indicator of both chronic and acute malnutrition. Both are common in school-age children.

According to Steyn et al (2009) nutrition affects children's ability to learn. The link has been established for some time through controlled research studies (Levitsky 2005: 270). The United Nation Children's Fund (UNICEF 2001) reported that when a child lacks nurturing care or suffers from malnutrition, stress, trauma, abuse or neglect, the growing brain is the first casualty. Malnutrition is caused by various factors and, at its most immediate level, is a consequence of poor food intake as well as infections and disease resulting in nutrient inadequacy. The implications of malnutrition include both growth failure and functional disability (UNICEF 1998, Vorster et al. 1998). Enhancement of children's health and nutrition is thus a world-wide priority and requires immediate attention (UNICEF 1998, Food and Agricultural Organization (FAO) of the United Nations 1998).

Furthermore, the 1999 National Food Consumption Survey (NFCS) indicated that at national level, one out of five children from one to nine years old is stunted (Labadarios 2000). Gauteng showed a prevalence of 20%. Nationally, the prevalence of stunting decreased with age, from 25.5% in children aged one to three years, to 21% in those aged four to six years, to 13% in those from seven to nine years old. A similar pattern emerged for the prevalence of underweight children, whilst the prevalence of wasting remained constant at less than 4% in all age groups (Labadarios, 2000). In terms of iron status, 10% of children in South Africa are iron-depleted, one in 20 (5%) is severely iron depleted and one in 20 (5%) has iron deficiency.

The study conducted by Sibanda-Mulder (2004) points out that in addition to the problems associated with malnutrition in school-age children, there is also evidence of negative consequences for children suffering from short-term hunger, common in children who are not fed before going to school. Children who are hungry are more likely

to have difficulty concentrating and performing complex tasks, even if otherwise well nourished.

2.5 Experiences from other countries in Africa

In the study conducted by Sherman et al (2007) a situation analysis was carried out in 15 basic schools in Luapula Province of Zambia in August 2000. It revealed that primary school children's general health was poor, there was a high prevalence of stunting (ie, 58% of children under 6 years old were moderately to severely stunted, and their diet lacked variety and was lacking in important micronutrients. Parents did not perceive children's health problems as linked to diet. There were no school meals. Children ate 1 or 2 meals a day, seldom had breakfast, and did not take snacks to school. Findings for the wider population suggested that vitamin A deficiency and anaemia were prevalent and that children's nutritional status was exacerbated by infections, including worms, malaria, and diarrheal diseases. In the school environment, water supply and sanitation were generally inadequate, most schools had gardens, but these were seldom associated with education or nutrition.

According to Sherman et al (2007) Luapula Province is one of the poorest and most neglected provinces in Zambia in terms of agriculture, infrastructure, and community development. About half the households are chronically food insecure. Although comprehensive data do not exist for the school-aged population, the indications are that undernutrition and micronutrient deficiencies continue to impede the growth and development of children when they reach school, while also reducing their capacity and motivation to learn.

The study conducted by Mukudi (2003) amongst Kenyan middle-school children showed nutritional stress to be a significant educational factor in the population. The association between achievement scores on the Kenya Certificate of Primary Education (KCPE) and nutrition status supported findings from the Phillipines showing that children who are better nourished perform significantly better in school. Similar findings were documented in a study of primary school children in rural Jamaica, with achievement being associated with good nutrition.

The author further indicates that budgetary constraints and high dropout rates characterize the Kenyan education system. Whereas about 76% of the eligible primary school-age population is enrolled, the completion rate stands at less than 50%. Increasing poverty levels limit access to education because costs sharing in the form of user-fees charged at public schools render education unaffordable. The percentage of households living in poverty is assessed at about 50%, with an overly represented rural population.

Mukudi (2003) further indicated that poor attendance rates and low achievement levels are concerns for those persisting through the cycle. Chronic absenteeism, infrastructure deficits such as buildings and text books, and poor quality instruction have been identified as problems endemic to educational systems in poor countries. At the individual level, limited access and participation in education have been attributed to economic constraints and socio-cultural and other such delimiting factors. Enrolment decline positively correlates with declining gross national product per capita because cost affects access and participation in an era of a growing trend of education privatization. Regional and rural versus urban disparities in access and participation are other factors.

Girls fared relatively better than boys on the anthropometric measures of nutrition status. These findings mirror what has been seen elsewhere when sex differentials in nutrition status are considered.

Mukudi (2003) indicates that although the overall achievement scores for all children in the study were low, the differentials across schools reflected the marginal differences in socioeconomic background and in nutritional well being. Similarly achievement scores mirrored attendance rate, with attendance emerging as the best predictor of achievement scores when considered alongside nutrition status measures. She further indicates that from the educational point of view, the strength of the association between attendance and achievement scores makes sense because it reflects the level of exposure to learning. The differentials in achievement scores across schools in the sample population can be explained by findings from Jamaican adolescent study that linked better achievement scores to access to educational materials.

According to Mukudi (2003) the intervening effects of nutrition status were wider in the association of higher achievement with better nutrition seen among children from better-

placed income and school categories. The magnitude of the strength in the cause-effect relationship between nutrition status and achievement may be weakened by the fact that the range for the differences in nutrition status across groups was limited. Most pupils scored below the means for the reference NCHS population on the stunting and underweight measures. The sex differentials in achievement that favoured boys also introduced a counter element in the strength of association between nutrition status and educational achievement.

In this study there were marginal benefits of nutrition status when sex differentials in achievement score were considered for girls in economically marginal groups. The implication is that for poor girls, those who are better nourished are more likely to score better on achievement tests (Mukudi, 2003). Nutritional stress warrants a deliberate intervention to enhance achievement for populations in economic hardships conditions. Improving nutrition status will entail implementation of interventions that improve the socioeconomic status of households with a nutrition component (Mukudi, 2003).

Fig 1: Learners feeding under the school nutrition programme in Ghana



Source: www.ireportghana.com/ghana/local/news (accessed May 2010)

2.6 Interviews conducted by WFP in Africa

In his interview with Emily Doe, WFP Programme officer in the DRC, Lambers (2008) highlighted that between January and May of 2008, WFP fed over 260,000 primary school children and about 12,000 pre-school children in four provinces (North and South Kivu, Katanga, and Equateur). They are targeting over 530,000 children in 1085 schools in six of the 11 provinces of the Democratic Republic of the Congo starting September, 2008. The WFP will gradually increase to assisting 595,000 children during 2009.

Emily Doe further highlighted that the hot meals, served six days a week, are a motivating factor for parents to send children to school and for the children themselves to remain in school (Lambers, 2008). Most families in the Democratic Republic of the Congo cannot afford more than one meal a day, served in the evening before bedtime. Most children go to school on an empty stomach, therefore the meal taken at school compensates for breakfast and lunch. The meal is served during recreation (mid-morning) and gives children the energy needed to make it through the rest of the school day. The feeding encourages regular school attendance and allows children to be more attentive and focused during class. Parents prefer to send their children to schools which run the feeding program because they are assured their children will have a meal and be less likely to leave class due to hunger. School feeding has become even more critical with the on-going food price crisis.

The average number of children enrolled in schools with school feeding programs increased by 7% from 2006 to 2007. The average attendance rate of WFP-assisted schools was 91.5% in 2007, which was above WFP's goal of 90%. The focus on girls' education has led to an increase in enrollment and attendance rates for girls. The ratio of girls to boys enrolled in school increased by 7% from 2006 to 2007. Furthermore, the drop-out rate is lower in schools that have school feeding programs than the average in schools nationwide. The average drop-out rate nationwide is 11.25% for girls and 12.26% for boys, as compared to rates of 9% for girls and 11% for boys in WFP-assisted schools (Ministry of Education Annual Statistical Abstract, 2005/2006).

According to Lambers (2008) the program in the Democratic Republic of the Congo is emergency school feeding, so 10,500 teachers are also targeted for feeding to encourage them come to school regularly (despite low salaries and delays in payments).

The United Nations World Food Programme (WFP) recently reported that drought and high food prices have pushed 12 million people into hunger. For struggling families, knowing that their child is ensured a meal at school is an important safety net in times of crisis. As part of a long-term strategy to eliminate the high poverty rate in the country, school feeding is essential. The World Food Programme is working to help make sure every child in the DRC can receive a school lunch (Lambers, 2008).

In another interview with Jakob Wikkelsen the WFP representative in Ethiopia, the respondent highlighted that WFP currently supports the Ethiopian Ministry of Health in providing school meals to 414,078 school children in six regions of the country (Afar, Amhara, Oromiya, Southern People's Region, Somali, and Tigray), encompassing 130 districts and 770 schools (Lambers, 2009). WFP and the Ministry of Education are planning to scale up the program in the Afar region (Lambers, 2009).

In another interview, Haladou Salha, the director of United Nations World Food Program in Cameroon, highlighted that the school feeding component of the country program targets the three Northern provinces where enrolment rates are lower than 30 percent, and gender disparity is as high as 50 percent. In the 2007/2008 school year, WFP assisted a total of 51,017 pupils in the three Northern Provinces (Adamaoua, North and Extreme North). Some 7,200 girls in the last three grades of primary school at the end of each school term benefited from take home dry rations. It was planned in the academic year 2008/2009, starting in September that the total number of beneficiaries will increase to 53,040 and some 7,560 girls will receive dry rations.

2.7 Experiences in other parts of the world

According to Bundy (2009) hunger which reduces the ability to perform school tasks, is readily reversed by feeding. Children aged 11 to 13 years in Jamaica because they improved their scores on arithmetic tests after one semester of receiving breakfast at school because they attended more regularly and studied more effectively. Missing breakfast impairs performance to a greater extent for children of poor nutritional status, who also benefit most from food interventions.

The high prevalence of malnutrition in children continues to be a major challenge for low income countries. Providing food to children at school is often seen as an important part of the solution and is a major focus for food aid. However nutrition literature suggests that ensuring good nutrition earlier in life certainly before 3 years of age, but perhaps earlier, is essential to ensuring an appropriate development trajectory throughout life. Where food is limiting, it raises the question whether the first target should be preschool rather than school age children (Bundy, 2003).

This debate has been blurred by admixing the nutrition outcomes with broader social and education issues. Clearly, providing a meal at school is socially desirable and can offer education benefit for children (Bundy, 2005).

Bundy et al (2005) also indicate that no comparable network exists to reach preschool children. However from a nutritional perspective, it remains unclear whether ensuring good nutrition early in life has more effect on subsequent development - including educational achievement - than providing food at school age.

In conclusion of their study, they indicated that the rationale for school based health and nutrition programs and the approach of their implementation have undergone a paradigm shift over the past two decades. The traditional perception of these programs as seeking to improve the health of schoolchildren cannot be justified on the basis of mortality or public health statistics alone. Instead it is increasingly recognized that a major impact of ill health and malnutrition on this age group is that on cognitive development, learning, and educational achievement.

In consequence, the clearest benefit of school health and nutrition programs is measurable in terms of education outcomes and economic returns. The scale of benefit is significant: school health and nutrition interventions can add four to six points to IQ levels, 10 percent to participation in schooling, and one to two years of education. This scale of benefit can add 8 to 12 percent to labour returns and provide a rate of return that offers a strong argument for public sector investment (Bundy, 2005).

In Jamaica, providing breakfast to primary school students significantly increased their attendance and arithmetic scores (Del Rosso, 1996). A US study also showed the benefit

of providing breakfast to disadvantaged primary school students. He further points out that studies in Benin, Burkina Faso and Togo of the determinants of achievement found that a school meal was related to children's performance on year-end tests. In Benin, children in schools with canteens scored five points higher on second-grade tests than did children in schools without canteens.

In Canada, a study on the effect of missing breakfast (short-term hunger) among low-income children found that "low achieving" children ate breakfast less regularly than did 'high-performing' children from similar home environments. In Africa, the detrimental effects of hunger on learning are exacerbated by malnutrition (Del Rosso, 1996).

2.8 World Food Programme's Food for Education programme

According to Sibanda-Mulder (2004) the United Nations World Food Programme (WFP) is the largest organizer of Food for Education (FFE) throughout the world. WFP provides food to schools in 70 countries, accounting for more than 15 million children in 2003. FFE includes a significantly broader array of interventions designed to improve school enrollment, attendance, community-school linkages, and learning. Among possible FFE interventions are take home rations targeted to girls, orphans and other vulnerable children who attend school regularly, in-school meals or snacks to reduce short-term hunger along with associated cognitive impediments, and food for work targeted to teachers or parents engaged in activities to improve schooling outcomes. There is abundant evidence that such interventions can be very effective in improving school enrolment, attendance and children's active learning capacity.

According to Drescher (2002), the following are facts about school children and education in developing countries:

Under-nutrition is widespread among school children (particularly in South Asia and Africa), and their nutritional status often deteriorates during their school years (WFP, 2002). Iron deficiency anaemia (IDA) affects 10% to 48% of preschool and school age children in developing countries (WHO-WPR, 1998). The cross sectional data from large samples of school children in Ghana, Tanzania, India, Indonesia, and Viet Nam showed that:

- About 50% of children in all countries were stunted;
- In all countries height-for-age increasingly departed from reference values, especially among boys, indicating that children were becoming more stunted with age;
- In all countries more boys were classified as underweight than girls but this may be confounded by female drop-out from school;
- Children in Tanzania and Ghana who enrolled late in school were more stunted than children who enrolled closer to the right age;
- There was little evidence for an adolescent growth spurt.

A survey of anaemia in 8-9 year old school children in those countries showed a wide range in the prevalence of anaemia from around 12% in Vietnam to about 60% in Tanzania. These data show that the nutritional problems of school age children may be greater and more widespread than previously thought, and indicate that school health and nutrition programmes have a clear potential to improve the nutrition and growth of school age children (Drescher, 2002).

2.9 Boosting the educational and nutritional value of school feeding programs

According to Del Rosso and Marek (1996), several actions can boost the educational and nutritional value of school feeding programs:

- Provide the meal or snack early in the school day. The goal to eliminate hunger so the children are more attentive in class?
- Provide the caloric quantity in each ration necessary to meet the actual needs of the children and fill the micronutrient gaps of their diet; and
- Offer other school-based health and nutrition interventions in addition to food.

Condon et al (2009) conducted a study with American schools which indicated that schools can make important contributions to improving children's food and nutrient intakes. School-aged children spend at least 6 hours at school every school day and obtain up to 47% of their calories from meals and snacks consumed at school. For many

children, the federally sponsored school meal programs - the National School Lunch Program (NSLP) and the School Breakfast Program (SBP) - are the main sources of food obtained at school.

Almost all US public schools participate in the NSLP, and 80% of NSLP schools also participate in the SBP. On an average school day in 2006-2007, 30 million children ate a school lunch, and 10 million ate a school breakfast. Current federal regulations stipulate that school lunches and breakfasts should provide one third and one fourth, respectively, of children's daily needs for energy (calories) and key nutrients, and should be consistent with the recommendations for fat and saturated fat in the Dietary Guidelines for Americans 1995. In addition schools are encouraged to reduce levels of sodium and cholesterol and to increase the fibre content of the meals.

Schools can help children increase their intake of foods that are likely to have important health benefits and limit intake of the foods that are not recommended as part of a healthful diet. The federally sponsored NSLP and SBP are important venues for providing children with healthful, balanced meals. This article by Condon et al (2009) provides valuable information on school menu offerings and children's food choices. It shows that consumption of school meals is positively related to children's intake of key food groups at lunch and breakfast and that additional health benefits could be realized by offering more fresh fruits, whole grains, and a greater variety of vegetables.

A key finding from Story (2009) was that NSLP participants consumed more nutrients at lunch than matched non-participants, even after adjusting for differences in observable characteristics. Intake of protein, vitamin A, vitamin B-12, riboflavin, calcium, phosphorus, potassium, and zinc were among the nutrients that were significantly higher compared with intake by non-participants. In general, lunches consumed by NSLP participants and non-participants provided similar amounts of energy. However, lunches consumed by high school NSLP participants were significantly higher in calories than those consumed by high school non-participants (733 vs 661 calories), but were still lower than the USDA energy standard for NSLP high school lunches (Story, 2009).

Story (2009) also indicates that evidence suggests that breakfast consumption may improve cognitive function, test grades, and school attendance, and that breakfast eaters

are less likely to be overweight. School breakfast participation may be a protective factor in obesity because school breakfast participation was associated with significantly lower body mass index, particularly among non-Hispanic white students (Story, 2009). A key issue for the SBP is reducing barriers and increasing student participation rates.

2.9.1 Comparisons between breakfast participants and non-participants

According to Gordon (2009) school breakfast participants were significantly more likely to consume milk and fruit at breakfast than non-participants; among both groups, most fruit was consumed as 100% fruit juice. (These comparisons were also not adjusted for other factors that may differ between the two groups.) The following comparisons between participants and non-participants during both school breakfast and school lunch were observed by the above mentioned author.

2.9.2 Daily intakes of school lunch participants and non-participants

Comparisons of means or distributions of usual daily intakes of participants and non-participants were the result of a two-step process. First, statistical matching techniques were used to select a matched sample of non-participants similar to school meal participants on a wide range of characteristics. Second, the usual intake distributions of key nutrients was estimated for each group, using procedures that relied on the second day of 24-hour dietary recall data for part of the sample to adjust for day-to-day variation in nutrient intakes. School lunch participants had daily energy intakes that were greater than those of matched non-participants by about 130 calories, on average, controlling for other factors (Gordon, 2009).

According to Gordon, (2009) lunch participants were more likely to have adequate usual intake of vitamin A, vitamin B-6, vitamin C, magnesium and phosphorus. Participants and non-participants consumed similar percentages of energy from fat and saturated fat. The school lunch participants had significantly higher mean intake of fibre than non-participants.

2.9.3 Usual daily intakes of school breakfast participants and non-participants

There were few statistically significant differences in usual nutrient intakes between school breakfast participants and matched non-participants, controlling for many background characteristics. Breakfast participants were less likely to have inadequate intakes of vitamin A and phosphorous, both of which may be linked to the higher milk intakes noted above. School breakfast participants were also more likely than matched non-participants to consume excessive levels of sodium.

2.10 Definition of concepts

For the purpose of this study the following concepts will be defined:

- **National School Nutrition Programme (NSNP):** this is a programme introduced in 1994 under the Reconstruction and Development Programme. Its aim was to alleviate short-term hunger, improve concentration and contribute to general health development to needy learners.
- **Malnutrition:** according to World Health Organisation (WHO) malnutrition is any physical condition resulting either from an inappropriate or inadequate diet, such as a diet that either provides too much or too little of necessary nutrients, or from a physical inability to absorb or metabolise nutrients. Malnutrition includes over-nutrition and nutritional deficiencies as well as under-nutrition which impairs health, intellectual activity, adaptive behaviour, education, productivity and well being and can induce death.
- **Nodal areas:** these are poverty-stricken areas identified by the president of the country in South Africa.

2.11 CONCLUSION

In conclusion, most countries of the world have introduced school nutrition programmes to deal with child malnutrition. It is evident from the literature regarding the benefits of the programme. Africa is the most affected continent due to its high level of poverty. South Africa has policy and legislation in place regarding the reduction of malnutrition and hunger, but they need to be strengthened in order for the country to achieve its Millennium Development goals. The achievement of the universal primary education is also critical.

3.2 Choice and rationale for design

The study collected both quantitative and qualitative data. Its main focus was essentially qualitative data because it sought to solicit the opinions and perceptions of the participants with regard to the delivery of the programme in its current form. Qualitative data are based on meanings expressed through words and other symbols or metaphors (Weber and Kruger, 2005). A qualitative design refers to research which produces descriptive data, generally people's own written or spoken words. This study will also be executed as a case study because case studies have long been associated with social research, particularly as they concern specific phenomena or localities.

3.3 Study Area

The study area was Leruanyane circuit in the Greater Marble Hill Municipality in the Greater Sediberg District of Limpopo Province. The circuit consists of 19 primary schools and 12 secondary schools which makes a total of 31 schools. Twenty learners from the 20 selected primary schools were involved in the study. About 90% of the villages under this circuit are generally poor and many households are living on empty stomachs. These are communities ravaged by poverty and hunger. Unemployment is very high and the majority of people depend on government for social grants. The researcher's observation in working in this area is that many children come to school malnourished and hungry. Although these communities are close to the big Tlokoeng dam, people

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

This chapter outlines the research design and methodology that was followed in the research process in order to investigate the problem identified in chapter one. The chapter also identifies the target group, sampling method and size of the population. In this chapter the instruments that were used to collect data are explained and discussed.

3.2 Choice and rationale for design

The study collected both quantitative and qualitative data. Its main focus was essentially qualitative data because it sought to solicit the opinions and perceptions of the participants with regard to the delivery of the programme in its current form. Qualitative data are based on meanings expressed through words and other symbols or metaphors (Welman and Kruger, 2000). A qualitative design refers to research, which produces descriptive data, generally people's own written or spoken words. This study will also be executed as a case study because case studies have long been associated with social research, particularly as they concern specific phenomena or localities.

3.3 Study area

The study area was Tsimanyane circuit in the Greater Marble Hall Municipality in the Greater Sekhukhune District of Limpopo Province. The circuit consists of 19 primary schools and 12 secondary schools which makes a total of 31 schools. Twenty learners from the two selected primary schools were involved in the study. About 60% of the villages under this circuit are generally poor and many households go to sleep on empty stomachs. These are communities ravaged by poverty and hunger. Unemployment is very high and the majority of people depend on government for social grants. The researcher's observation in working in this area is that many children come to school undernourished and hungry. Although these communities are close to the big Flag Boshielo Dam, which

also supplies water to Polokwane City, water is a big problem. People are not able to grow food in their backyard gardens for survival.

3.4 Population

The total population of learners in the circuit is about 15000 at both primary and secondary schools. For the purpose of this study, the researcher collected empirical data from mainly the learners, but the following stakeholders also contributed in the study:

- a) educators;
- b) officials within the school nutrition section at the circuit and district levels; and
- c) parents.

3.5 Sample size and selection method

For the purpose of this study, two schools within the circuit were sampled. To that end, learners who partake in the programme and those who do not partake for various reasons, but are eligible, were sampled. A total of 50 participants formed part of the sample that was interviewed in this study: Ten learners (10 boys and 10 girls) from each school were selected for the study taking into consideration gender to make it inclusive. The inclusion of both girls and boys is therefore not for comparison purposes. Furthermore, five parents, from each school participated in the study. These are parents of the children participating in the programme. To understand issues from the perspective of the officials, an additional five participants from each school were also selected. Lastly, five educators each from both schools partook in the study.

The researcher used the stratified random sampling method since learners who participate in the programme and those who do not participate were required for the sample. The rationale for choosing a stratified sampling method is precisely because the population on which the study is based is heterogeneous as indicated above. The advantage of this separation is that the researcher will be able to divide a population into different groups called strata to make an analysis.

The study employed purposive sampling to the extent that the researcher has chosen the case study. The sample included learners who participated in the programme and those who did not participate.

3.6 Hypothesis

The following hypothesis was tested empirically

- a) Improved monitoring of the programme results in better implementation.
- b) Establishment of the school food gardens ensures sustainability of the nutrition programme;

The study attempted to uncover whether nutritional value results in improved health and well-being of learners as well as whether it impacts on school attendance. School administrative records were used to shed light on these issues.

3.7 Data collection methods

The researcher used the following research methods for the study

3.7.1 Self-administered questionnaire

A self-administered questionnaire was used for the purpose of this study. It targeted selected learners, educators, departmental officials, parents and service providers. The researcher used both the open-ended and closed-ended questions. The questionnaire was divided into sections covering the stakeholders in relation to the study. The information based on learners' and parents' perceptions, monitoring by the department, educator involvement, infrastructure, and the health status of learners was collected.

3.7.2 Interviews

Structured personal face-to-face interviews were conducted with school principals of the two schools, departmental officials responsible for school nutrition within the district, selected learners from the two schools as well as selected educators from the two schools.

Open-ended questions were asked because the advantage of using this type of question is the rich and complex data that one can obtain which is not possible from a closed-response question. Closed-ended questions were also used to avoid monotony. In this regard the researcher supplied the response options to the person. The interviews took approximately 20 minutes for each interviewee and the process took one month to complete.

3.7.3 Observation

The researcher observed the activities of the stakeholders mentioned above for the purpose of the study. The researcher took down notes in the process which were later analysed for drawing the conclusions.

3.8 Data analysis methods

Once having collected the data from the field, the purpose of data analysis is to make sense of the accumulated information (Vithal and Jansen, 1997). In this study, an interpretive approach was adopted. The analysis involved breaking up the data into manageable themes and categories. Patterns, trends and relationships were deduced in relation to the impact of nutrition on the learners. These formed the basis upon which data interpretation ensued. In the process, any irrelevant material was discarded.

3.9 Ethical considerations

The researcher considered the following ethical issues.

- a) Informed consent - the researcher obtained informed consent from the participants who indicated that they are willing to voluntarily take part in the study. Participants were also informed that they can voluntarily withdraw their participation at any given point in time of the interview.
- b) Privacy - the researcher preserved the privacy / confidentiality of the participants by maintaining the anonymity of the participants;
- c) The researcher also ensured that no harm was inflicted upon the participants in the course of the study.

3.10 CONCLUSION

The interviews held with learners, teachers, parents and departmental officials were more empowering and gave insight into the poverty situations and malnutrition in which people find themselves. The challenge which the researcher experienced was that the respondents were reminded to complete the questionnaires. It was also difficult to get the questionnaires back. Some respondents lost the completed forms and they were requested to fill new questionnaires.

The researcher had to visit some of the respondents at their homes to either interview them or request them to complete the questionnaire. The researcher had to conduct telephonic interviews with some respondents, as it was not easy to meet them in person.

The analysed data were derived from the following main questions of the study:

- a) Does the food add any nutritional value/ impact on the learners?
- b) Does the programme benefit needy learners from poverty-stricken homes?
- c) Do the self-supporting school food gardens assist in alleviating hunger and poverty in those needy learners?
- d) To what extent is the quality of food supplied contributing to learner's interest in taking part in the programme?
- e) To what extent is the programme contributing to the improvement of learner's attendance, academic performance and health improvement of the learners?
- f) How is the Department of Education supporting schools taking part in the programme?

Table 1 below shows the demographic profile of the respondents.

CHAPTER 4

RESEARCH FINDINGS AND DISCUSSION

4.1 INTRODUCTION

This chapter discusses how the collected data was analysed. The research determined and selected from the data set that data which is helpful in unpacking the impact of the nutrition on the learners. Both quantitative and qualitative analyses were used for the purpose of this study. The data was collected from educators including the principals, learners, parents and departmental officials responsible for National School Nutrition Programme.

The analysed data were derived from the following main questions of the study.

- a) Does the food add any nutritional value / impact on the learners?
- b) Does the programme benefit needy learners from poverty-stricken homes?
- c) Do the self-supporting school food gardens assist in alleviating hunger and poverty to these needy learners?
- d) To what extent is the quality of food supplied contributing to learner's interest in taking part in the programme?
- e) To what extent is the programme contributing to the improvement of learner attendance, academic performance and health improvement of the learners?
- f) How is the Department of Education supporting schools taking part in the programme?

Table 1 below, shows the demographic profile of the respondents.

Table 1. Demographic profile of participants

<u>Variable</u>	<u>Category</u>	<u>Frequency</u>
<u>Total number of participants</u>		50
<u>Gender distribution</u>	Male	29
	Female	21
<u>Age distribution</u>	10-20	20
	20-30	1
	31-40	6
	41-50	17
	51-60	6
	60+	0
<u>Marital status</u>	Never married (children)	20
	Married	29
	Divorced	0
	Widowed	1
<u>Highest education</u>	Grade 1-7	24
	Grade 12	6
	Diploma	10
	Diploma + Degree	10
<u>Main Economic Activity</u>	Regular employment	24
	Casual employment	0
	Self-employment	0
	Housewife	0
	Unemployed	26

Minimum age 16, Mean age 31, Maximum age 58

The findings as per the respondents' contributions were analysed. The following is an analysis of the questionnaire responses in percentages by the learners from the two schools which took part in the study.

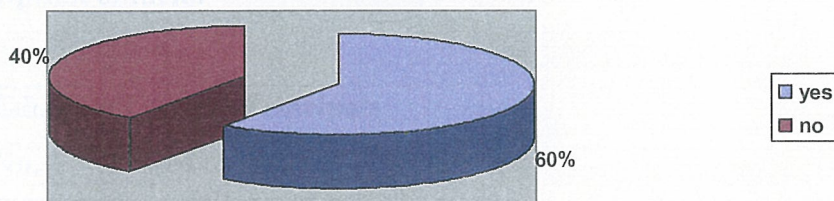
4.2 Participation in the School Nutrition Programme

Twelve (12) or 60% out of the 20 learners who responded to the questionnaire indicated that they do eat the food provided by the school. In other words they take part in the School Nutrition Programme. The learners' responses are summarised in table 2 and figure 1 below.

Table 2: Learner's responses on the participation in the school nutrition programme

Responses	Learners	
	No.	%
Yes	12	60
No	8	40
	20	100

Fig 1: Learner perception on participation in the school nutrition programme



4.3 Parent's responses on learner participation in the nutrition programme

In addition 10 parents were interviewed. Eight (8) parents indicated that the programme relieves hunger and the other two (2) parents indicated that they strongly agree that the programme relieves hunger. This means that all parents (100%) agree that the school nutrition programme benefit learners. The table below summarises their responses.

Table 3: Parents' responses on learner participation in the nutrition programme

Responses	Parents	
	No.	%
Yes	10	100
No	0	0
Total	10	100

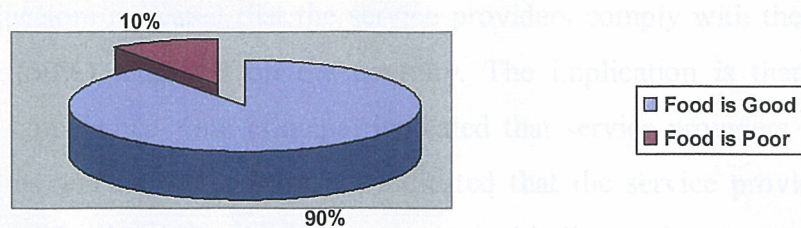
4.4 Educators and principal's description of the food (menu)

Nine (9) educators indicated that the quality of the menu is good whereas one (1) educator indicated that the quality of the menu is poor. Both principals indicated that the food is of good nutritional value. The menu is balanced and contains soya products, dried beans, nuts and dried peas, fish, maize meal, samp, mealie rice, cabbage and other vegetables like spinach.

Table 4: Description of menu

Responses	Educators		Principals	
	No.	%	No.	%
Meal is good	9	90	2	100
Food is of poor quality	1	10	0	0
	10	100	2	100

Figure 2: Menu description



4.5 Learner's responses on the specific time at which they eat the food

Seventeen (17) learners indicated that they get the food at 10hr am. In other words they get their food in the morning at break time. Only three of the respondents indicated that they get food at 1.00 hr. It is the Department's policy that the learners get food at 10 hr. The reason is that they will be able to concentrate more in class than when they are not fed.

The implication from the figures in the table is that the two schools comply with policy. This policy is in line with assertion by De Rosso and Marek (1996) that providing meals or a snack early in the school day eliminates hunger and that the children are attentive in class. Bundy et al (2005) share the same sentiment that missing breakfast impairs performance for children of poor nutritional status, who also benefit from food interventions. This data is represented in table 5 below

Table 5: Specific time in which learners receive food

Responses	Learners	Percentages
10hr	17	85
1hr	3	15
Total	20	100

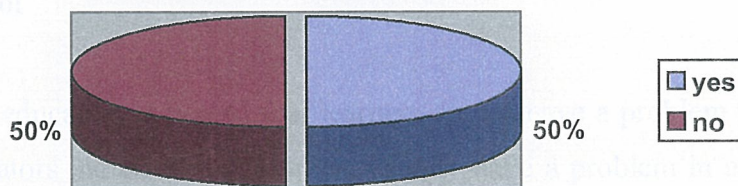
4.6 Educators and principals responses on compliance with menu prescription

Five (50%) educators indicated that the service providers comply with the menu while the other five (50%) indicated on the contrary. The implication is that there is no consistency in compliance. One principal indicated that service providers comply with the specifications and the other principal indicated that the service provider does not comply with specifications. The fact that one principal indicates that the service provider does not comply means that the quality of the food is sometimes compromised. The data is presented in Table 4 below.

Table 6: Compliance with menu prescription

Responses	Teachers	Principals	Percentage
Yes	5	1	50
No	5	1	50
Total	10	2	100

Figure 3. Compliance with menu prescription



4.7 Rating support from the department in terms of monitoring scale (1-10)

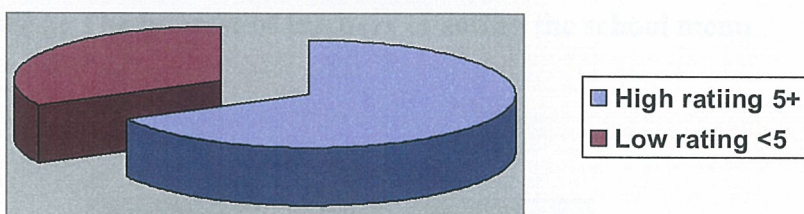
(1 bad, 10 good)

Data from the study show that three (3) educators rated the support from the department at 3, one (1) educator rated the support at 4, two (2) educators rated the support at 5, one (1) educator rated the support at 6, two (2) educators rated the support at 8 and one (1)

educator rated the support at 9. This then implies that the monitoring by the Department is very poor and therefore needs some improvement if implementation has to happen correctly. Both principals share the sentiment of the educators who indicated that the support from the department is not satisfactory.

If one were to take 5 as the average rating or mid-point, six of the 10 educators rated the support from the Department at 5 and below; while only 4 rated it above 5. This is shown in the pie chart below (See fig 5)

Figure 4: Educator’s responses on department support



4.8 Educator’s responses on the interest of learners in eating the food provided by the school

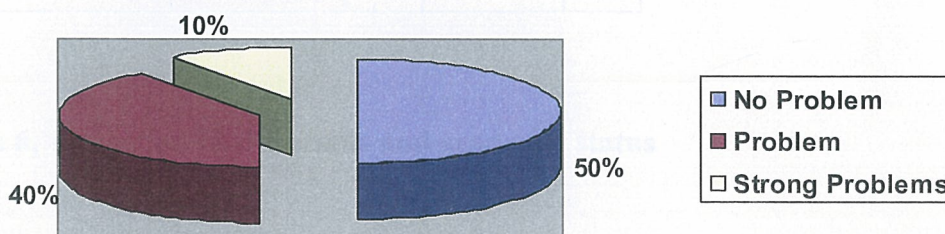
Five (5) educators indicated that learners do not have a problem in eating the food; four (4) educators indicated that learners usually have a problem in eating the food supplied and one (1) educator strongly indicated that learners usually have a problem with the food supplied by the school. The five educators who indicated that learners have a problem in eating the food suggest that the programme is not benefiting all the learners. There could be various reasons for this. The most common one is fear of witchcraft. Some of the food handlers are not in good terms with some of the parents of the learners and therefore there is always a suspicion that their children will be bewitched through food poisoning. These parents prohibit their children from taking part in the programme. They come with their food from home. The 10 % indicating that ‘strongly there is a problem’ could be

attributed to this. The other problem which the researcher has observed is that learners usually shun the food which is not well prepared. It is not only about the quality of the food but preparation also counts. The other 40% indicating that there are problems could be attributed to this issue.

Table 7: Educators’ responses on interest of learners in eating the food provided by the school

Response	No	%
No problem	5	50
There is a problem	4	40
Strongly there is a problem	1	10

Figure 5: The interest of learners in eating the school menu



4.9 Educators and parent’s responses on the impact on health status and academic performance

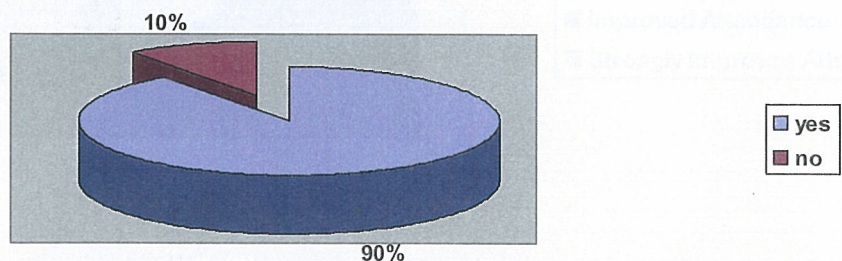
Nine (9) educators indicated that that the nutrition programme improves the health status and academic performance of the learners whereas one (1) educator disagreed with the statement. This is consistent with Lamber’s study (2008) in the DRC in which the respondents highlighted that the hot meals, served six days a week, are a motivating factor for parents to send children to school and for the children themselves to remain in school as well as allowing children to be more attentive and focused during class.

Three (3) or 30% of parents rated the programme at 7, two (2) or 20% of parents rated the programme at 8 and five (5) parents rated the programme at 10. Seventeen (17) out of the 20 respondents indicated that since taking part in the programme, they have observed a significant improvement in terms of health and academic performance. Two (2) respondents indicated that they don't see any changes at all. One (1) respondent indicated that she is not sure. One parent rated the programme at 3, one parent rated it at 6, two parents rated it at 7, one parent rated it at 8 and five parents rated it at 10. The percentage on the table (82%) implies that the programme has a positive impact on academic performance and health improvement. Table 8 and pie chart below summarised their responses.

Table 8: Impact on health status and academic performance

Responses	Educators	%	Parents	%
Yes	9	90	7	70
No	1	10	3	30
Total	10	100	10	100

Figure 6: Impact on health status and academic status



4.10 Educators, principals and parent's responses on the impact on school attendance

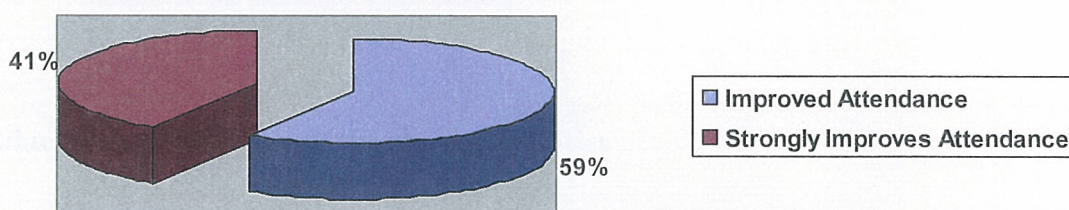
On this aspect six (6) parents indicated that the Nutrition Programme improves their children school attendance whereas four (4) parents indicated that the programme

strongly improves their children school attendance. The same sentiment was echoed by both the educators and principals. Bundy et al (2005) indicated that school food programs have been successful in improving school attendance. The implication is that the programme has positive impact on the attendance of learners. There is enough evidence in literature indicating that most learners come from poverty stricken households and therefore the school nutrition programme provides relief to both learners and parents.

Table 9: Impact on school attendance

Responses	Parents	%	Educators	%	Principals	%	No	Percentage
Improves Attendance	6	60	6	60	1	50	13	59
Strongly improves Attendance	4	40	4	40	1	50	9	41
	10	100	10	100	2	100	22	100

Figure 7: Impact on school attendance.



4.11 Educators and principal's responses on impact on poor learners

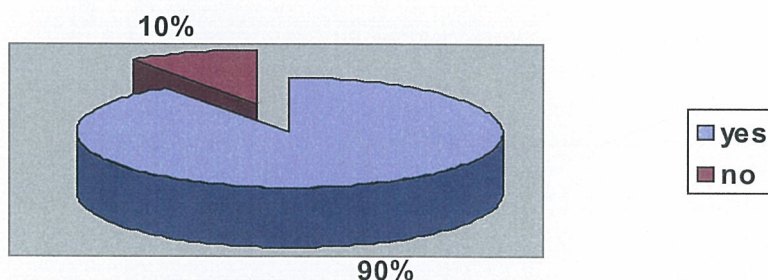
Eight (8) educators indicated that the nutrition programme benefits poor learners whereas two (2) indicated that the programme benefits average learners. The implication is that the department is achieving its goal of relieving hunger since the learners from poor families are the main beneficiaries. Both principals indicated that they strongly agree that the programme has a beneficial effect on the learners in the sense that due to their

participation in the programme, their school attendance has improved as well as their health status. This sentiment is also shared by Jukes et al (2008) who indicated that the school health and nutrition programmes benefit the poorest children. The benefits include Improvement of their health status, improvement of academic results and so forth.

Table 10: Educators and principal’s responses on poor learners

Responses	Educators	%	Principals	%	No	Percentage
Yes	8	80	2	100	10	90
No	2	20	0	0	2	10
	10	100	2	100	12	100

Figure 8: Impact on poor learners.



4.12 Educator’s description of the storage facilities

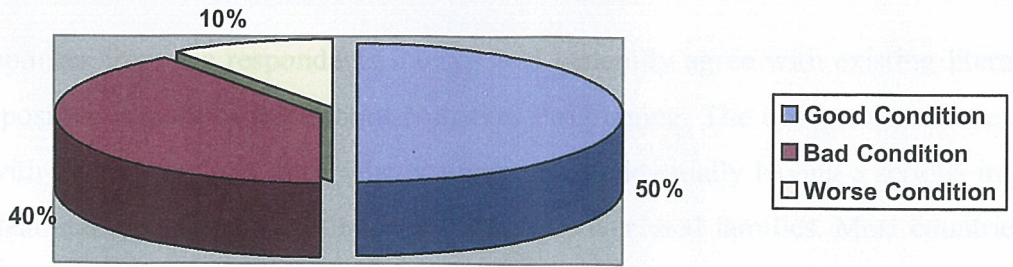
Five (5) educators indicated that the storage facility is in good condition, four (4) indicated that the storage facility is in bad condition whereas one (1) educator indicated that the storage facilities are in a very bad condition. This comment implies that the hygiene standards and quality of the food is compromised in the process. This may have a negative impact on the goal of the department which is to improve the learner’s health status.

Figure 9: Description of storage facility

4.13.1 Impact on school attendance

The respondents in this study indicated that the School Nutrition Programme improves learner school attendance. One educator indicated that learners do not want to skip the meal. There is a general agreement on this issue. Educators, parents, learners themselves, the school principals and departmental officials generally agree that the programme, since its inception, improves school attendance. They indicated that absenteeism was rife in their schools before the inception of the programme. They pointed out that the majority of these learners were from the impoverished households who are struggling to make ends meet.

There was a general improvement on attendance since the programme was introduced in the two schools that took part in the study. Learners from the well-to-do families were regular attendees even before the inception of the programme in the two schools. This was observed when marking daily attendance registers made such an observation and noted. The parents that make such an observation and comment are requested by the department of education to do so.



4.13 DISCUSSION

The responses from the respondents interviewed generally agree with existing literature on the positive impact of the School Nutrition Programme. The observations done also agree with the existing literature. The programme is evidentially having a serious impact on the learners especially those that come from impoverished families. Most countries of the world have been implementing school feeding programmes as a way of relieving hunger and poverty. Interesting enough is that some African countries have also been implementing school nutrition programmes to relieve hunger for some years.

4.13.2 Impact on health status of learners and academic performance

The literature used in this study was deliberately drawn from experiences in a number of countries in different continents of the world. This offered the researcher an opportunity to gain some insight about the trends in countries not just of one continent but across the globe. It was interesting to note that irrespective of the contexts and different backgrounds, the results on the impact of the programme are similar. They all point to the same results in more ways than one.

4.13.1 Impact on school attendance

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There was a drastic improvement on attendance since the programme was introduced in the two schools that took part in the study. Learners from the well to do families were regular attendants even before the inception of the programme in the two schools. The class teachers when marking daily attendance registers made such an observation and trend. The parents also made such an observation and commended the department for the provision of food to their children.

Parents in their responses clearly indicated that such a programme should continue as it has an impact on learner school attendance. All the ten parents shared this sentiment. Parents felt that the programme is also a relief to them in terms of the responsibility they were supposed to be executing, which is that of providing quality and nutritious food to their children. The existing literature also supports this observations and experiences by the respondents. According to Lambers (2008) parents prefer to send their children to schools which run the feeding program because they are assured that their children will have a meal and be less likely to leave class due to hunger.

4.13.2 Impact on health status of learners and academic performance

The respondents also indicated in the study that the school nutrition programme improves the health status of the learners. They indicated that the programme reduced malnutrition amongst the learners. Learners are generally healthy and fit because they eat a well balanced menu. The respondents indicated that learners' sickness problems were drastically reduced. The existing literature agrees with the observation by the respondents that the nutrition programme improves learner health status.

Data from the qualitative portions of the study were also revealing. For instance, it was mentioned by respondents that the improvement of learner health status also has a direct link to school attendance because if the child is free from disease, school attendance improves but if the learners are always sick, absenteeism will take its toll hence the respondents feel that the programme should continue. All the respondents gave the same answer when asked if they think the programme should continue.

On the issue of the impact on academic progress, the respondents indicated that the nutrition programme improved the academic performance of learners. They indicated that learner's concentration levels are much better than before the programme was introduced. Learners are now also more attentive than before because they are no longer starving. In other words they listen to the educator more than hunger itself.

The respondents also indicated that learners generally are interested in eating the food provided by the school. There are however few exceptions were learners are not

participants in the programme due to various reasons. The researcher's observation on this issue is that some learners suspect witchcraft, precisely that the food handlers may poison them for one reason or the other. It is for this reason that their parents would instruct them not to take part in the programme. Some learners are not participants in the programme for the simple reason that they do not find the food palatable or delicious. These normally would be children from well to do families. The researcher's experience as an implementer at the school level is that learners from poor households eat whatever is provided by the school.

4.13.3 Stakeholder support to the programme

The respondents felt very strongly that the Department of Education is not doing enough to render support to the participating schools. They also feel that the department is doing very little to monitor the implementation of the programme at school level. Schools usually convey their frustrations with the service providers to the department. The problems usually range from inconsistent supply of food, non-compliance with the menu prescriptions and so forth.

The respondents indicated that there is very little support they receive from the department on these issues and therefore the service providers usually 'get away with murder'. It can be surmised that it is difficult to deal with implementation challenges at school level when there is no support from the department. Those who are vested with the responsibility of implementing the programme at school level get frustrated when they see no help coming.

4.13.4 Eating time

The respondents also indicated that learners get their food at 10hrs which is a departmental policy. The reason for determining this time for the schools was that learners would be able to eat their food a little early in order for them to learn when they are not hungry. It is no point to give learners food at lunch because it will not serve the purpose of improving their concentration levels. Research shows that learners learn better when they are well fed than when they are starving. However some respondents,

especially learners indicated that they get their food at 1hr which I think defeats the whole idea and vision of the programme.

4.13.5 The condition of storage facilities and hygiene considerations

On the issue of the condition of storage facilities, the respondents indicated that they are in a bad condition although some indicated that they are in a good state. The researcher's own observation is that this is serious matter which the officials in charge of the programme should take seriously. Hygiene should be prioritised for the benefit of the children.

Respondents indicated that generally the schools take hygiene issues seriously. They indicated to the researcher that the food handlers wear clean clothes and wash their hands when preparing food for the learners. Learners are also taught the life skills of washing their hands after using the toilet and every time they eat. The researcher's observation is that some schools, because of lack of kitchen facilities, prepare food in the open space which makes the food vulnerable to the germs especially when the wind is blowing. The ultimate result is that learners may end up getting sick because of the germs in the food.

In (2009) the Department of Education issued out a circular informing schools participating in the programme that they intend building kitchens for them. They also designed a building plan for all the participating schools.

The respondents also indicated that in order to sustain the School Nutrition Programme, establishment of school gardens is necessary so that those gardens can support and strengthen the school feeding programme. I think that needy learners can benefit more because they can also take food produced from the school garden to share with their family members at home.

4.13.6 How often the learners get food from the school

The research indicated that learners get food from the school on a daily basis. The researcher observed that the schools under study were providing all the learners with a meal on a daily basis as a departmental policy unless where the service provider had defaulted in terms of consistent delivery of food to the school. There are such exceptions but overall the policy demands that the learners should be provided with a meal everyday.

4.13.7 Establishment of food gardens

Most parents indicated that there is a need to establish food gardens to sustain the program. The Department of Education was mandated by Parliament on the 23 January 2003 to lead and mobilise civil society as well as social sector departments to set up school vegetable gardens as a food security initiative (Government Programme of Action, 2003). Carin et al (2009) pointed out that commitment from community and volunteer workers can assist in executing well run and managed programmes.

4.13.8 Continuation of the programme

All the parents indicated that they want the programme to continue for the benefit of their children. As an implementer the researcher has also observed the benefits of this programme to our learners. The researcher's opinion is that it should continue to exist but the researcher would like to see a situation where the World Food Programme (WFP) assists just like in other African countries where such programmes exist. The United Nations World Food Programme recently reported that drought and high food prices have pushed 12 million people into hunger in the DRC. For struggling families, knowing that their child is ensured a meal at school is an important safety net in times of crisis.

4.14 CONCLUSION

The findings of the study show that there the school nutrition programme has a huge impact on the reduction of malnutrition on learners. There is also evidence from the research that the programme improves learner attendance, health status and academic status of learners. There is also evidence from the study that officials are not doing enough to monitor the programme at school level. All the respondents in the study want the programme to continue which is evidence that it is indeed impacting positively on the lives of learners.

The majority of learners (70%) indicated in the study that the food the schools provide is of good nutritional value and delicious. The educators also attest to what the learners say. The nutritional value in the food has the potential to improve the health status of learners and their academic performance as literature in this study has shown.

Most of the learners also (70%) alluded to the fact that they eat their breakfast at 10h every day. The benefit for eating breakfast at this time of the day is that it helps learners to focus and to concentrate in class. This practice also complies with the department's policy that learners should be fed at this time.

The fact that educators and principals share different views with regard to compliance by the service provider to prescribed menu indicates that there is no consistency. It means that service providers comply when it is in their convenience. This will ultimately have a negative impact on the whole programme in terms of implementing its intended goals. The department may not achieve what it had set out to achieve through the programme.

Both principals and educators indicated that the support from the department with regard to support and monitoring is poor. Service providers will always capitalise on this loophole and continue to provide poor service to schools while raking in millions of rand from public funds. The principle of value for money should apply so that the public funds are not defrauded and abused.

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS.

5.1 CONCLUSION

The study revealed that on one hand 80% of the parents believe that the programme relieves hunger whereas on the other hand the remaining 20% strongly believes that it relieves hunger. The conclusion can then be drawn that the nutrition programme may help in achieving the objectives of the Department of Education and Millennium Development Goals which relieves hunger especially in Africa and Asia.

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The majority of educators have said that the programme improves the health status and academic performance of learners (90%) while 85% of learners agree with this observation. This therefore means that the programme is achieving its intended goals and objectives. It simply means that the programme plays a very important part to enhance learning in schools.

Eighty percent of the educators in the study have indicated that the poor learners are the main beneficiaries in the programme. Learners from poor households usually go to school with empty stomachs which makes it very difficult for them to concentrate in class. This may also lead them to miss their classes. The programme is a huge relief to this group of learners.

The overall conclusion for the study is that the findings confirm what the literature is highlighting. It therefore means that the NSNP is an important programme and should continue assisting the needy learners in our country. The good news is that as from April 2009 the programme has now been rolled out to secondary schools. The benefits of the programme are evident from the study hence the researcher feels strongly that the programme should be improved and that it should continue to exist.

The impact of the national school nutrition programme especially on improving health status and performance of learners is critical towards improving education in South Africa and elsewhere in the world. The improvement of learner attendance is equally important in enhancing the education of the learner. The studies conducted in Africa and elsewhere in the world seem to produce the same findings.

5.2 RECOMMENDATIONS

The first thing which is of critical importance is that the Department of Education (DoE) should consider making it policy and compulsory that all participating schools and non-participating schools should grow vegetable gardens in their schools to deal with the scourge of hunger. This should not only be confined to participating schools because the problem of hunger affects all schools and communities. The researcher thinks that there will be some improvements in attendance and academic performance in our schools around the country especially those which are in deep rural areas. As it is now schools are not taking this matter seriously, it is only a few schools that really take this issue as important.

All the schools should also consider having a garden committee and a policy in place which will then give direction as to how it should be run and managed to improve its effectiveness and efficiency in dealing with the challenge of hunger. This I think should become the department's policy that all schools should have this structure and policy in place. The department will then be able to monitor compliance in this regard. Non-complying schools should then be given support and assistance to improve and failure to cooperate should result in the department sanctioning the school.

The department should also consider improving its support to participating schools. There is currently little monitoring and support to participating schools. The department should develop a program to regularly visit these schools to have a sense of challenges they are faced with. An intervention plan should then be drawn to deal with these challenges and problems. The officials in charge should monitor service provider compliance, learner eating time, hygiene, impact of the program and so forth. The monitoring of implementation of the program will assist the department to give schools the necessary support. The norms and standards allocations should also be increased to enable NSNP to meet its expectations.

The safety of the food should be improved by building storage facilities in schools. These facilities should be hygienically clean to avoid food poisoning. The department should increase its norms and standards allocations to the participating schools to enable them to

design a bigger budget for the NSNP. The alternative would be for the department to build the storage facilities for the participating schools.

Although the department has indicated that it will build kitchenettes at the participating schools, the project does not seem have started. The researcher would therefore recommend that the department build these kitchenettes as a matter of urgency. This should be done to improve food safety because as the research has indicated the cooking facilities for the schools which took part in the study are in bad condition and this could be the situation in most of the schools around the province and the country. Most of the schools have constructed shacks to prepare food for the learners. These shacks are not user friendly especially during windy and rainy days. It is also easy for germs to get into the food.

Related to the above mentioned issue is that workshops should be conducted for the food handlers to improve personal hygiene. Learners need to consume healthy and nutritious food which has not been contaminated by germs. They should through the norms and standards allocation, buy the necessary attire for the food handlers to support them. The department has requested schools to include the NSNP in their school budgets. The NSNP budget will then take care of all nutrition program needs in the school to make it workable and successful. The researcher's experience in this regard is that most schools do not have provision for NSNP in their budgets making it difficult for the program to run effectively and efficiently.

Currently the department is not organizing workshops to train food handlers on how to prepare, cook and serve the meals to the learners. They are expected to maintain high level of personal hygiene. The problem is that if there are no such workshops the possibility is that even though the menu is of good quality, it may not be prepared in the manner that would make it tasty and attractive to the learners. This may then result in the learners shunning the food so prepared. Most of this food will consequently be thrown away amounting to fruitless expenditure. Food handlers should therefore be trained on health and hygienic issues to improve the quality of food in terms of the manner in which it is prepared and served.

It is also evident from the research that service providers do not always comply with menu prescription of the department. In terms of National School Nutrition Program guide, school menus should offer tasty and adequate meals which must fulfill at least 30% of the daily nutritional needs of learners per meal. It is important to serve a balanced meal which is composed of protein, starch, vegetables. Anything other than this prescription will definitely compromise the quality of the menu supplied to learners. The researcher's experience as an implementer at school level is that service providers have a tendency of providing low quality food at the expense of learners precisely because they want to save money and cash in more profit. Sometimes expired food is delivered to the schools which is highly unacceptable.

The recommendation in this regard would be that the nutrition committee as well as the principal should carefully check the food supplied immediately upon delivery. They must check if the menu complies with the description of the department in terms of the necessary nutrients. Service providers are not allowed to supply 'no name' parcels. In terms of the guidelines alluded to in the above paragraph, maize meal, bread or flour and flour products should have the logo depicting that they have been **fortified** with essential macro nutrients.

The deterrent for non-complying service providers should be that their claims should not be processed and that such non-compliance should be brought to the attention of the department. The fact of the matter is that appointed service providers normally are called to the workshops organized by the department to acquaint them about the expectations. A repeat of the same should result in the department terminating the contract with the provider and not entering into business deals with them in the future.

The trend whereby one service provider provides for more than two terms should be discouraged. It does not assist in terms advancing the concept of broad based economic empowerment. Service providers should not provide for more than two terms because there is always the temptation to begin to relax and not do things correctly. New service providers should be given a chance to supply food to schools and when their term lapses they should give others a chance. The researcher's observation is that many problems are caused by the fact that one service provider would supply for two circuits or even more and in most cases they do not have the capacity to do so.

A majority of respondents are of the view that school authorities should be involved in the procurement processes regarding the hiring of service providers. The argument is that this will minimize contracting of incompetent service providers. Many respondents feel that the process is centralized and a top-down affair.

The researcher also recommends that in order to address service provider challenges, it would be important to acquire the services of local providers. In other words service providers residing in a particular district should supply for their respective district unless if there is no capacity. The reason for this is that this arrangement will allow them to deliver food on time and at the right places. It will always be easy for schools to reach them in case there are problems. It will also be easy for them to deal with the logistics relating to food delivery. The researcher has, since the inception of this program, seen service providers from other districts struggling to provide the necessary services because of the distance.

One of the menu requirements for this program is that providers should also provide an indigenous menu. It may be very difficult for the service provider from another district to understand cultural issues of other ethnic group and for this reason it would be important to consider local service providers. This approach I think will assist the department in dealing with service provider challenges because currently there are many such challenges.

The schools must also start mobilizing and involving other important stakeholders like the parents. Initially in this chapter, there was an indication that the notion of food gardens should be transferred to the learner's homes for continuity and sustainability. This will avoid a situation where learners get food at school and continue to starve at their homes. There is a need for a long term vision in addressing the problem of hunger in order to improve learning in our schools. This therefore implies that parental involvement is very important in realizing sustainable food growth. The school should train parents on how to establish and organize a food garden. There is very little involvement of parents in the program so far and this must change so that the program impacts positively on the learner.

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There is a need to incorporate the program into the school curriculum. Learners need more comprehensive and organized information on health matters so that they live healthy lifestyles. Life orientation and natural sciences can offer them an opportunity to make more informed choices about healthy living. Educators offering these learning areas should therefore adopt the approach which is more practical and interactive. Learners should be taught, among others, how to establish a food garden. Once they have acquired the skills to establish food gardens themselves, they will then be able to establish them at home thus dealing with hunger relief.

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Annexure A

ADMINISTERED QUESTIONNAIRE

QUESTIONNAIRE

RESPONDENT: EDUCATOR (NSNP COORDINATOR)

Name and surname.....

Questionnaire No.....

Age

Gender.....

Position.....

Educational qualification.....

1. How often does the service provider deliver food at the school?
 - a) monthly
 - b) middle of the month
 - c) quaterly
 - d) fortnight

2. Is the food delivered in terms of the prescribed menu?
 - a) no
 - b) yes

3. Tick the word that best describes the quality of menu supplied in terms of its nutritional value.
 - a) good
 - b) poor

4. How would you rate the support you are getting from the department in terms of monitoring? Circle your answer

1 2 3 4 5 6 7 8 9 10 (1 bad 10 good)

5. Learners do not usually have a problem in eating the food supplied.
 - a. yes
 - b. no

6. The nutrition programme improves the health status and academic performance of learners.

Annexure B

QUESTIONNAIRE

RESPONDENT: PARENT

Name and surname.....

Questionnaire No.....

Age

Gender.....

Employment status.....

Educational qualification.....

1. Is your child taking part in the school nutrition programme?
 - a) yes
 - b) no
 - c) sometimes
2. If your answer is no why is he/she not taking part in the programme?
 - a) Fear of witchcraft
 - b) Allergy
 - c) Religion
 - d) Menu not tasty
3. The school nutrition programme relieves hunger.
 - a) yes
 - b) no
4. How would you rate the impact of this programme on your child especially in terms of health improvement
1 2 3 4 5 6 7 8 9 10 (1 bad 10 good)
5. How would you rate the impact of this programme on your child especially in terms of academic performance.
1 2 3 4 5 6 7 8 9 10 (1 bad 10 good)
5. Are you allowed to make suggestions on how the programme can be improved?
 - a) yes
 - b) sometimes
 - c) no
6. The nutrition programme improves school attendance of my child.
 - a) Yes

Annexure C

QUESTIONNAIRE

RESPONDENT: LEARNER

Name and surname.....

Questionnaire No.....

Age

Gender.....

Grade.....

1. Do you eat the food provided by the school?
 - a) Yes
 - b) No

2. Why do you go to school everyday?
 - a) to learn
 - b) to eat
 - c) because of friends
 - d) for fun

3. Circle the word that best describes the food you eat at school.
 - a) good nutritional value
 - b) poor quality

4. What changes have you observed since you started eating the food provided by the school?
 - a) health and academic performance improvement
 - b) not sure
 - c) no changes at all

5. At what specific time do you get your food?
 - a) 10 hr am
 - b) 12 hr am
 - c) 1hr pm

6. How often do you get your food?
 - a) once a week
 - b) everyday
 - c) fortnightly
 - d) twice a week.

Annexure D

QUESTIONNAIRE

RESPONDENT: DEPARTMENTAL OFFICIAL REponsible FOR NSNP.

Name and surname.....

Questionnaire No.....

Age

Gender.....

Position.....

1. Are you adequately trained to run the NSNP?
 - a) no
 - b) yes

2. What kind of support do you give to the participating schools?
 - a) regular visits
 - b) workshops
 - c) none
 - d) telephonic contact

3. Choose the word that best describes monitoring of implementation at school level
 - a) satisfactory
 - b) not satisfactory
 - c) excellent
 - d) average

3. How do you select the service providers?
 - a) on merit
 - b) experience
 - c) first timers
 - d) political affiliation to a particular party
 - e) other, specify.....

4. Is the department providing infrastructure to the participating schools?
 - a) yes
 - b) no

5. The service providers deliver the food exactly as prescribed by the department.
 - a) Yes
 - b) No

Annexure E

QUESTIONNAIRE

Respondent: Principal

Name and surname.....

Questionnaire No.....

Age.....

Gender.....

Position.....

- a) Are you satisfied with the type of food the learners are getting?
.....
- b) Are the service providers complying with departmental specifications?
.....
- c) How has the programme impacted on learner attendance since its inception?
.....
- d) What is your comment on the impact of health status of the learners?
.....
- e) Is the department monitoring the programme at your school?
.....
- f) Do you think the food gardens are necessary for the programme?
.....

Annexure F

OBSERVATION TEMPLATE: NATIONAL SCHOOL NUTRITION PROGRAMME (NSNP)

The following behavioural patterns and activities will be observed:

LEARNER ATTENDANCE

Consistent Inconsistent Poor Average

HYGIENE

Cleanliness of utensils Cleanliness of kitchen washing of hands

HEALTH STATUS

Excellent Good Poor Bad

ACADEMIC IMPROVEMENT

Satisfactory Not Satisfactory

DEPARTMENTAL PROGRAMME SUPPORT

Satisfactory Not Satisfactory

MONITORING

Good Satisfactory Bad

PARENTAL INPUTS

Allowed Not Allowed

FOOD GARDENS (IMPACT)

Significant Insignificant

Annexure G



UNIVERSITY OF LIMPOPO

TURFLOOP GRADUATE SCHOOL OF LEADERSHIP

PO Box 756, Fauna Park, 0787

Tel: 015 290 2836

Fax: 015 290 2836



MEMORANDUM

26 November 2009

To whom it may concern

RE: RESEARCH FOR MDEV MINI-DISSERTATION

Mr. James Matoane (200310312) is registered as an MDEV student in our School. In partial fulfilment of the requirements of the degree, students are required to prepare a mini-dissertation.

We kindly request you to assist Mr. Matoane in gathering data for this research. His research topic is:

AN INVESTIGATION INTO THE IMPACT OF THE NATIONAL SCHOOL NUTRITION PROGRAMME (NSNP) IN THE GREATER SEKHUKHUNE DISTRICT, FOCUSING ON THE TSIMANYANE CIRCUIT PRIMARY SCHOOLS IN THE LIMPOPO PROVINCE

Your assistance in this regard will be appreciated.

Thank you

Dr. O. Mtapuri
MDEV Programme



**Faculty of Sciences and Agriculture
Materials Modeling Center
Dr Lutz Ackermann (Deputy Director)**

Private Bag X1106
Sovenga 0727

Tel: +27 15 268 3424
Fax: +27 15 268 3268
lutza@ul.ac.za

4 Aug 2010

TO WHOM IT MAY CONCERN

This is to confirm, that I, Dr Lutz Ackermann, have read the Mini-Dissertation entitled

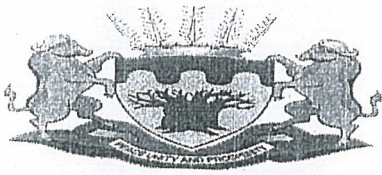
**“THE IMPACT OF NATIONAL SCHOOL NUTRITION PROGRAMME
(NSNP) IN TSIMANYANE CIRCUIT, SEKHUKHUNE DISTRICT OF
LIMPOPO PROVINCE”**

by Mr **JAMES MASIA MATOANE**

(Student Nr 200310312) and that I am satisfied with the quality of work he has produced in terms of structuring the document, in terms of style, grammar and spelling.

Lutz Ackermann

(Revd Dr Lutz Ackermann, Turfloop Campus)



TSIMANYANE CIRCUIT

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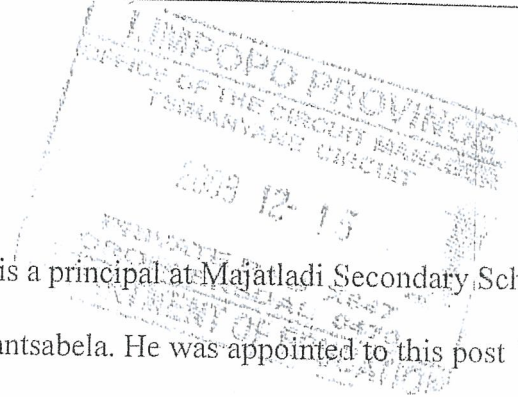
Annexure I

TEL. NO.: (013) 268 9312

FAX NO.: (013) 269 0037

To whom it may Concern

This serves to confirm that Mr. M.J Matoane is a principal at Majatladi Secondary School and is currently serving the community of Tsantsabela. He was appointed to this post from 2006.



As the department we don't have any objection to him, furthering his studies with your institution as this will ensure that he is efficient and effective in his administration. The department will also accord him time to attend contact sessions with your institution.

With regards

Yours faithfully

Mhlapamaswi E

Circuit Manager

