



**ADDIS ABABA UNIVERSITY**

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**COLLEGE OF EDUCATION AND BEHAVIORAL STUDIES**

**SCHOOL OF PSYCHOLOGY**

**THE EFFECT OF SCHOOL FEEDING PROGRAM ON  
LEARNERS SCHOOL ATTENDANCE AND ACADEMIC  
PERFORMANCE IN GOVERNMENT LED PRIMARY  
SCHOOLS OF ARADA SUB CITY, ADDIS ABABA**

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**OCTOBER 1, 2025**

**ADDIS ABABA UNIVERSITY**

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THE EFFECT OF SCHOOL FEEDING PROGRAM ON LEARNERS  
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GOVERNMENT LED PRIMARY SCHOOLS OF ARADA SUB CITY, ADDIS  
ABABA

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**SCHOOL OF PSYCHOLOGY**

This is to certify that the thesis prepared by Belayneh Yilma entitled: "The Effect of School Feeding Program on Learners' School Attendance and Academic Performance in Government-Led Primary Schools of Arada Sub City, Addis Ababa" is my original work. I completed the research independently, with guidance from my research supervisor. This study has not been submitted for any degree at this or any other institution and I have properly acknowledged all sources used for the thesis.

**Signed by the Examining Board**

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## DECLARATION

I, BelaynehYilma, countersigner, declare that this thesis titled “The Effect of School Feeding Program on Learners’ School Attendance and Academic Performance in Government-Led Primary Schools of Arada Sub City, Addis Ababa” is my original work. I completed the research independently, with guidance from my research supervisor. This study has not been submitted for any degree at this or any other institution and I have properly acknowledged all sources used for the thesis.

BelaynehYilma October 1, 2025

Name of Student	Signature	Date
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This letter confirms that the thesis titled “The Effect of School Feeding Program on Learners School Attendance and Academic Performance in Government Led Primary Schools of Arada Sub City, Addis Ababa” meets the requirements for a Master’s degree in Psychology. This work is original research conducted by BelaynehYilma under my supervision. No part of the thesis has been submitted for any other master’s degree. All assistance received during this investigation has been recognized. Therefore, I recommend that it be accepted as meeting the thesis requirements.

Daniel Tefera (PhD)-----	-----	
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Name of Advisor	Signature	Date
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## **ACRONYMS AND ABBREVIATIONS**

BoE	Addis Ababa Education Bureau
EFA	Ethiopian Food Authority
ESDP	Education Sector Development Program
GMR	Global Monitoring Report
MDG	Millennium Development Goal
MoE	Ministry of Education
NEPAD	New partnership For African development
NGOs	Nongovernment Organizations
UNDP	United Nations Development Program
UNICEF	United Nations International Children's Emergency Fund
UNHTF	The United Nations Hunger Task Force
RBoEs	Regional Bureaus of Education
SFP	School Feeding Program
WFP	World Food Program
WPF	United Nations World Food Program

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## ABSTRACT

*The Effect of School Feeding Program on Learners School Attendance and Academic Performance in Government Led Primary Schools of Arada Sub City, Addis Ababa*

*The study was conducted to evaluate the effect of SFP on the attendance and academic performance of Addis Ababa primary school students for the past six years (2018 -2023 G.C). Correlational research design was utilized to achieve the research objective. A total of 200 students were participated in the study. Two hundred primary school students with full school record data for six successive academic years (2018 - 2023 G.C)..Systematic random sampling was employed to selected study participants. for this study, the researcher primarily employed two data collection instruments: the **School Record Inventory (SRI)** and **in-depth interviews**. For the quantitative component, data were entered into **SPSS version 25**, and descriptive statistics (mean and standard deviation) were presented in tables. Subsequently, a **parametric statistical test**—specifically, the **paired samples t-test**—was conducted. For the qualitative part, a **narrative description method** was used to interpret and summarize the information obtained from the interviews. The results are presented in the following table. The paired samples t-test revealed a significant improvement in the academic achievement of primary school students, increasing from **pre-SFP (M = 56, SD = 10)** to **post-SFP (M = 70, SD = 6.33; t = -10.2, p < .001)**. Similarly, the test showed a significant improvement in school attendance, rising from **pre-SFP (M = 0.95, SD = 0.3)** to **post-SFP (M = 0.97, SD = 0.2; t = -15.7, p < .001)**. Based on these findings, the researcher concluded that the **School Feeding Program (SFP)** positively influenced both **academic performance** and **school attendance** among primary school students. Although the mean attendance rate identified in this study was lower than expected, the evidence suggests that SFP contributes meaningfully to improving students' engagement and performance. Therefore, it is recommended that **schools and relevant institutions** (such as the **Addis Ababa Education Bureau** and the **Addis Ababa City Administration**) further investigate and address the underlying issues affecting attendance rates.*

**Key terms: SFP, Academic Achievement, student enrolment, student retention**

# CHAPTER ONE

## INTRODUCTION

### 1.1. Background of the study

Education is a process by which attitudes, skills, and knowledge one needs to deal with their environment are transferred (Gejabo, 2017). It is also an effective reagent that fulfills human needs and requirements both materially and mentally (Aslam et al., 2015). Education also aids people for they can develop their skills, disposition, self-assurance, and decision-making to arrive at a decent job (Hailu, 2011). Additionally, education improves people's productivity and efficiency. It also creates trained and skilled labor that can drive economic growth. For this reason, education is more prominent to developed and developing nations (Kapur, 2019).

Nations all over the world ensured that the international community needs to make progress towards education for "every citizen in every society," commending the efforts made by the international community in the 1990s, especially the right-based approach to education endorsed by the Universal Declaration of Human Rights (United Nations, 1995). In addition, education has been viewed as a human right (UNESCO, 2000). Universal Declaration of Human Rights (UDHR, 1948), Education for All (EFA), Millennium Development Goals (MDG), and Sustainable Development Goals (SDGs) are some of the pertinent international agreements and commitments that Ethiopia has also signed and ratified (Yadessa&Shemelis, 2022)

However, in nation, regional and worldwide context there is a gap between the performance that is achieved and the goals that are set (UNESCO, 2015). On the other hand, UNESCO (2015) recounted that education performance is supposed to be evaluated by enrollment, school retention, school attendance and academic performance. In case of Ethiopia to materialize this; ever since the 1994 education and training policy was approved, the country has made significant improvement in the

whole education system especially on increased enrollment in primary and middle education; meanwhile, too many students are lost out of the education system early (Federal Ministry of Education, 2015).. In addition, most of the primary school students are as poor as they can perform in education (Seyoum, Tsegaye&Tesfaye, 2019). The same students are also characterized by poor attendance at school.

Some sources mentioned so many factors causing the low academic achievement and poor school attendance linked to primary schools. Among these factors this day under nutritionscited most often.Actually, underperformance at school is a consequence of poor development and intellectual growth, poor motivation and cognitive development which trace back from under nutrition (Bisset et al., 2013) Furthermore, cognitive and physical potential among children is also undermined by stunting- chronic under (Kamanga, 2024). On the other hand, school attendance and learning are seriously troubled issues in the provision process of quality education. Thus, among the millions of hindrances affecting the provision of quality education the issue of foodlessness among school children is the most noted.

To ameliorate this, a School Feeding Program (SFP) was launched around 1930 both in the USA and the UK to improve students' growth and their health (World Bank, 2008)(Gokah, 2008). Next, Netherlands scaled up the program to higher levels by incorporating school meals into its national legislation in 1900. The developing nations in Latin America, Asia, and Africa werealso implemented the SFP by developing and passing legislation supporting this program. Among these countries Brazil and India supported the implementation of the SFP by including legislation in their constitutions (Bundy et al., 2009). Colombia also introduced school feeding programs in its schools in 1941, El Salvador also introduced the program in 1984 and Paraguay commenced the program in 1995 (World Bank, 2015)

The school feeding program in Africa was also commenced following the footsteps of the foregoing countries. Its primary objective was to minimize short-term hunger in their schools. According to the World Bank (2008), endemic illnesses,

poverty-instigated vulnerabilities, and occasional food deficits are central to preventing children from learning in the majority of African countries. As outlined by Theodore,(2018).alongside this, intra-regional conflicts and harsh economic and climate conditions account for food deficit insecurity that threatens children's survival (Mareges&Amos, 2024). For instance, South Africa initiated the scheme in the early 1940s by providing free milk to white and colored school children, as well as providing fortified biscuits, supplements, and full meals to students (Tomlinson, 2007). Similarly, Zimbabwe, Tanzania, Malawi, Rwanda, Kenya, and other sub-Saharan African countries began introducing the program in schools to improve learning and student retention (World Bank, 2011, World Bank, 2013).

In response to worry about the intersection of under nutrition and academic performance, Ethiopia's government started school feeding program since 1994. Ethiopia's school meal program was introduced in 1994 under collaboration with WFP, in the form of a pilot project initially starting in 40 schools within pastoral regions. Due to the success of the program, the program was expanded to additional regions in 2004.

SFP is a vital initiative that aims to address child hunger, malnutrition, and educational barriers. By providing nutritious meals to students during school hours, it not only supports their health and well-being but also enhances their ability to learn (Alderman, Gilligan & Lehrer, 2012). SFP has a paramount role on school retention and academic achievement among primary school pupils (Maghra, Abraham & Lawal, 2023).

The theoretical underpinning of the concept of school feeding program can be traced to social protection theory considering school feeding programs (SFPs) as a form of social protection aiming to improve the health, nutrition, and education of school-aged children, especially those who are vulnerable to shocks and risks. In this regard empirical literatures uncovered the role of SFP (Bundy et al., 2024).

In this regard as part of foreign researches the scholars revealed that nutritious meals to optimally motivate regular student attendance, especially for vulnerable populations in underprivileged rural locales grappling with.(Prudence, 2024).

As part of local research students who were not covered by the SFP were twice as likely to miss. In terms of academic performance, a wide but small percentage point mean difference was also noticeable in the favor of the SFP beneficiaries (Desalegn et al., 2021). However, the results of the empirical studies were conflicting. Furthermore, the result was also non-conclusive. This gave the author of this thesis a hint for the presence of contextual research gap. Therefore, this research was aimed to measure the effect of the SFP on attendance and academic performance of the students of Arada sub city, Addis Ababa

## **1.2. Statement of the problem**

Profoundly academic performance is affected by the nutritional and health status of schoolchildren (Zerfu, 2024). By focusing attention on the overlap between under nutrition and educational performance (academic achievement, school attendance, retention and enrollment) the Government of Ethiopia launched school feeding program from 1994. School Feeding Programme (SFP) refers to provision of food to school going children which was intended to prevent short term school hunger among school children with a view to promoting enrollment, retention, attendance and academic performance (Appollm & Daniel, 2021). To this end during the last two decades school feeding program was an inspiration for the study.

For instance, as part of foreign researches the scholars already examined the impact of school feeding programs on student attendance in rural primary schools located in Mukono District, Uganda (Peter et al., 2024). The frequency of provision saw a positive 20% increase in attendance for each additional meal supplied weekly, while nutritional quality saw an associated 28% boost for every unit increase on a 5-point scale (Peter et al., 2024). Researchers also locally evaluated the SFP's effect on class absenteeism and grade 5–8 primary school Sidama zone, Southern Ethiopian children's academic performance. In terms of

academic performance, there was a significant though small 2.40 (95 % CI 0.69, 4.12) percentage point mean difference in favor of SFP beneficiaries. In case of domestic research the empirical studies lacked consistency. In addition the result also remained inconclusive. This gave the writer of this thesis a clue for the presence of contextual research gap. So, this study was aimed to evaluate the effect of the SFP on school attendance and academic performance of primary school students of Arada sub city, Addis Ababa to bridge the gap of Non conclusive and Consistency of empirical studies.

### **1.3. Objective of the study**

#### **1.3.1. General objective**

The main objective of the study was to evaluate the effect of the SFP on school attendance and academic performance of primary school students of Arada sub city, Addis Ababa over the past six years (2018 -2023 G.C)

#### **1.3.2. Specific objective**

1. Assess attendance rate of the primary schools over the past six years (2018 -2023 G.C)
2. Determine academic performance rate of the primary schools over the past six years (2018 -2023 G.C)
3. Examine school attendance rate of the post SFP academic years against pre SFP academic years
4. Investigate academic performance rate of the post SFP academic years against pre SFP academic years

## **14. Significance of the study**

This study is expected to make an important contribution to the existing literature and help close the empirical research gap on how SFP is related to education performance (academic performance and school attendance). The quest for intervention theory was of high priority for primary schools. Therefore, this study would give theoretical framework to the positivist philosophical position world view by focusing on Classical liberal theory of equal opportunity and Abraham Maslow's theory of human motivation. This study has also practical implication. The quest for research-based intervention was high on the priority list for SFP to be backed by the research. So, this study was important to bridge this gap. For instance, education practitioners will be well informed about the relationship between SFP and education performance (school attendance and academic performance). Furthermore, the results of this study may offer significant insights for practitioners and policymakers concerning the formulation of policies and the implementation of suitable measures to develop strategies for augmenting the impact of SFP. Finally, the study will provide the researcher with an empirical source for future research.

### **1.5 Scope of the study**

This study's scope was limited to specific topical and spatial areas, but the relationship between SFP and education performance (school attendance and academic achievement) is a broad concept that is intertwined with numerous underlying issues. The study's topical areas included the primary schools' attendance and academic performance rates. Additionally, it included a comparison of the post-SFP academic years' school attendance rate to that of the pre-SFP academic years. The academic performance rate of the post-SFP academic years was also examined in comparison to the pre-SFP academic years.

The study's geographic scope was restricted to Addis Ababa. The study ran for five months, from January 2025 to October 2025. In terms of the study's methodology, a correlational research design was used. The mixed research method was also used in this study. Regarding to the target population; this study encompassed Two hundred primary school students with

complete school record information for six consecutive academic years (2018 -2023 G.C), was used. School record information about 200 students was obtained by AtseFasil; AtseNaod; TibebEdget/wereda, Minilike II primary schools found in Woreda 01, Woreda 06;Woreda 04, Woreda 06 respectively.

The researcher selected Arada Subcity for the topic because only little research was conducted in the Sub city. Lastly, using Yemane formula ( $N/1 + Ne^2$ ); the researcher calculated sample size and obtained two hundred (200) primary school students

The researcher used the School Record Inventory (SRI) as one of the secondary information sources for the quantitative portion. Principals of elementary schools, vice principals, and nutrition specialists served as the main sources of data. As part of data collection tool the study employed School Record Inventory (SRI) and in-depth interview. SPSS version 25 was used to enter data for the study's quantitative component. The mean and standard deviation of the descriptive results were compiled. The paired sample t-test, a parametric statistical test, was then used. The interviewees' extracts were compiled and examined using the narrative description method for the study's qualitative component.

### **1.6 Limitation of the study**

This study had several limitations that could affect how widely its findings apply. The research took place in a specific district of Addis Ababa, Ethiopia, which may limit how the results are relevant to other areas or situations. The study also faced constraints related to time and funding. The most well-known theories were the focus of this investigation, such as Abraham Maslow's theory of human motivation and the traditional liberal theory of equal opportunity. This study excluded other theories. When evaluating the study for various contexts, this could lessen its representativeness. Last but not least, the study ignored additional variables like family history, teacher caliber, and school resources that might affect student enrollment, retention, and academic achievement.

## **1. 7. Operational definition of terms**

**School Feeding Program:** it refers to the provision of breakfast, lunch, or both to students while they are in school

**Academic Performance:** it refers to the level of performance or attainment of students in academic subjects, measured by standardized tests, grades, or other indicators

**Student Attendance Rate:** it shows the percentage of students who are present at school compared to the total number of enrolled students. It also represents the ratio of school days a student actually attended

**School Record Information:** according to this study it refers to the required information (academic performance and attendance) of individual student for the consecutive six years (2018-2023)

## **1.9.8 Organization of the study**

His work was organized into five chapters. Chapter one is held for the introduction. Under the chapter, background of the study, statement of the problem, the purpose of the study, the scope of the study & limitation of the study are described.

This chapter starts discussing theoretical and empirical literatures. Under theoretical section the study read literatures to operationalize key terms such as school feeding program, school attendance, and academic performance. The study also read literatures on the underlying issues related to the research topic such as measurement of school attendance and academic performance, theories about the effects of SFP on School attendance and academic performance. Following meanwhile, the literatures empirical were also consulted in the study. The study ended with leading to the research gap and conceptual frame work of the study

Chapter three discusses the research methodology like research approach and design, sample size and sampling technique, research participants (respondents), data collection instruments and method of analysis. Chapter four of this study is where data presentation, analysis, and interpretation are conducted. Chapter five terminates the study by presenting the study, discussion, conclusion, and recommendation.

## **CHAPTER TWO**

### **REVIEW OF RELATED LITERATURE**

This chapter embarks on reviewing theoretical and empirical literatures. Under theoretical section the study reviewed literatures to define key terms such as school feeding program, school attendance, and academic performance. The study also reviewed literatures about the underlying issues linked to the research topic such as measuring academic performance and school attendance, theories about the effect of SFP on School attendance and academic performance. After meanwhile, the study also reviewed empirical literatures. At the end the study led in to the research gap and conceptual frame work of the study

#### **2.1. Definition and basic concepts**

##### **2.1.1. School feeding program**

School feeding is defined as the provision of breakfast, lunch, or both to children who attend school during the period they are in school (Memirie, 2023). School feeding is the provision of breakfast, lunch or both to the children while they are in school. While some programs provide full meals, others provide nutritious snacks or biscuits that are high in energy content. Based on their methodology, school feeding programs can be divided into two general forms: take-home rations, which provide food to families with children attending school, and in-school feeding, which provides the children with food while at school (UNDP, 2025).

We are talking about the first modality in Vietnam, which is giving food and milk to students at school. SFP is a government or non-government initiative that provides nutritious food to children and adolescents who attend school (Mideksaet al., 2024). The main objectives of SFP are to improve the health, education, and well-being of the students, as well as to support the local food systems and economies (Yohannes, 2017). SFP can also help reduce hunger, poverty, and inequality, especially in LMICs. SFP are considered a cost-effective and sustainable investment that can generate multiple benefits for individuals and societies. SFP is intervention that provides food to schoolchildren, usually in the form of meals or snacks, with

the aim of improving their health, nutrition, education, and development outcomes (Memirie, 2023).

School feeding programs have been defined by the World Bank as “targeted social safety nets that provide both educational and health benefits to the most vulnerable children, thereby increasing enrolment rates, reducing absenteeism, and improving food security at the household level.

Schools have become a natural and convenient setting for the implementation of health and education interventions. School feeding is just one facet of school health initiatives, as other programs may include de-worming, HIV/AIDS prevention and education, and life and health skills education. Overall, school feeding programs have been shown to directly increase the educational and nutritional status of recipient children, and indirectly impact the economic and social lives of themselves and their family (17). Additionally, school feeding directly addresses the Millennium Development Goals (MDGs) of reducing hunger by one-half, achieving universal primary education, and achieving gender parity in education by 2015

According to the United Nations World Food Programme, 66 million primary school age children go hungry every day, with 23 million hungry children in Africa alone (1).

Furthermore, 80% of these 66 million children are concentrated within just 20 countries. Additionally, 75 million school-age children (55% of them girls) do not attend school, with 47% of them living in sub-Saharan Africa . Thus, the need to reduce hunger while increasing school enrolment in these children is evident, and school feeding programs have been developed to target this multifaceted problem.

WFP currently provides school feeding resources to an average of 22 million children in school, about half of whom are girls, across 70 countries. The total financial contribution for these programs is almost USD\$500 million per year. Many governments work alongside world food program (WFP) in school-feeding programs, though in countries where the government is non-functional or corrupt, it may work on its own or with other nongovernmental organizations. The World Food Program has estimated that US\$3.2 billion is needed each year to feed the 66 million school-age children around the globe, an amount of US\$50 per child

As early as 1790, a combined program of teaching and feeding hungry children was begun in Munich, Germany, and in France in 1867, a school lunch program for needy children was established in about 464 areas (15). Netherlands became the first country to adopt national legislation specifically to provide school lunches in 1900 (15).

The Government of Ethiopia (GoE) has adopted an Education and Training Policy (ETP) in 1994 with a view to achieving universal primary education by the year 2015 (19,5). To attain this goal, the GoE has so far been implementing three phases of multi-year Education Sector Development Programs (ESDPs). One of the main components of the ESDPs has been the school meals program (SMP), which the GoE undertakes in partnership with the United Nations World Food Program (WFP) (3). ESDP III has expanded school meals to remote schools in food insecure and vulnerable areas in Ethiopia. In particular, the program targets pastoralist areas and chronic food deficit highland woredas in the country. The main objective of school meals in Ethiopia is to attract children to school in chronically food insecure areas, increase enrolment, stabilize attendance and reduce drop-out. It also pays special attention to increase in girls' enrolment in program areas with a view to bringing about gender disparity in school enrolment.

In Ethiopia, SFP has another twin component called Children-In-Local-Development-Based Food for Education (CHILD-FFE) that was included in the World Food Program (WFP) Country Program. UN-WFP, together with Government of Ethiopia (GoE), sponsored School Meal Program (SMP) started in Ethiopia in 1994 with an initial pilot project covering 40 primary schools in selected food insecure woredas' of four regions of the country. The pilot SMP was found to be successful in raising enrolment in primary schools in the target areas prompting the rollout of the SMP over successive years in further food insecure woredas' of the country. Under this package, each child is entitled to approximately 650 kcal (kilo calorie) per day in the form of Porridge. The SMP also aims at alleviating short-term hunger for children by feeding them in schools which is in line with the Millennium Development Goals, which the Ethiopian Ministry of Education set to achieve Universal Primary Education by

2015. In order to reach this goal, it is essential to provide incentives for parents to send their children to school. Thus, Food for Education (FFE) is designed to promote increased enrolment and attendance and reduce dropouts in chronically food insecure districts in rural Ethiopia by providing a daily hot meal in school. FFE meals additionally make it easier for children to concentrate on their work, facilitating learning (7). Data on Food for education (FFE) shows that school enrolment increased by 3% in 2010, attendance rate increased from 90% in 2010, and dropout rates fell to 8% for girls and 9% for boys in FFE schools, which is lower than the national dropout rate of 14.6% for girls and 13% for boys (7).

School feeding program in Addis Ababa is launched in October 2015. 222 government primary schools hosting 515,915 students in the same year with enrolment rate of 0.5 (5). The school meal program was intended to alleviate hunger and increase school enrolment decrease school dropout, and absence. In order to meet this, the beneficiaries were selected carefully by the schools and wereda administration after the regional education bureau revealed the need assessment result which indicates more than 20,000 children were in need of the support. SFPs can address some of the nutrition and health problems of school-age children. SFPs and other school-based nutrition and health programs can also motivate parents to enrol their children in school and to see that they attend regularly. Experience shows that properly designed and effectively implemented SFPs can:

1. Alleviate short-term hunger in malnourished or otherwise well-nourished school children.

This helps to increase the attention and concentration of students producing gains in cognitive function and learning. Motivate parents to enrol their children in school and have them attend regularly. When programs effectively reduce absenteeism and increase the duration of schooling, educational outcomes (performance, dropout, and repetition) improve.

Address specific micronutrient deficiencies in school-age children. Most important of these are iodine and iron, which directly affect cognition. Meeting the iron and iodine needs of school-age children can translate into better school performance. Increase community involvement in schools, particularly where programs depend on the community to prepare and serve meals to children

### **2.1.2. School attendance**

School attendance means that students regularly go to and are present at school learner absenteeism refers to sustained patterns of students absence from school who are registered in the school. A student who has an absence is a student that was expected to be in school at certain times for certain periods and was not there for those times. A student has an absence when he or she did not attend when he or she was supposed to, regardless of the reason, the student has a absence. A student absentee is a student who is expected to be in school at specific times for specific periods and he/she is not there. A student is considered an absentee when he/she fails to report for school time and remain in school for a scheduled period regardless of the reason.

Routine attendance at school gives children the best possible start in life. Regular attendance is important for learning, socialization and friendships. It also gives them an opportunity to develop good habits in preparation for adult life. The Government anticipates that pupils will attend school for 96% of the school year. Regular school attendance is viewed as a key element of a successful education, providing pupils with access to learning opportunities and social interactions with peers.

### **2.1.3. Academic performance**

Academic performance is defined as a student's ability to complete academic assignments, and it is assessed using objective criteria such as final course grades and grading point average (Some sources defined academic performance as a student's ability to complete academic assignments(It is also defined as in terms of gaining knowledge; acquiring skills and competencies; securing high grades and similar academic achievements; securing a progressive career; and intention and persistence towards education.

According to Hijazi & Naqvi (2006),academic performance is a complex idea made up of the skills, attitudes, and behaviors of a learner that lead to success in the classroom(Singh &

Yadav, 2021). Tinto (1993) also added that it is a good and high level of performance of students as they go through and finish their school experience.

The assessment of pupils' performance in a variety of academic topics is known as academic performance. Teachers and possibly educationists use graduation grades, standardized test scores, and classroom performance to gauge students' academic progress.

It is difficult to comprehend the concept of academic performance explicitly Academic Performance of students as an aspect of their total behavior. According to Dictionary of Education(Carter, 1959, as cited in Bhat & Bhardwaji, 2014), academic performance refers to the knowledge acquired or skills developed in school subjects, typically measured by test scores or teacher-assigned grades-or both.

## **2.2. Theoretical literature**

### **2.2.1. Measuring academic performance and school attendance**

Academic performance is the extent to which academic success can be measured in different ways. Individual studies and meta-analysis have indicated that the nature of the relationship between academic success and its predictors such as intelligence, motivation, and personality is variable as a function of whether academic success is quantified (Steinmay&Wirthwein, 2014). If skill and ability-center are added to genre of factors used to distinguish academic performance; academic performance is the extent to which a student's growth occurs, both intellectually and academically.

When skill- and ability-centric as well as achievement-centric factors are considered, academic performance can be defined as the knowledge gained by students, which is assessed through grades assigned by teachers and/or by achieving educational goals set jointly by students and educators over a specific period. Within the achievement-centric genre of definitions, the Cambridge University Reporter (2003) suggests that academic performance is frequently defined as the outcomes demonstrated by students in tests, coursework, and examinations. Similarly, Choi (2005, as cited in Kumar &Saumya, 2021) proposed that the total points

obtained in a course reflect a student's academic success. Grades, grade point averages (GPAs), and standardized test scores are commonly employed as quantitative and qualitative markers of academic performance.

On the other hand, **school attendance** is typically measured using the following formula:

$$\text{Attendance Rate} = (\text{Total Attendees} / \text{Total Registrants}) * 100,$$

### **2.2.2. Theories about the effect of SFP on School attendance and academic performance**

To examine the role of school feeding programs, it is imperative to have a good understanding of theories of school feeding programs. In this study, classical liberal theory of equal opportunity and the work of John Dewey (1946) is included. Classical liberal theory of equal opportunity states that, in every area, including education, people should have the same opportunities with the same treatment as indicated by all education programs that are available to all learners. The general principles of this theory are described by Sherman and Wood (1982) and indicate that every child is born with innate talents and innate capabilities; therefore, the education system should be built with a view of a pupil taking full advantage of the innate talents that may support social mobility in their future (Jack, 1982). Classical theory of equal opportunity indicates that equal opportunity, including education, should always be made available to the children at schools. Also, education should be free and, further, barriers for children to access education, such as hunger, should be minimized or eliminated using food through school feeding programs. Providing food to children will make them consuming of the academic content more effective when academic retention is taken in account. Classical liberal theory of equal opportunity fits this study because the independent variable (school feeding programs) will have a role on the dependent variable (academic performance, school, and retain attendance for school) (Masset & Gelli, 2013).

Abraham Maslow's theory of human motivation, introduced in 1943, is another framework we will utilize in this study. It posits that all human beings achieve basic needs, as well as successfully meet higher needs based on a pyramid or hierarchy of needs as proposed by Maslow. Often referred to as Maslow's hierarchy of needs it is typically depicted as a hierarchically sized pyramid where the largest needs are shown at the base and higher levels of needs as they move toward the pinnacle of self-actualization. Maslow's hierarchy of needs has five levels; the physiological needs at the base of the hierarchy. Followed by safety needs, love/belonging, esteem, self-actualization was has the pinnacle need. (Jerome, 2013) The concept of Maslow's hierarchy of needs has always represented the following hierarchic needs: physiological needs; safety needs; love needs; esteem needs; and self-actualization needs.

The researcher has reviewed literatures about these hierarchical beds starting from physiological need through self-actualization is necessary. The physiological needs which are often regarded as the critical point for motivation theory are the so-called physiological drives. Two new lines of research necessitate the revision of our normal concepts regarding these needs, first, the development of homeostasis as a concept, and second, the discovery that appetites (preference among foods) are a reasonably effective indicator of actual need or deficiency of the body.

Maslow's Hierarchy of Needs theory states that food is a basic physiological need and higher needs can only be satisfied when the basic needs are met. In the education context, learners must have their physiological needs of food and water fulfilled prior to effective teaching and learning activities being planned and delivered for learners to focus on learning and educational institutions to achieve quality learning (Wangian, 2021).

Next the researcher reviewed literatures about safety need. Nurturing of safety in a child can be reflected by the desire for some sort of uninterrupted routine or rhythm. He wants to be sure of the world being orderly. For instance, injustice,

unfairness, or even inconsistency on the part of the parents may make the child feel uneasy, unsafe. The reasoning might be somewhat paradoxical: The sense of being cheated is in itself not so distressing, so much as the danger of having one's world made into an unsafe, unreliable, or unpredictable place by such treatment. Very small children seem to do better in a system that at least has some skeleton of rigidity, some scheduling in place, some form of operation that can be relied upon, not only now but also well into the future. Perhaps this could be better put by saying that the child needs an orderly world and not one that is disorderly or lacking in structure.

After reviewing literatures about safety need the research goon to review literatures about the love needs. The love needs. -- When the physiological and safety needs are all fairly well gratified, the love, affection, and belongingness needs will emerge in the field of concentration, and the whole cycle already described will then be repeated with them in the leading role. The person will now feel the keen absence of friends, a sweetheart, wife, or children as never before. He hungers for affectionate relationships with people generally, that is, for a place in his group, and he humbly dreads to lose any time in striving for that very goal. He wants that place dearly but would forget if it ever came to mind that he once mocked love amid hunger(Sarah & Holly, 2021).

For self-actualization to occur, again, even in the situation where every condition is met, unless the person is doing what they are designed for, we can often (although this is not a universal law) expect that a new level of unhappiness and restlessness will occur or develop shortly. A musician must compose music in order to be happy, an artist must create or paint and a poet must write.

Among the foregoing hierarchical needs; the physiological need was the theoretical stand to the contemporary study. For instance, if learners' physiological needs i.e. food and water)meet; it will have a role on academic achievement, and school attendance. In this regard SFPs can increase the school attendance of children in education, especially those who face barriers such as distance, cost, or gender

discrimination, by providing them with an incentive to attend and stay in school (Appollm & Daniel, 2021).

Many studies evaluating the educational outcomes of school feeding programs are limited by post program data collection, despite the relative ease of establishing control groups and using enrolment and dropout rates with test scores to determine impacts. However, there are a number of studies that do establish a clear link between school feeding and enrollments, and some showing also an impact on learning outcomes. Kristjánsson et al. (2007), review is the most comprehensive and rigorous review of impact evaluations to date. It comprises 18 studies, 9 from lower income countries and 9 from higher income countries. Amongst the 18 studies, 7 used randomized controlled trials (RCTs), 9 controlled before and after studies (CBAs) and 2 interrupted time series (ITS). In low income countries, children who were fed at school attended school more frequently 4 to 6 days a year per child as opposed to the children in control groups. Children who were fed at school also did better than those in control groups on math achievement tests, consistently so in lower income countries, and on some tasks requiring rational psychological processing of information). There is also evidence that school meals may have small physical, psychological and social benefits for disadvantaged children. The review note that other reviews of the educational outcomes of school feeding programs report mixed results. Overall they indicate school-feeding programs increase enrollment and reduce dropout, particularly in rural low-income schools in developing countries, and improve cognitive performance at least in the short term. 25 An analysis from the World Food Program's Food for Education programs, which provided food to 21.7 million children in 74 countries in 2005, finds a 14 per cent yearly increase in school enrolment for both boys and girls in 4,175 WFP-assisted schools in 32 sub-Saharan African countries. The study used a cross-sectional quantitative analysis. 40 per cent of WFP assisted programs also provided micronutrient supplementation to children, most commonly to correct Vitamin A, iodine or iron deficiencies known to impair cognitive function and school achievement (WFP, 2006). Ahmed (2004) uses a mixed cross-sectional survey and a retrospective CBA to evaluate Bangladesh's School Feeding Program, which provides a mid-morning snack of fortified wheat biscuits to one million children. School enrolment was boosted by 14.2 per cent, attendance increased by about 1.3 days a month, and the probability of dropping out was

reduced by 7.5 per cent. Academic performance also improved, with test scores boosted by 15.7 per cent points. Participating students do especially well in mathematics, scoring 28.5 per cent more than those in the control group. This study is based on the theory of Social Capital. Social capital is a collective asset in the form of shared norms, values, networks, social relations, and institutions that facilitate cooperation and collective action for mutual benefit (Bourdieu 1986). According to him, social capital is made up of social obligations and connections where social capital refers to a sphere of “mutual acquaintance and recognition.” This meant that social capital is a sphere of influence of joint social contact and credit. Bourdieu (1986) divides social capital in two components: the size of ones connections and the volume of the capital (economic, cultural, or symbolic) in these connections possession.

In light of this theory, the success or the failure of the SFP depends on synergies between and among the stakeholders and the amount of resources allocated to run the SFP. With this assumption, one of the factors for successful SFP is having strong relationship between individuals or institutions in both horizontal (parallel) and vertical (top-bottom) relationships. Conversely, if these are relationships are weak, the SFP will not be effective. In addition, the amounts of resources allocated play an important role in the success and sustainability the SFP. When there is sufficient amount of money collected (from the government, from the non-state actors) to the program, there is high tendency of the school feeding program to succeed and be sustained as there will be sufficient finance to purchase food as well as payment for cookers and other service providers. What is more, making program budget which takes into account the existing cost of living will be factors for the SFP to achieve its goals while the reverse scenario will cause program failure.

### 2.2. 3 Experiences of Children Who Don't access of Food

Demissie, Senait, Adefris, and Groote (2018) also studied on the deprivation food is not only causing health problems for many Ethiopians, but it is also the major reason for student's

dropouts in school including in the capital; Addis Ababa. Similarly a study by Riley et al., (2009) shows deprivation seriously prejudiced the enrollment and students' learning capacity. Both

researches found out that low school enrollment rates, high dropout rates and poor attendance are extensively persist in all public schools where the problem is worse for girls and it affected them highly. There are also studies on households' level of income and food access to school children. In this respect, Bessler's study (2012) found that low-income families could not provide enough nourished food for themselves and their children due to lack of income and the rising cost of food. A Kristjansson, Gelli, and Welch, (2016) also stated that eating enough food is hard because of the high prices of food and low income of many families. However, food insecurity also involves, poor academic performance, coping mechanism of households such as begging and engaging in informal activities and child labor among other.

According to Black et al (2013) hunger weakens the body's immune system to defend against diseases because the body did not get vital nutrients. These starved children are more vulnerable to repeated infections. Children who are starved are at an increased risk for repeated infections and are more likely to die. 45% of children's mortality is attributable to malnutrition. But hunger not only causes health problems but also physical and cognitive problems (Jepkemboi, 2018).

Having no or little food leads to the miserable growth of children that adversely affect child's mental and physical development and, learning capacity in future life (WFP, 2017)

Grandner et. al. (1999) study indicates that, starving students suffer from behavioral problems where hunger and malnutrition delays the ability of students to learn. A malnourished child have new emotional behaviors, including increased apathy, negative effect (e.g. crying and fussiness) and reduced activity play and interest in exploring their environment (Grandner et al., 1999). A study by Yousafzai et al. (2012) and Lawson, (2012) also identified that food insecurity causes lack of interest and reduces the level of motivation and interaction children

with their peers and the environment associated with higher prevalence of poor health conditions(e.g. stomachaches, headaches, and colds, chronic illness, low weight, etc.).

Researches by Black et al., (2013), Grandner et al., (1999) and WFP, (2017) also show that children face drowsiness due to starvation, absentees from school, not actively participating in class while the teacher is explaining, failure to do classwork and homework due to fatigue, being angry and irritate. These food insecure children perform worse on academic achievement tests and learn less during the school year. Fanzo (2012) reported that, children with a history of malnutrition attained lower scores than children of similar social and economic status who were properly nourished. Uduku (2011) identified that for food insecure children have difficulty to concentrate at school and have irregular school attendance where these conditions of school children are key factors for poor performance. WFP (2017) also indicates that children feel embarrassed and isolated by the stigma associated with their lack of food, which is the cognitive effects of students who have no food/less food are lower scores in tests and exams as well as in ability to engage fully in school. People be subject to spend their limited mental reserves on resources that they lack, and so hungry children focus on food, which can lead to neglect of other areas of life such as schoolwork. Consequently, as USAID (2017) study indicates children spent their time by searching of food instead of learning. The above empirical studies focus on household income and food access but these researchers do not reflect the efforts of these families in order to alleviate the hunger of themselves and their children and experiences of food insecure children. USAID (2004) also did not show students' experience, but it focuses on the experiences of parents or guardians.

#### 2.2.4 The Benefits of SFP, State and Non-stat Response

According to Rethinking(2009), countries referenced two major reasons for launching and implementing school feeding programs: (1) to address social needs and provide a social safety net during crises; and (2) to support child development through improved learning and enhanced nutrition. In addition, a third reason is identified by Food and Nutrition (2007) which links school feeding in order to local agricultural production and its potential related benefits

to the local economy and the incomes of farmers. However, according UN Charter (1945) countries do not start SFP as a charity to their citizens rather all member states have a responsibility to feed their food insecure people, however, it does not mean that the government is responsible to feed every individual. Similarly FAO, (2012) indicates that member states must give adequate nutritious food to its people who are unable to feed themselves.

In this regard, The UN constitution preamble indicates that, UN member states must improve the lives of their citizens and eradicate hunger where everyone has the right to access food based the UN (1945) charter as food is essential for children's' prime physical, psychological, and mental development (Chirwa, 2009). In addition HRC (1948) declared that, everyone has a right to a better living adequate for the health and well-being of himself and of his family, including foods.

Many studies and reviews indicated the effectiveness and benefits of school feeding programs, (Bundy et al.2009, Simon& Granatham- Mc Gregor 1989, Vorley & Corbett 2005, Kazinga et al., 2009). Empirical study by Bundy et al. (2009) suggests that appropriately designed school feeding program increase access to education and improve children's health and nutrition, especially when integrated into comprehensive school health and nutrition programs.

Researchers conducted by Simon& Granatham- Mc Gregor(1989), Vorley and Corbett (2005), Bundy et al., (2009), Kazinga et al., (2009) and Raine et al., 2003 point out that in addition to improving student health, providing either breakfast or lunch or both meals help to narrow the learning achievement gap between poor and rich students. Pillot et. al., (1981, 1983) studies also investigate the functions of food access where they identified that eating a well-balanced breakfast and lunch is important for the body and mind to function properly. Similar to this, a study conducted in Jamaica indicated that, temporary hunger alleviated when food was provided to students; especially for the starved pupils (Simon& Granatham- Mc Gregor, 1989). According to this study, well-balanced breakfast and lunch increased student's attention

and concentration in class where children who had breakfast in school performed better than those who did not have any breakfast.

The SFP improves student learning in three ways. First, SFP programs increase school attendance by encouraging students to attend school regularly and help them to spend more time in class with better concentration on their full-time learning (QPM, 2018 and SFPTH, 2006). The same studies indicated that alleviating students' short-term hunger improves children's cognitive functioning and attention span as well as improving students' nutritional status by providing them calories and nutrients leads to better health and better resistance to infectious diseases and illnesses that would keep children from attending school.

Although, SFP is applicable all over the world, the practice varies from country to country based on income level of countries. To this end, WFP (2013) report indicates that SFPs in first and second world countries have consolidated structure and ownership as well as strong institutions.

These countries often have mechanisms for recovering costs from better-off families and using this income to support the cost of feeding those from vulnerable backgrounds. On the reverse the attention of school feeding programs is very low in countries where the need is the greatest including Ethiopia. The WFP (2013) revealed that the school meal is a source of nutritious meals in developed countries while in poor countries including Ethiopia, it is an incentive to send children to school and continue their education or it provides food security at times of crisis and help children to become healthy and productive adults, thus helping to break the cycle of poverty and hunger.

The above researches investigated the benefits of SFP from the view point of alleviating hunger, improving child health, enhancing learning and child performance. Some of the researches also investigated school feeding programs from human rights perspectives. However, these researches have less focus on the importance of SFP as a coping mechanism for parents and school children during food insecurity.

### 2.2.5 The Negative Impacts of SFP

Some studies have been conducted on the negative impact of the SFP on beneficiary schoolchildren. In this regard studies by Raine et al., (2003), Lagbo (2012) and Brainly (2018) show that the SFP promotes a sense of dependency in the community. These studies also identified that SFP reduces public work motivation and working habit. Some poor parents and children are also unwilling to accept the food, which is being offered because of stigmatization within and from other communities (Raine et al., 2003). Similarly Lagbo (2012) argues that SFP causes the difficulty of freedom and Brainly (2018) also identified that a nutrition program limits children's choice what to eat and it exposes to illness and disease. Dheressa (2011) stated that SFP raises students' enrollment and which leads to classes over crowdedness. Thus SFP negatively affects learning unless school capacity is increased accordingly.

### 2.2 .6 The Constraints for the Effectiveness and Sustainability of School Feeding

WFP (2013) shows the challenges and recommendations that the SFP faces. According to this study, the resource constraints of SFP which encountered: a financial burden to run the program because fortification of foods is cost-effective; the inflation rate of commodities; the annual running cost of the feeding program is high; a low collaboration of stakeholder's involvement in running the program, the availabilities of commodities, the availability of trained cooks, cooking facilities, and clean water. (WFP 2000) especially, the increasing number of students from year to year, lack of sectorial engagement, lack of financial and institutional capacity as well as lack of independent SFP structure at different levels affect the implementation of SFP and future sustainability of the program. The accessibility and effectiveness of the SF increased because the program has been able to address its shortcomings through progress, relentless effort, and strong public participation. Studies show that while it does not stop progressing, the SFP is still hampered by various challenges (WFP, 2013).

It may have poor performance when SFP is at its pilot stage. Nonetheless, the program can be effective through time, with support from different sources. The sustainability and effectiveness of the program need different strategies. High-income countries such as Sweden, Finland, Estonia, and India provide free school meals to all pupils in compulsory education, regardless of their economic and other differences. Similar to this in India, all public school students accessed free staple lunch through the Midday Meal Scheme. A study of a free school meal program in the United States found that providing free meals to elementary and middle school children in areas characterized by high food insecurity led to better school discipline among the students. Other countries reduced the price of meals to those who need a degree of assistance with costs. Lower cost meals are available to students in France, Italy, Hong Kong, Japan, and the United States (WFP, 2007).

Different nations implement SFP in different modalities and different schemes. Nonetheless, the important question is how these countries can increase the effectiveness and efficiency of the programs they are already implementing (WFP, 2013). The growth of the country determines the effectiveness and sustainability of the SFP. Similarly, countries' income level is associated with both the size and the level of consolidation of the program. In high- and upper-middle-income countries, generally, all children have access to food through schools, and the most vulnerable children typically are entitled to subsidize or free meals. In low middle and low-income countries including Ethiopia, by contrast, programs are generally only available to some children in certain geographical areas chosen according to vulnerability factors.

School feeding programmes can be classified as an in-kind conditional welfare transfer whose aim is to incentivise households to invest in the education of their children, i.e., enrolling and keeping them in school. Thus, school feeding programmes can be ascribed to the category of demand-side interventions in education. However, if we move away from the premise that school feeding is mainly meant to increase attendance, enrolment and retention rates, and instead consider that school feeding can also improve performance, as well-nourished children are better able to learn and participate in school, then school feeding can also be regarded as a school input. This means that school feeding can be treated as a supply-side intervention. Nevertheless, since the focus of this study falls on enrolment and retention rates, then the classification of school feeding programmes as a demand-side intervention is in order. As a

demand side intervention, the impact of school feeding programmes can be analysed using a cost-benefit analysis (Becker, 1962; Machin & Stevens, 2004; Jimenez & Patrinos, 2008; Glewwe & Muralidharan, 2016), per which parents decide to invest in the education of their children if the present value of the benefits associated with better-educated children is greater than the current cost of sending children to school. Households incorporate individual benefits into their decision-making process; however, they are unlikely to also consider the social benefits of additional schooling. Thus, their decisions may not be optimal for societies as a whole (Machin & Stevens, 2004; Jimenez & Patrinos, 2008). Consequently, governments and their development partners have the incentive to intervene in this context. They can rely on two types of interventions to incentivise investments in education. They can either reduce the cost of schooling or increase the benefits of education. Costs can be direct, such as fees, uniforms and supplies, or indirect, such as lost labour, whether paid or unremunerated chores and agricultural tasks. Benefits generally incorporate the present value of future income from skilled employment. Though smaller in magnitude, benefits can also be immediate if, for instance, regular school attendance is rewarded. School feeding is a case in point. The magnitude of the impact, however, is not the same for everyone. The provision of school meals can be invaluable to food-insecure budget-constrained households. But it can also mean very little to households that were already effortlessly providing meals to their children. This is a consequence of the nature of the intervention, which is an in-kind transfer that implicitly assumes what the problem is and gives a one-size-fits-all type of solution. If the assumption is faulty and the household is not facing a binding food constraint, then an otherwise well-intended intervention can have limited impact. This is the main theoretical reason why it may be cost-effective to target only the most vulnerable of areas or schools against the background of limited public resources. Consequently, I hypothesise that for school feeding to have an impact in terms of educational outcomes, the programme must be implemented in an area that is facing both binding food constraints and educational gaps. If there are no binding food constraints, then households have no additional incentive to send their children to school following the implementation of school feeding programmes. In this case, school feeding offers a solution, i.e., complementary meals, to a non-existent problem. Therefore, the prevailing local food security situation can explain why the impact of school feeding on enrolment and attendance can be limited on occasions.

Education, Rural Malawi The net enrolment rate among children aged 6 to 14 years old has increased from 84 percent in 2010 to 90 percent in 2016 in Malawi (National Statistical Office, 2017). These statistics are encouraging, but there is still room for improvement—especially after seeing how enrolment rates have decreased from 90 percent in 2016 to 88 percent in 2017, in the aftermath of the flooding and drought events of 2016 (UNICEF, 2019). Moreover, educational outcomes vary substantially between urban and rural Malawi. The difference between primary school completion rates in urban and rural Malawi was of 34 percentage points around the time when school feeding impacts are observed and evaluated in this study (Ministry of Education, Science and Technology, 2014). I restrict this study to rural Malawi to keep a homogeneous sample of households. Nevertheless, only a small part of the data is lost as more than 80 percent of Malawians live in rural areas (National Statistical Office, 2019). Rural areas are also the most pertinent setting to discuss educational outcomes and school feeding against the background of food insecurity that is brought on by natural causes. Malawi's rural population is overlyreliant on small-scale, rain-fed agriculture; therefore, households are vulnerable to climate variability and change. It does not help that Malawi is prone to floods and droughts or that their frequency and spread have intensified in the past decades. Finally, population growth and environmental degradation will also continue to aggravate the impacts of the aforementioned natural disasters (Government of Malawi, 2016).

### 3.2 School Feeding Programmes in Malawi

Malawi's experience with school feeding programmes pre-dates the efforts of the government to regulate these interventions. For instance, the Department of School Health and Nutrition, which provides guidance on health and nutrition-related interventions, was established in 2007. However, school feeding in Malawi dates back to the late 1990s, when the World Food Programme first implemented a pilot project in the country (Government of Malawi, 2009). The other important entity implementing school feeding in Malawi is Mary's Meals. Their work started in 2002. As of 2015, Malawi counted 5,864 primary schools (UNICEF, 2018). The World Food Programme worked with 783 of these schools in 13 districts (Webb et al., 2018). Mary's Meals catered to 635 additional schools in 20 districts as of 2016 (McMahon, 2016). Malawi has 28 districts. Both implementing agencies follow the guidelines issued by the 5 government. The World Food Programme and Mary's Meals target communities and areas that are vulnerable and lagging behind in terms of educational outcomes.

Integrated Household Surveys (2010–11; 2016–17). The result is a pooled cross-sectional dataset. These surveys have been implemented through the National Statistical Office with support from the World Bank. The analysis sample is limited to rural communities and includes all children that are of primary school age, 6 to 14 years old. On average, 16 percent of these children have received school meals at some point during the 12 months prior to the interview taking place. Moreover, 34 percent of communities were being targeted by school feeding at the time of the interview.<sup>1</sup> Not everyone within a targeted community was necessarily treated. As the concept of a community often overlaps with the boundaries of a village, I will use references to communities and villages interchangeably. Children are classified as in school if they replied positively to the survey question: “Are you currently attending school or, if school is not in session now, did you attend school in the session just completed and plan to attend next session?” This variable measures the intensive margin of schooling, i.e., the proportion of children who are still in school conditional on past enrolment. I obtain the extensive margin of schooling by complementing the out-of-school sample per the above survey question with children who have never attended school but who were of primary school age at the time of the survey interview. Thus, the extensive margin measures the proportion of all children of primary school age who are in school, regardless of whether they have or have never enrolled in primary education. Besides the intensive and extensive measures of schooling, I explore two additional variables: the grade-for-age gap and age at the time of enrolment. For those who have never enrolled in school, the grade-for-age gap is the grade in which they should have been given their age. For early achievers, the gap is zero (Islam & Choe, Food Security Data To assess the impact heterogeneity of school feeding with respect to the prevailing food security situation, I merge the aforementioned surveys point-to-polygon with information from the Famine Early Warning Systems Network (FEWS-NET). The time match between survey interviews and the food security information is almost to the yearly quarter. FEWS-NET is a tool of the United States Agency for International Development, and it relies on the input of several organisations. I use their historical, non-projection data to capture the food security situation on the ground during 2010–11 and 2016–17. FEWSNET classifies areas into five categories of food insecurity, as per the Integrated Food Security Phase Classification Version 2 (2016–17) and the FEWS-NET-defined Food Insecurity Severity Scale (2010–11). The two scales are very similar, but to avoid any

misalignment, I collapse the five categories of food insecurity (minimal, stressed, crisis, emergency and famine) into two (minimal vs. some stress). Minimal stress means that households are able to meet essential food and non-food needs without engaging in atypical and unsustainable strategies. If there is some stress, then FEWS-NET documents the presence of any of the following signals: households not being able to afford some essential non-food expenditures without engaging in stress-coping strategies, households experiencing high or above-usual acute malnutrition, or households 2A few outliers were present due to entry errors in the case of two variables which measure distance to the closest primary school and the number of religious primary such Minimal stress means that households are able to meet essential food and non-food needs without engaging in atypical and unsustainable strategies. If there is some stress, then FEWS-NET documents the presence of any of the following signals: households not being able to afford some essential non-food expenditures without engaging in stress-coping strategies, households experiencing high or above-usual acute malnutrition, or households 2A few outliers were present due to entry errors in the case of two variables which measure distance to the closest primary school and the number of religious primary schools present in the community. Regarding the former, the data clerk has inputted kilometres where metres must have been the correct metric. Thus, I made the correction, but only after I checked that the amended numbers were similar to those of neighbouring communities. Moreover, in the case of religious primary schools, there were only two communities with very large numbers. All other communities report numbers smaller than 25. However, these two rural communities reported 350 and 401. I have set them to 3 and 4, respectively. Furthermore, there were additional outliers in terms of the pupils-to-teacher variable. In this case, the reason behind the outliers was not clear. I have excluded these observations from the analysis. Very few individuals were dropped. Lastly, population numbers were off for 3 communities. They exceeded the population of the districts to which they belonged. I cut two zeroes to bring the numbers down. 9 only meeting their minimum food needs by depleting or liquidating essential livelihood assets or through crisis-coping strategies. The FEWS-NET variable shows that 2016 was a drought year. In 2010, 23 percent of households lived in areas classified as food insecure, while as many as 59 percent of households lived in food-insecure areas in 2016. It is clear that 2016 was affected by food insecurity, while 2010 was a rather typical year

### **2.3. Empirical review**

Scholars already examined the impact of school feeding programs on student attendance in rural primary schools located in Mukono District, Uganda (Peter et al., 2024). The study deployed a descriptive cross-sectional study design. The study also collected both quantitative and qualitative data from a stratified random sample of 380 respondents including teachers, administrators, and students selected from rural public schools in the region. Regression analyses unearthed that schools implementing feeding programs reported an average 32% higher attendance rate compared to institutions without such initiatives. Additionally, the frequency of provision saw a positive 20% increase in attendance for each additional meal supplied weekly, while nutritional quality saw an associated 28% boost for every unit increase on a 5-point scale (Peter et al., 2024).

The investigation was also conducted to assess the impact of the school feeding program on children's attendance and performance within Public Primary schools in the Southwestern region of Nigeria (Sowunmi, 2025). The investigation established a positive impact of School Feeding on pupils' attendance to school. However, the study did not seem to translate to improvements in attaining significant improvement from an academic performance viewpoint either in terms of cumulative scores and performance (in mathematics). These results denote that the feeding program was effective at encouraging attendance, but it was apparent that everything around educational success (outcomes) needed to address the educational goals in a complete way (Sowunmi, 2025). Here it is suggested that supplementary can take the form of remedial tuition, learning support services, teacher training and the employment of additional staff will only support the continuation of feeding strategy.

**Empirical Strategy** The literature studying interventions that offer food in exchange for school attendance is generally concerned that treatment at the individual or school level is endogenous. For instance, the agencies implementing school feeding use school-selection criteria that draw heavily on local knowledge. Researchers cannot claim to observe these

criteria. Moreover, further bias is likely. For an individual to have received school feeding at some point in the past year, which is the treatment variable, s/he must have been in school to begin with. Thus, it is more likely that s/he is still in school at the time of the interview. This may lead to a positive bias. Lastly, a negative bias due to omitted variables is also possible because school feeding programmes target the most vulnerable of schools, which are also likely to have relatively lower educational performance. While the implementation design of the programme is a source of endogeneity, it also puts forward the solution. The intervention in Malawi has followed a two-step targeting of beneficiaries. The implementing agencies consult with the government and with regional and district administration departments to decide on which areas to target. These decisions must be based on information that is observable to the relevant authorities, and thus, it is argued, observable to researchers as well. Thereafter, once these areas are set, the agencies use their local knowledge to target schools (Government of Malawi, 2009). The latter step is the source of endogeneity, while the former is the identification solution. I argue that treatment at the community level can be used as an instrument for treatment at the individual level provided that I control for the observables that inform treatment at the community level, e.g., the decision-making factors used during the first phase of the implementation process. Therefore, I defend the exogeneity of the instrument in the context of selection on observables. Similar strategies have been implemented by Ravallion & Wodon (2000), Sparrow (2007) and Islam & Choe (2013). 5.1 Individual-Level Analysis Equations 1 and 2 describe the instrumental variable approach

### **2.3.1. Domestic researches**

A study was carried to assess the effect of the SFP on school performance among primary school adolescents in Addis Ababa, Central Ethiopia (Mohammed et al., 2023). A prospective cohort study design was used with 322 SFP beneficiaries and equally sized non-beneficiary adolescents. For the quantitative part of the study data entry was carried out using SPSS version 24. Next SPSS version 24 and multivariable linear regression models were used. Next, descriptive results (mean and standard deviation) were summarized. Furthermore, multivariable linear regression models were used. To the qualitative part of the study narrative description method was used to

summarize and analyze the extracts obtained by the interviewees (Mohammed et al., 2023). In linear regression, unadjusted model (Model 1), compared with the non-school-fed adolescent, the mean difference in difference of average academic scores of school-fed adolescents was higher by 2.11 ( $\beta$  2.11, 95% CI 1.39–2.83) (Mohammed et al., 2023).

Other researchers assessed the impact of the SFP on school absenteeism and academic achievement among primary school children (grades 5–8) in Sidama zone in Southern Ethiopia. Design: This is a prospective cohort study that recruited SFP-beneficiary (n 240) and non-beneficiary (n 240) children aged 10–14 years from sixteen public schools and followed them for one academic year. The number of days children were absent from school over the school year was used to determine school absenteeism, and to determine academic achievement, an average academic score from the ten subjects attended was calculated for students for the school year. The data were analyzed with multivariable mixed effects negative binomial and linear regression models.

Setting: The study was based in food insecure districts in Sidama zone, Southern Ethiopia. Participants: SFP-beneficiary and non-beneficiary children aged 10–14 years. Results: The mean (SD) number of days children were absent from school was 4.0 (SD 1.5) and 9.3 (SD 6.0) among SFP beneficiaries and non-beneficiaries, respectively. Children who were not participants in the SFP were 2 times more likely to miss school (adjusted rate ratio = 2.30; 95 % CI 2.03, 2.61). For academic achievement, there was a significant but small 2.40 (95 % CI 0.69, 4.12) percentage point mean difference in favour of SFP beneficiary

### 2.3.2 Empirical Studies on SFP in Ethiopia

Abiy (2017) assessed the effects of the school feeding program on the school performance of primary public school children in Arada sub-city. Mulat (2020) studied the contribution of SFP

to quality education in Yeka Sub City's first cycle primary schools. Yigzaw (2019) evaluated the contributions and sustainability as well as the challenges of the school feeding program in Ethiopia Somali Regional State. Demissie, Senait, Adefris, and Groote (2018) evaluated the impact of quality protein maize for School Feeding in Ethiopia. Fitsum (2012) evaluated the impact of the school feeding program on student enrollment and dropout and constraints that hamper its effective implementation. Mahamad (2016) assessed the effect of the school feeding program on student enrolment, retention in Jijiga district. These studies have been done on SFP in the previous have the following gaps and remaining problems:

First, studies do not explain the experiences of students who have severe food shortages.

Although different communities have different experiences to address food shortages, the researchers did not show school children's experiences and how these school children cope up food shortage challenges. To this end, no sufficient research has been done to demonstrate how local communities and students cope up the negative impacts of malnutrition. For instance, one of the coping mechanisms in many parts of Ethiopia during food shortages is sharing food to the households suffering from hunger. It is common to see students sharing food for those who could not bring lunch to school during lunch time. These one mechanism even students try to mitigate the challenge of access to food by poor students. Ethiopia has such experiences in its traditions; however, these kinds of useful traditional practices are not well studied. Second, it is hardly possible to find researches that have identified obstacles and solutions to the constraints of SFP. Third, most of the researches conducted focus on the relevance and positive effects of the programs. Therefore, this research intends to identify experiences of school children who do not access to food in the school and to identify constraints and management problems in Addis Ababa City Administration particularly in Bole Sub-city in implementing the SFP.

The engagement of pupils in learning is inherently regarded as a crucial element of a country's strategic development goals. The involvement of learners in class is influenced by a variety of factors. Having competent teachers, offering enough food, encouraging good health, fostering a friendly environment, and other aspects are all factors that encourage students to actively participate in class (Kapur, 2018). Pupils who miss school frequently fall behind and do poorly in class assignments. The strategies for the school meal programme were implemented to ensure that everything was monitored and that the program ran following the World Bank and the Kenyan government's expectations. The strategies are designed to enhance learner participation through enhanced transition and completion rates, peer collaboration, school attendance, retention, and enrollment rates. The school feeding programme has influenced the execution of several school programme, particularly the curriculum execution exercise, as evidenced by students' participation in extracurricular activities, attendance in class, academic performance, and school administration procedures (Khatete et al., 2013). As a result, improving the programme through the application of these strategies guarantees the welfare of the benefits realized, particularly the projected rise in student participation. The distribution of nutrient-dense food, instruction in nutrition, providing nourishing meals throughout the school day, and enlisting the help of small-scale producers are the primary elements of school meal programme strategies. The subsequent sub-themes go into further detail about these. Nutrition not only aids in human development but also the prevention and treatment of disease. Maintaining good health requires eating a well-balanced diet. (Bier et al., 2013). According to Ohlhorst et al. (2013), healthy learners comprehend the concepts they are being taught in school and demonstrate high self-esteem, resulting in the growth of the economy, society, and individual citizens.

Acquiring awareness and understanding of nutrition enables teenagers and their families to ensure that a well-balanced diet promotes healthier growth, (UNICEF, 2019). Many countries working toward the Millennium Development Goals (MDGs) consider nutrition education a top priority. Furthermore, teaching about nutrition promotes healthy eating practices while increasing students' awareness of their nutritional status. Inevitably, most children in semi-arid regions fail to take advantage of this free service due to factors such as impoverishment, gender disparity, scarcity of food, and security concerns. Pupils who receive enough meals

experience less hunger. Students must eat enough meals throughout the day to participate fully. (Graham et al., 2016; Lawson, 2012). Anderson, Gallagher, and Ritchie (2018) found that school meal quality and academic performance are positively correlated with students' healthy diets.

#### **2.3.4 THE INVOLVEMENT OF SMALL-SCALE PRODUCERS IN THE SCHOOL FEEDING PROGRAMME**

By taking part in the school feeding program, smallholder farmers can access consistent markets, increasing their income and household food security (Mensah, 2019). For the targeted children, a steady supply of nutritious food is also guaranteed (WFP, 2016). Purchasing food directly from small-scale producers can be expensive, but it also empowers farmers and social groups and creates long-term incentives that support local development (WFP, 2016). The term "theoretical framework" defines a set of notions, theories, and presumptions that act as a prism through which to view a specific phenomenon. It offers a framework for arranging and comprehending the connections between different elements and variables that influence the phenomenon under study. A strong theoretical framework can direct the design of empirical studies to test hypotheses, help researchers identify knowledge gaps, and generate hypotheses. The theory of change and social learning provided the foundation for the study.

**2.3.5 SOCIAL LEARNING THEORY** The theory was developed in 1977 by Bandura, a psychologist best known for his research on how people learn through reinforcement, adaptation, and retaliation. He points out that most human behaviors are learned through imitation, observation, and modeling. Bandura goes on to say that learning is necessary for observable behaviors to occur. He talked in detail about motivation, retention, attention, and reproduction—the four phases that are necessary in this scenario. A learner must pay attention, as they get disengaged if distracted which lowers the quality of the learning process. Social learning theory is considered to be a fundamental component of the cognitive dominant behaviorist theories due to its similarity to behaviorist theories and its emphasis on the cognitive components of learning. The strategies of the school feeding program were supported by the social learning theory because learning activities demand a high degree of focus. Observing and imitating others can help someone learn a new behavior, as per the

theory of social learning, which provides an in-depth account of social interactions and the learning process. According to this study, school feeding policies affect pupil participation in class. This theory holds that the evolution of human cognition has been influenced by social factors including cognition emotion, genetics, behavior, and ecological activities. Consequently, the setting of supplying wholesome food, educating people about nutrition, serving food during school hours, and interacting with small-scale producers serves as a model for how learners should behave in the classroom. In addition, Edinyang et al., (2015) pointed out that the investigation of social studies emphasizes how people interact with their environment and seeks to impart knowledge, morals, and documentation techniques to them. Pupils gain confidence in their ability to accomplish an array of responsibilities in the classroom and can nurture self-efficacy that is founded on social learning theory (Kurt, 2019)

School feeding is recognized as a way to improve children's nutrition and education and as a vehicle to fight disease and school dropouts. School feeding programs throughout the world have successfully attracted children to school and have hold on to them by offering them food or a nourishing snack. Such programs have indicated an increase in children's nutritional status, raised school enrolment, improved attendance, increased attention span and are solving community health problems. School feeding provides vital nutrients, and for many children the food they eat at school is the most nutritious they will get all day (IFPRI, 2004a). Although many SFPs have been conceived out of ideological, political and economic pressures, the prejudices of international or national personnel, or even commercial or other non-objective influences, the first step toward an effective program is to build programs on sound and transparent objectives. Since SFPs are highly visible and can offer a significant income transfer to families they will always be inherently political. To avoid the use of programs for political purposes, information on programs – especially, who the program is for and why and targeting measures -- must be made readily available to the public. Policy development and setting the objectives of school feeding provides the framework for implementing all the other recommendations aimed at improving the contribution that a SFP can make to education and better health and nutrition. The process of policy development calls for compiling information on: what ‘\_food-related’ and education-related problems exist in the school age population which could be addressed by school feeding; where, geographically, the problems are located;

and which school feeding options are available, or could be developed, for addressing these problems. School feeding could be seen as one of the key strategies in contributing to household food security, and should outline as part of a complete package to improve the health and general well-being of a child (DoH, 2005:32).

In the Capital Addis following the launching of the program some studies have been made by the government institutions and individuals regarding the impact of the towards

The gap I saw in those studies were they did not engaged in case studies which is better to indicate the impact of SFPs . So every thing remaining constant based on the case studies that I will get using different mechanisms /i.e student scores from their document, deep interview with the students and teachers as well as in my observation/ I will analyze how much the program has direct impact in learning and teaching process in general and the results of the students in particular.

#### **2.4. Research gap**

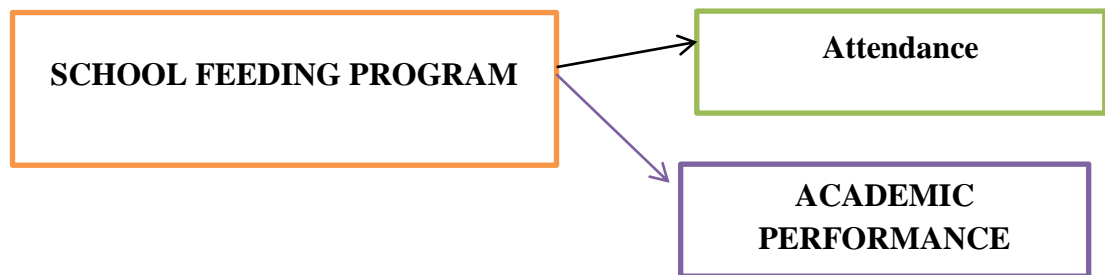
In the foregoing section in case of domestic research the empirical studies lacked consistency. In addition the result also remained inconclusive. This gave the writer of this thesis a clue for the presence of contextual research gap. So, this study was aimed to evaluate the effect of the SFP on school attendance and academic performance of primary school students in Addis Ababa over the past six years (2018 - 2023 G.C)

#### **2.5. Conceptual framework**

A conceptual framework contains various ideas that are entrenched in existing theorisations, sources and experiences premised largely on the context (Parker et al., 2022). In working through the issue of what effect the school feeding programme had on students' academic performance, and related school attendance, the researcher attempted to canvas the interrelationships of the various ideas that are entrenched in the studies discussed. Classical liberal theory of equal opportunity describes that there ought to be opportunities such as education provided to individuals at schools, and that

barriers such as hunger must be minimized by providing food through school feeding programmes. Consequently, the researcher considers the school feeding programme as an independent variable. The school feeding programme would allow for learners to be more learning effective in relation to attendance in school broadly and the researcher contrasted academic performance and school attendance as dependent variables. The conceptual framework is outlined below.

Figure 2.1: Conceptual Model



Source: Own synthesis from empirical literature review on (Peter, et al. 2024) and (Mohammed, et al. 2023;)

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

According to Walliman (2005), it will become apparent what type of data will need to be to explore the problem, and also what type of analysis would be most appropriate to analyze the data, once the problem has been statement. (Parveen, 2015) In this regard, this chapter outlines the methodology adopted and identifies the tools and techniques used in undertaking this research. The researcher applied both ways of research methodologies /i.e Qualitative and Quantitative/ And data was collected in three ways Students average score of the past six academic years / three pre SFP academic years and three Post SFP academic years average score students and attendance was collected from the students inventory record while deep interview was conducted with school principals and vice principals Peer group discussion was also conducted among students. This triangulation helped the researcher to avoid biasness of the research. In the case of Quantitative data entry SPSS version 25 was applied while Narrative description was applied for the qualitative approach.

#### **3.1. Description of the study area**

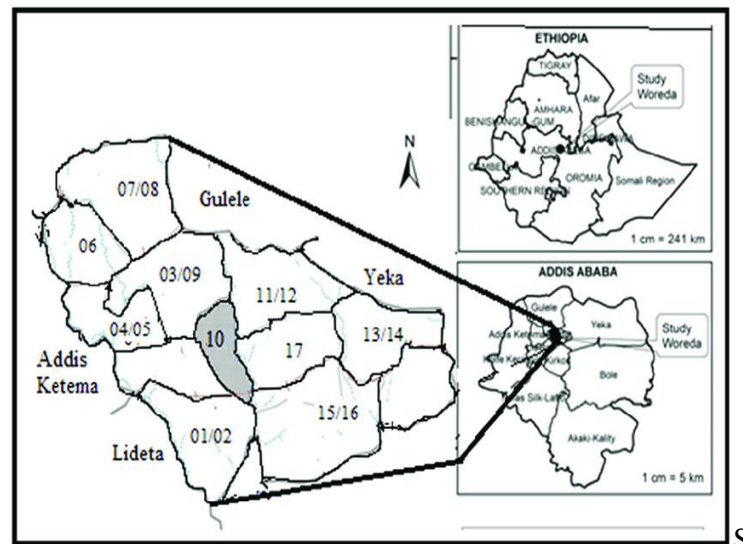
To describe the study area, the study focused on the location relation to the topic of the study. Arada, one of the oldest sub-cities in the Addis Ababa city administration, includes 10 woredas and 21 government primary schools (Airo, 2024). The study area, Arada sub-city is depicted below. The first city government-funded School Feeding Program (SFP) started in September 2019 in Addis Ababa. In the same year, the city council approved a proclamation to create the “Feeding Agency” (referred to as the Agency), which reports to the mayor (Gizaw & Andualem, 2025)

. The reasons for establishing the Agency include improving access to primary education for all children in the capital, reducing short-term hunger, improving educational outcomes for public primary school students, and managing in-school

feeding in public schools consistently and effectively. Since 2021, Addis Ababa’s SFP has been providing food to all pre-primary, primary, and middle school children in the city government areas. This paper is the step for the research inquiry about the effect of SFP

The schools in the Sub city were selected because in the area only little research was conducted regarding the issue. Furthermore the empirical studies was non consistent and non-conclusive

Figure 3.1: Map of the study area



Ssource: Adopted from (Megento, 2013)

### 3.2. Research approach

Grover (2015) stated that the research approach is the plan and the process of research that include the entire steps of research (Park & Westat, 2001).. This research recognizes the positivist perspective as one of the most relevant philosophical worldviews; the reason is that the researcher stressed that true, actual and factual events can be studied and observed scientifically and empirically and can also be explained

through simple and logical inquiry and analysis. Actually, this philosophical world view assumed that reality is rooted on the ontological principle and doctrine that truth and reality is free and independent of the viewer and observer. In addition, this research considers pragmatic worldviews because scholars in the area of measuring the role of any program should not adhere to rigid theories or methods. Instead, it is vital to focus on a particular problem or question that should be addressed. Regarding the research approach, this thesis took a deductive approach. The reason behind using a deductive approach is that the study started with theory.

### **3.3. Research design**

Research design defines the organization that acts as the strategy for investigating the research problem. A research design's function is to coordinate, with a minimum use of energy, time, and money, the gathering of pertinent data in view of the research objectives (Kothari, 2004). The present research has been framed in the context of a correlational research design. The purpose of adapting correlational research design was to describe relationships between variables without manipulating them, allowing researchers to identify patterns and associations as they naturally occur. Previously the scholars were successful in applying correlational research design as part of plan of action to address similar research problem (Maghra, Abraham & Lawal, 2023). On the other hand, over the past one decade the research focus has shifted from simply assessing school feeding program to determine the effect of the school feeding program. So, this research developed a methodology, through theoretical research as well as making use of descriptive survey, which can be used for measuring the overall effect of school feeding program in terms of academic performance and attendance rate.

### **3.4. Research methods**

Research methods refer to the tools, equipments, practices, and processes that enable one to find answers to questions that interest and also add to a critical discussion, or a cluster of recognized concepts relating to that particular interest

(Kothari, 2004) This study employed mixed research method. The reason for applying quantitative research method is to assess the effect of the school feeding program on academic performance and attendance rate using School Record Inventory (SRI) as secondary information sources. In addition, the study used qualitative research method in order to enable the researcher to have complete opinion of subjective conviction of the key informants (primary and middle school principals, vice principals and feeding experts), who have broad experience with the research topic. So, among the lists of ways/tools/methods the researcher aware of; makes use of work with primary and middle school principals, vice principals and feeding experts.

### **3.5. Types and sources of data**

According to Wimmer and Dominick (2011), method is a specific data collection process in accordance with the assumption of the selected methodology (Parveen, 2015). Primary data are those which are collected a fresh and for the first time and thus happen to be original in character. For this study primary data sources are primary school principals, vice principals and feeding experts. For the quantitative part the researcher retrieved School Record Inventory (SRI) as part of secondary information sources

### **3.6. Population and sampling design**

#### **3.6.1 Population and sample size**

Population refers to the entire group of individuals or elements that share a common characteristic or feature (Willie, 2023). The target population refers to a specific subset or segment within the larger population that is the primary focus of a study, intervention, or marketing. In this regard the target population of this study encompassed four hundred primary school students with complete school record information for six consecutive academic years(2018 -2023 G.C).School record information about 400 students was obtained by AtseFasil; AtseNaod; TibebEdget/wereda, Minilike Iprimary schools found in Woreda 01, Woreda

06; Woreda 04, Woreda 06 respectively. Lastly, using Yemane formula ( $N/1 + Ne^2$ ); the researcher calculated sample size and obtained two hundred (200) primary school students

### **3.6.2 Sampling technique**

The careful design of the sample size and the right selection of sampling techniques are important to ensure the representativeness of the sample that can be dependable to generalize the information obtained from the sample to the whole population of the study (Park & Westat, 2001). Primarily the researcher purposely listed out two hundred out of the total (3269) students with complete school record information from AtseFasil; AtseNaod; TibebEdget/wereda, Minilike II schools found in Woreda 01, Woreda 06; Woreda 04, Woreda 06 respectively. Then using systematic random sampling /i.e 50 students from the four mentioned Schools who were not in the program before three academic years and the same students who were in the program for three years who are now in Grade 7 then in this way the researcher drawn two (200) students.

### **3.7. Methods of data collection**

In this study the researcher applied mainly the following information gathering tools i.e.; School Record Inventory (SRI) and in-depth interview.

#### **3.7.1. School record inventory (SRI)**

To do correlational research design the researcher employed School Record Inventory (SRI) about the student attendance and academic performance in reference to pre SFP academic years (2018 -2020 G.C) and post SFP academic years (2021 -2023 G.C)

### **3.7.2. In-depth interview**

Key Informant Interview (KII) guide line was prepared in order to gather information from the key informants. Seven (7) key informants were represented from primary and middle school principals (2), vice principals (2) and school feeding experts (3). Key informants were purposely selected from the four primary schools based on proximity to primary school clusters. The purpose of in-depth interview was in order to triangulate the information obtained by the quantitative survey. Focused group discussion was also conducted with 40 students drawn from the mentioned schools

### **3.8. Study variables**

**School attendance:** it is measured by Attendance Rate. It is calculated by students who are present at school / total number of enrolled students.) \* 100,

**Academic performance:** it is measured by the average final exam result. This average final exam result to primary school was obtained by School Record Inventory (SRI)

### **3.9. Data analysis**

For the quantitative part of the study data entry was carried out using SPSS version 25. Descriptive results (mean and standard deviation) were summarized. Next parametric statistical test (paired sample t-test) was deployed. To the qualitative part of the study narrative description method was used to summarize and analyze the extracts obtained by the interviewees.

### **3.10. Instrument reliability and validity**

For the reliability of the findings of the research and the accuracy with which a measure measures what it is intended to measure; the study applied the following instrument method of reliability and validity. For the reliability assurance amongst

different types of triangulation this study applied triangulation from different sources by looking at the same issues but trying to solve them through different sources i.e.; from key informant interviewees and secondary. To ensure validity of data obtained from secondary sources the researcher considers the credibility, context, and accuracy of the source. In addition, the instrument was piloted in a field trial with test-re-test procedure. Reliability of the instrument was ascertained using Cronbach Alpha Coefficient and a reliability of 0.73 was obtained.

### **3.11. Ethical considerations**

When collecting data for the study, confidentiality was taken into account at every stage. This section of the study outlines the ethical issues that the researcher must take into account when carrying out the investigation, handling the information provided by the respondents (confidentiality), and collecting and analyzing data. The researcher closely adheres to and takes into consideration a variety of ethical norms when collecting data. For example, the researcher obtained a letter of support from Addis Ababa University in order to gather relevant data from the bus. After gathering the required data, the researcher made a concerted effort to handle and process the information carefully while keeping ethical standards in mind. After being collected from the participants, the data was processed and stored with care.

## **CHAPTER FOUR**

### **RESULTS AND DISCUSSION**

This chapter attempted to present the result analysis of the collected data. In addition, this chapter also incorporates the interpretation and discussion part. This study evaluated the effect of the SFP on school attendance and academic performance of primary school students over the past six years (2018 -2023 G.C). The presentation of the result analysis in this chapter was organized in to nine sections. In addition this section incorporates the interpretation and discussion part. Section one and section two present the result analysis of the collected data linking to student academic performance and about the effect of SFP. Section three and section four present the result analysis of the collected data linking to student school; attendance and about the effect of SFP on student school attendance. Section one presents the discussion part.

#### **4.1. Student academic performance**

This study surveyed primary school student's academic performance in Pre SFP and post SFP academic years as presented (See Annex A). In pre SFP academic years; average students' academic performance score was 56; while, in post SFP academic years the average score was 70.

#### **4.2. The effect of SFP on student academic performance**

This study also employed paired sample t-test in order to measure the effect of SFP via investigating the foregoing score difference between academic performance in post SFP academic years and pre-SFP academic years (Table 4.1, Table 4.2 & Table 4.3).

Table 4.1: Paired sample statistics and correlation: the effect of SFP on academic performance

The paired sample  $t$ -test, sometimes called the dependent sample  $t$ -test, is a statistical procedure. Specifically, it determines whether the mean difference between two sets of observations is zero. In a paired sample  $t$ -test, one should measure each subject or entity twice, resulting in pairs of observations. Common applications of the paired sample  $t$ -test include case-control studies or repeated-measures designs. Suppose if you want to evaluate the effectiveness of a company training program, you might follow the following approach. One approach you might consider would be to measure the performance of a sample of employees before and after completing the program, and analyze the differences using a paired sample  $t$ -test.

		Mean	N	Std. Deviation	Correlation	Sig
Pair 1	Pre SFP	56	200	8	0.51	0.000
	Post SFP	<b>70</b>	200	10		

Source: own survey SPSS V25 (2025)

Table 4.2: Paired sample correlation: the effect of SFP on academic performance

		N	Correlation	Sig
Pair 1	Pre SFP & Post SFP	200	0.51	0.000

Source: own survey SPSS V25 (2025)

Table 4.3: Paired samples tests: the effect of SFP on academic performance

		Paired Differences					T	df.	Sig. (two tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
Pair 1	Pre SFP & Post SFP	-14	6.33	0.52	-4.7	1.87	-10.2	119	0.000

Source: own survey SPSS V25 (2025)

As illustrated in Table above a paired samples t-test showed that the primary school student’s academic performance increased from pre-SFP (M = 56, SD = 10) to post-program (M = 70, SD = 6.33; t = -10.2, p < .001). Transcribed information obtained by key informants also strengthened the foregoing results. During the interview session, key informants, demonstrated the issue in part by saying that “we remembered that the difficulty of capturing the attention of our students in pre SFP academic years. Even though the causes might be so many, mostly it associated with our students’ lack of adequate food before they get in to class. So, this day the situation is different. They get food for they can attend their class productively. We expect better results will be scored by our students”.

### 4.3. Student school attendance

This study also employed school record inventory to assess student school attendance in Pre SFP and post SFP academic years as presented (See Annex A). In pre SFP academic years; average attendance rate was 95%; while, in post SFP academic years average attendance rate was 97%.

### 4.4. The effect of SFP on student school attendance

Using paired sample t-test the researcher measured the effect of SFP (Table 4.4, Table 4.5& Table 4.6).

Table 4.4: Paired sample statistics and correlation: the effect of SFP on student school attendance

		<b>Mean</b>	<b>N</b>	<b>Std. Deviation</b>	<b>Correlation</b>	<b>Sig</b>
Pair 1	Pre SFP	0.95	200	0.3	0.39	0.000
	Post SFP	0.97	200	0.2		

Source: own survey SPSS V25 (2025)

Table 4.5: Paired sample correlation: the effect of SFP on primary school students attendance

		<b>N</b>	<b>Correlation</b>	<b>Sig</b>
Pair 1	Pre SFP & Post SFP	200	0.39	0.000

Source: own survey SPSS V25 (2025)

Table 4.6: Paired sample statistics: the role of SFP on 1<sup>st</sup> cycle primary students attendance

		Paired Differences							
		<b>Mean</b>	<b>Std. Deviation</b>	<b>Std. Error Mean</b>	<b>95% Confidence Interval of the Difference</b>		<b>t</b>	<b>Df</b>	<b>Sig. (two tailed)</b>
Pair 1	Pre SFP & Post SFP	-0.02	.25	-0.33	-0.333	0.666	-15.7	119	0.000

Source: own survey SPSS V25 (2025)

As illustrated in Table above a paired samples t-test indicated that the primary school student school attendance increased from pre-SFP (M =0.95, SD = 0.3) to post-school feeding program (M = 0.97, SD = 0.2; t = -15.7, p < .001). Transcribed information obtained by key informants also strengthened the foregoing results. During the interview session, key informants, demonstrated the issue in part by saying that “over the past five years before launching SFP the enrolment was decelerated with increasing; meanwhile, this day it is accelerating with increasing.

## **4.5. Discussion**

### **4.5.1. Student academic performance**

In pre SFP academic years; average students' academic performance score was 56; while, in post SFP academic years the average score was 70. In reference to Ethiopia Grading system the average score signifies well (60-79.99%) in case of post SFP academic years (Ministry of Education ,2009). Actually, classical liberal theory of equal opportunity theory demands that opportunities including education to be availed to individuals at schools and barriers for instance hunger to be curbed through provision of food through school feeding programme. This would enable the learners to be more effective in learning in relation to retention (Jack, 1982).

### **4.5.2. The effect of SFP on student academic performance**

The result showed that SFP has effect on students' academic achievement. The quantitative result also backed by previous empirical studies. Actually, well-planned school feeding programs can improve school attendance and performance. They also help protect children from all types of malnutrition, including undernutrition, lack of essential vitamins and minerals, and childhood obesity (Global Child Nutrition Foundation (GCNF), 2024)

.Scholars already revealed that there is positive effect of school feeding program on academic achievement and attendance of Grade 8 students (Assefa, 2023). Treatise of Assefa (2023),Beminet (2015) also revealed that the negative effect of undernourishment on the students' average score, memory, attention and general school activities.

### **4.5.3. Student school attendance**

In pre SFP academic years; average attendance rate was 95%; while, in post SFP academic years average attendance rate was 97%.In the eyes of the reports

over the pre SFP academic years in primary and middle schools the average attendance rate found in this study was low against the expected one. (Addis Ababa City Administration Education Bureau, 2024).

#### **4.5.4. The effect of SFP on student school attendance**

As illustrated in the result section; SFP has effect on student school attendance. The quantitative result also backed by previous empirical studies. For instance scholars already revealed that there is positive effect of school feeding program on academic achievement and attendance of Grade 8 students (Assefa, 2023). Before the program was launched many of the students were not attending the class as expected while following the program the attendance rate was dramatically increased. More over the active class participation of the students were boosted. So one way or the other students accessibility of food enable the students to actively attend the day to day learning process in turn improve the academic performance.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

This chapter presents summary of findings, conclusion and some relevant recommendations to practice as well as for future researchers based on objective of the study mentioned in Chapter One.

#### **5.1. Summary of findings**

This study applied correlational research design. By describing links between variables without changing them, the correlational research method was modified to enable researchers to spot patterns and associations as they arise spontaneously. As part of analysis section descriptive results (mean and standard deviation) were summarized. Next parametric statistical test (paired sample t-test) was deployed. To the qualitative part of the study narrative description method was used to summarize and analyze the extracts obtained by the interviewees.

#### **5.2. Conclusion**

Various scholars and academicians have conducted many studies across the globe regarding school feeding program. This research work was an attempt to evaluate the effect of the SFP on school attendance and academic performance of primary school students in Arada sub city, Addis Ababa over the past six years (2018 -2023 G.C).. Based on the results found the researcher concluded the following points.

The average score signifies well in case of post SFP academic years

SFP has effect on students' academic achievement

The average attendance rate found in this study was low against the expected one.

SFP has effect on student school attendance.

This research attempted to assess the effect of a multipart interventions program launched by the AddisAbaba City Administration aimed at decreasing school dropouts, improving enrollment, learning achievement in Arada sub-city. The research employed both quantitative and qualitative methods to evaluate the effect of the program. It has also tried to identify the confounding factors that affected the measurement of the program.

Findings from this study provided evidence that SFPS program has not brought about the envisaged effect. The qualitative results have identified there are several confounding factors that affected the measurement. The decrease in enrollment despite the implementation of the interventions was due to population displacement in Arada sub-city. The effect of the SFPS program on attendance rates was not significant due to previous interventions such as strict school management and close follow-up of teachers as per the qualitative findings

### **5.3. Recommendation**

Based on the findings, the conclusion is made before the following recommendations are provided. Currently primary schools are with high demand of improved academic performance. In this regard this study has shown that SFP is the key factor. The results provide support to the factors associated with academic performance; it signifies the positive effect over the students' academic performance. In this sense, it is necessary for the regarded bodies to design appropriate strategies for improving the quality of SFP provision. In post SFP academic years statistical results showed that SFP has role on students' academic achievement. In this sense, it is necessary for the schools and the regarded institutions (such as Addis Ababa Education Bureau and Addis Ababa City Administration Feeding Agency) to have appropriate toolkits for enhancing the implementation of SFP. For instance, the regarded bodies should be sure 2200 kilocalorie was acquired by the individual students. Most literatures suggested that individuals should gain this amount of energy for they would be productive in daily engagements. In addition to that the mentioned concerned bodies has to conduct further research why the mean attendance rate is low and in turn include the result in their policies and strategies. More over the menu list has to be improved based on the students natural and health based interests. The place where the meals was prepared has to be located in proper place just to smoothen the teaching and learning process. To further enhance the effectiveness of SFPS

on the school performance of Arada sub-city schoolchildren, the following are the recommendations:

Schools and educational administration bodies needed to make a proactive effort to increase enrollment by bringing out of school children into schools by advocating the benefits of the SFP program. • The heterogeneous results on children's average test scores suggested that further investigation is needed, possibly with a longitudinal study design.

SFPS Implementers, with the help of educational planners, should set up more effective monitoring and evaluation mechanism to provide all the SFPS program components

#### **5.4 Suggestions for future research**

Future research should look into the mediating variables beyond seeing the direct relationship between SFP and academic performance. Moreover, upcoming studies could examine the specific elements of the school feeding programs, such as the quality of nutrition and the consistency of the program, to pinpoint the most effective strategies for optimizing student benefits. Comparative studies across various regions or schools with different levels of program implementation could also shed light on the factors that influence the success or challenges of these initiatives. Future research should also investigate the lasting effects of the school feeding program on student retention, academic achievement, and behavioral outcomes, along with the influence of heightened parental and community engagement. Furthermore, studies ought to look into methods for addressing existing challenges, including budget constraints, infrastructure issues, and staff misconduct, by emphasizing the importance of stakeholders in the implementation of the program.

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**Annex A: Government-led Primary School Student Academic Performance and Attendance rate over 2018 - 2023**

S/N	sex	Pre SFP								Post SFP							
		2010 E.C		20	2012E		Average score	Nonatt endanc e (in averag e # of days)	2013 E.C		2014 E.C		2015 E.C		Average score	Nonatt endanc e (in averag e # of days)	
		Score	Nona ttend ance in (in # of days)	Score	Nona ttend ance in (in # of days)	Score			Nona ttend ance in (in # of days)	Score	Nona ttend ance in (in # of days)	Score	Nona ttend ance in (in # of days)				
1	F	85	0	80	2	79	2	64	1	82	0	85	0	87	0	85	0
2	M	89	2	90	3	89	2	70	2	92	0	95	0	99	0	95	0
3	M	59	2	46	2	49	3	40	2	50	0	86	2	87	0	74	1
4	F	89	3	85	3	81	0	67	2	80.6	0	95	1	89	1	88	1
5	F	51	1	53	3	55		41	1	56	1	67	1	87	2	70	1
6	M	48	2	61	2	60	2	43	2	65.6	1	65	0	55	1	62	1
7	M	60	2	47	1	50	2	41	2	55	0	55	0	67	0	59	0
8	F	65	2	58	1	55	3	47	2	67	2	60	0	76	0	68	1
9	F	69	0	87	0	77	0	61	0	88.5	0	90	1	87	2	88	1
10	M	86	0	77	2	69	2	62	1	67	1	89	0	80	1	79	1
11	M	78	2	65	3	65	2	55	2	78	0	69	1	75	1	74	1
12	F	72	0	60	0	57	0	50	0	61	1	65	2	78	0	68	1
13	F	63	2	54	2	55	2	45	2	54	0	66	0	85	2	68	1
14	M	67	1	55	0	54	2	47	1	56	0	57	1	77	1	63	1
15	F	63	2	50	2	52	3	43	2	50	1	55	1	67	0	57	1
16	F	57	0	60	3	66	1	46	1	74.8	1	62.5	0	78	1	72	1
17	F	62	2	45	2	55	0	42	1	50	2	68.75	0	69	1	63	1
18	M	51	3	51	1	57	3	40	2	59	1	55	2	56	0	57	1

S/N	sex	Pre SFP								Post SFP							
		2010 E.C		20	2012E		Average score	Nonattendance (in average # of days)	2013 E.C		2014 E.C		2015 E.C		Average score	Nonattendance (in average # of days)	
		Score	Nonattendance in (in # of days)	Score	Nonattendance in (in # of days)	Score			Nonattendance in (in # of days)	Score	Nonattendance in (in # of days)	Score	Nonattendance in (in # of days)				
19	F	53	1	50	0	57	2	41	1	52	0	54	0	57	1	54	0
20	F	54	0	50	0	56	2	41	1	52	2	57	0	59	0	56	1
21	M	54	2	64	2	55	3	45	2	64	2	65.33	1	70	1	66	1
22	F	56	0	50	3	53	2	41	2	55	1	50	0	66	0	57	0
23	F	56	2	63	2	60	0	46	1	56	0	68	0	76	0	67	0
24	F	57	3	50	2	67	2	43	2	44	1	70.4	1	66	1	60	1
25	F	58	2	58	3	60	1	45	2	60	1	65	0	65	0	63	0
26	F	67	3	80	1	77	2	58	2	78	1	77	0	80	0	78	0
27	F	89	2	67	0	65	1	59	1	69	0	69.6	0	70	1	70	0
28	F	56	3	68	3	69.5	3	49	3	69	1	73	0	80	1	74	1
29	F	67	2	78	2	80	2	57	2	76	0	82	1	86	0	81	0
30	F	89	0	75	2	78	2	63	1	80	1	79	0	83	0	81	0
31	F	76	3	66	1	78	0	56	1	78	2	80	0	83	0	80	1
32	F	68	2	77	0	77	2	57	1	69	1	78.8	2	80	1	76	1
33	F	78	1	69	2	70	2	57	2	72	0	74	1	85	0	77	0

S/N	sex	Pre SFP								Post SFP							
		2010 E.C		20	2012E		Nonatt endanc e (in averag e # of days)	Aver age score	2013 E.C		2014 E.C		2015 E.C		Aver age score	Nonatt endanc e (in averag e # of days)	
		Score	Nona ttend ance in (in # of days)	Sc ore	Nona ttend ance in (in # of days)	Score			Nona ttend ance in (in # of days)	Score	Nona ttend ance in (in # of days)	Score	Nona ttend ance in (in # of days)	Score			Nona ttend ance in (in # of days)
34	F	68	2	68	3	66	1	53	2	64	0	56	0	70	1	63	0
35	M	89	1	91	2	91	1	70	1	90	0	80	0	81	0	84	0
36	F	56	2	60	1	45	1	44	1	60	1	55	0	54	0	56	0
37	M	76	2	67	1	55	0	54	1	60	0	59	2	70	0	63	1
38	M	89	2	90	1	90	0	70	1	100	0	100	0	100	0	100	0
39	M	79	3	72	0	63	1	57	1	78	0	84	1	82	1	81	1
40	M	58	2	52	2	65	2	44	2	80	0	75	2	87	0	81	1
41	M	59	1	63	2	73	2	49	2	72	1	78	1	81	1	77	1
42	F	74	2	70	3	80	1	57	2	84	1	89	0	88	0	87	0
43	F	76	3	79	1	81	1	61	2	78	2	71	0	78	2	76	1
44	M	70	1	80	0	80	3	59	1	86	0	83	0	81	1	83	0
45	F	83	1	73	1	73	2	60	1	81	0	77	0	82	0	80	0
46	M	75	2	76	3	83	1	60	2	80	1	83	1	80	0	81	1
47	F	61	2	56	0	63	1	46	1	79	1	72	0	81	1	77	1
48	F	52	1	56	2	60	0	43	1	70	0	63	2	72	1	68	1
49	F	65	0	72	1	72	0	54	0	81	0	74	1	84	0	80	0
50	M	76	2	71	1	70	2	57	2	82	0	84	1	85	0	84	0
51	F	56	0	69	2	57	2	48	1	94	0	81	0	80	1	85	0
52	F	80	2	85	0	80	1	64	1	78	2	85	0	84	0	82	1
53	F	77	3	78	1	82	1	61	2	89	1	84	1	89	2	87	1

S/N	sex	Pre SFP								Post SFP							
		2010 E.C		20	2012E		Average score	Nonattendance (in average # of days)	2013 E.C		2014 E.C		2015 E.C		Average score	Nonattendance (in average # of days)	
		Score	Nonattendance in (in # of days)	Score	Nonattendance in (in # of days)	Score			Nonattendance in (in # of days)	Score	Nonattendance in (in # of days)	Score	Nonattendance in (in # of days)				
54	F	78	1	81	0	82	3	62	1	83	2	88	0	86	0	86	1
55	M	86	0	88	2	81	1	67	1	87	1	87	1	85	1	86	1
56	M	78	0	74	3	78	2	59	2	77	0	79	0	79	0	78	0
57	M	80	1	74	2	69	2	59	2	89	0	87	2	86	1	87	1
58	F	50	3	57	1	58	0	42	1	52	0	54	0	54	0	53	0
59	M	69	1	66	2	78	0	54	1	64	0	61	1	60	0	62	0
60	F	54	1	51	1	59	2	42	1	55	1	62	1	56	1	58	1
61	F	51	0	55	0	52	2	41	1	51	1	58	0	54	1	54	1
62	M	70	2	69	2	72	3	54	2	82	0	76	1	78	1	79	1
63	F	67	3	66	2	59	2	51	2	60	1	60.5	0	60	1	60	1
64	F	70	2	79	1	57	0	56	1	60	0	60	0	62	0	61	0
65	M	65	1	71	2	77	1	54	1	76	0	79.3	0	74	2	76	1
66	M	48	2	55	1	57	2	41	2	56	1	56.8	0	58	0	57	0
67	F	55	1	54	2	52	2	42	2	50	0	53	1	51	1	51	1

S/N	sex	Pre SFP								Post SFP							
		2010 E.C		20	2012E		Average score	Nonattendance (in average # of days)	2013 E.C		2014 E.C		2015 E.C		Average score	Nonattendance (in average # of days)	
		Score	Nona ttendance in (in # of days)	Score	Nona ttendance in (in # of days)	Score			Nona ttendance in (in # of days)	Score	Nona ttendance in (in # of days)	Score	Nona ttendance in (in # of days)				
68	M	70	2	67	2	68	0	53	1	70	2	69	1	72	0	70	1
69	M	59	3	55	3	53	3	44	3	54	0	52.8	1	51	1	53	1
70	M	55	1	52	1	54	2	42	1	51	0	56	0	55	0	54	0
71	F	69	1	58	2	56	1	49	1	59	1	55	0	57	0	57	0
72	F	80	2	77	1	79.6	3	61	2	80	1	82.5	1	84	1	82	1
73	M	77	1	79	2	77	0	61	1	81	0	79.01	1	78	2	79	1
74	M	83	0	85	0	85.2	1	65	0	83.8	0	83	0	77.1	0	81	0
75	M	88.3	2	90	2	95.4	2	70	2	90.6	0	93	0	89.3	0	91	0
76	F	82.4	3	69	1	70	0	58	1	73.4	0	81.2	0	84.8	0	80	0
77	F	92.4	4	96	1	93.4	0	73	2	86.5	0	90.3	0	90.4	0	89	0
78	F	85.6	2	80	1	76	0	64	1	83.2	0	89.3	0	94.8	0	89	0
79	F	75.4	2	66	3	68.8	2	55	2	56.3	0	63	0	54	0	58	0
80	F	67	2	62	1	58	1	49	1	51.1	0	68.1	0	64.8	0	61	0
81	F	84.4	3	82	2	78.8	0	64	2	75.6	0	78.6	0	65.9	2	73	1
82	M	69.5	3	68	4	62.4	3	53	3	55.9	0	69.7	0	71.3	1	66	0
83	F	77.5	2	82	3	71.8	2	61	2	58.3	0	66	0	60.7	0	62	0

S/N	sex	Pre SFP								Post SFP							
		2010 E.C		20	2012E		Nonatt endanc e (in averag e # of days)	Aver age score	2013 E.C		2014 E.C		2015 E.C		Aver age score	Nonatt endanc e (in averag e # of days)	
		Score	Nona ttend ance in (in # of days)	Score	Nona ttend ance in (in # of days)	Score			Nonat tenda nce in (in # of days)	Score	Nona ttend ance in (in # of days)	Score	Nona ttend ance in (in # of days)				
84	F	72.3	2	62	2	66.4	3	52	2	62.4	0	65.9	0	70.2	1	66	0
85	M	61.6	1	57	2	53.2	2	46	2	51.8	0	54.3	0	57.3	1	54	0
86	F	72.5	3	69	3	65.4	1	55	2	74.1	0	79.4	0	81.6	0	78	0
87	F	77.3	4	72	2	69	0	57	2	66	1	77.2	0	63.9	0	69	0
88	M	83.9	4	82	3	75	1	64	3	66.3	0	66.6	0	59.9	0	64	0
89	F	85.1	5	74	3	69	0	61	3	54.7	0	65.5	0	71.6	0	64	0
90	M	91.3	2	89	1	74.6	0	68	1	84.7	1	75.2	0	78	0	79	0
91	M	84.3	4	82	3	67.2	1	63	3	72.1	0	76.3	0	76.1	0	75	0
92	M	67.4	0	72	0	52.6	0	52	0	79.1	0	82.4	0	81.7	0	81	0
93	F	70.9	2	69	3	67.2	4	54	3	59.7	0	66.77	0	60.2	0	62	0
94	M	83.1	3	76	2	79	0	62	2	77	0	79.3	0	81	0	79	0
95	M	67.1	4	70	1	70	0	54	2	64	0	69.5	0	70	0	68	0
96	M	60.1	5	64	2	56.4	6	48	4	54	0	59.3	0	67	0	60	0
97	M	91.3	3	90	3	88.4	4	70	3	74	0	79.8	0	80	0	78	0
98	M	70.1	3	67	2	62.6	5	53	3	61	0	67.2	0	71	0	67	0
99	M	75.1	3	72	2	71.6	2	57	2	62	0	71	0	68	0	67	0

S/N	sex	Pre SFP								Post SFP							
		2010 E.C		20	2012E		Nonatt endanc e (in averag e # of days)	Aver age score	2013 E.C		2014 E.C		2015 E.C		Aver age score	Nonatt endanc e (in averag e # of days)	
		Score	Nona ttend ance in (in # of days)	Sc ore	Nona ttend ance in (in # of days)	Score			Nona ttend ance in (in # of days)	Score	Nona ttend ance in (in # of days)	Score	Nona ttend ance in (in # of days)	Score			Nona ttend ance in (in # of days)
100	M	91.3	1	88	2	86.2	1	69	1	77	0	80.5	0	86	0	81	0
101	M	62.4	2	66	3	58.2	0	49	2	54	0	66.5	0	62	0	61	0
102	M	80.4	4	75	3	76.2	2	60	3	64	0	70.8	0	72	0	69	0
103	F	98.1	0	81	0	97.8	0	71	0	92	0	95.7	0	98	0	95	0
104	M	72.1	0	78	3	60	0	57	1	56	2	64.1	0	64	0	61	1
105	M	75.1	0	84	2	67.6	0	60	1	58	1	61.5	0	62	0	60	0
106	F	71.9	0	77	3	67.7	0	57	1	65	0	67.7	0	69	0	67	0
107	M	84.3	0	80	1	71.8	0	63	0	68	0	74.7	0	84	0	75	0
108	M	73.4	0	81	1	68.2	0	59	0	66	0	67.1	0	71	0	68	0
109	M	87.1	3	71	2	78.6	0	61	2	74	0	79.5	0	86	0	80	0
110	M	84.3	1	75	1	80	0	62	1	75	0	71.2	0	76	0	74	0
111	F	73.4	2	75	1	59	4	56	2	53	0	63.9	0	72	0	63	0
112	F	77.3	3	93	2	71.6	0	65	2	63	0	67.5	0	71	0	67	0
113	M	81.6	5	89	4	69.8	0	65	3	56	0	62.7	0	60	0	60	0
114	M	89.2	3	93	3	85	0	70	2	67	0	73	6	56	0	65	2

S/N	sex	Pre SFP								Post SFP							
		2010 E.C		20	2012E		Nonatt endanc e (in averag e # of days)	Aver age score	2013 E.C		2014 E.C		2015 E.C		Aver age score	Nonatt endanc e (in averag e # of days)	
		Score	Nona ttend ance in (in # of days)	Score	Nona ttend ance in (in # of days)	Score			Nonat tenda nce in (in # of days)	Score	Nona ttend ance in (in # of days)	Score	Nona ttend ance in (in # of days)				
115	M	96	3	79	2	93	0	69	2	82	0	83.3	0	58	0	74	0
116	F	94.3	1	82	2	86.2	0	68	1	82	0	81.4	0	90	1	85	0
117	M	81.3	3	73	0	75.4	0	60	1	65	1	78.5	2	63	2	69	2
118	M	83.1	3	79	2	74.8	3	62	3	66	0	71.8	4	58	0	65	1
119	M	67.1	2	65	2	59.6	0	51	1	55	0	65.2	9	58	0	59	3
120	M	71.4	3	90	4	66.8	0	61	2	56	1	63	2	49	0	56	1
121	M	67.4	2	72	0	59	0	53	1	54	0	66.8	4	61	0	61	1
122	M	91.4	4	82	2	85	0	67	2	74	2	60.6	6	72	2	69	3
123	M	75.4	2	86	4	62.8	0	61	2	51	0	66.6	5	76	0	65	2
124	F	84.4	2	80	1	79.2	0	63	1	67	0	72.9	0	79	1	73	0
125	F	88.3	1	68	3	84.6	0	61	1	78	0	70.1	1	81	0	76	0
126	F	84.2	2	84	2	79	0	65	1	74	0	81.6	0	83	2	80	1
127	M	67.4	2	86	2	57.6	0	58	1	52	0	62.8	3	55	1	57	1
128	F	90.3	3	97	2	75.4	0	71	2	74	0	73.7	2	66	0	71	1
129	F	87.1	0	71	1	82	0	62	0	81	0	81.3	1	87	1	83	1
130	F	97.1	0	81	0	98.2	0	70	0	96	0	96.1	0	93	0	95	0

S/N	sex	Pre SFP								Post SFP							
		2010 E.C		20	2012E		Average score	Nonattendance (in average # of days)	2013 E.C		2014 E.C		2015 E.C		Average score	Nonattendance (in average # of days)	
		Score	Nonattendance in (in # of days)	Score	Nonattendance in (in # of days)	Score			Nonattendance in (in # of days)	Score	Nonattendance in (in # of days)	Score	Nonattendance in (in # of days)				
131	M	68.4	0	78	0	56.6	0	55	0	58	0	64.4	4	59	0	61	1
132	F	85.4	0	71	2	71	0	60	1	78	0	77.5	0	76	0	77	0
133	F	77.3	0	78	2	61.4	0	59	1	59	3	66.4	2	75	1	67	2
134	M	65.1	0	60	0	58	0	48	0	51	2	59.7	0	67	0	59	1
135	M	82.3	0	75	0	64.6	0	60	0	66	3	75	1	73	0	71	1
136	M	67.4	2	92	0	53.6	0	59	1	53	0	65	2	51	0	56	1
137	M	71.4	1	82	0	65.4	0	59	0	65	1	69.4	3	58	0	64	1
138	F	88.4	1	67	2	90	0	62	1	81	0	82.4	2	81	0	81	1
139	F	79.4	0	86	1	71.4	0	63	0	73	0	79.4	2	69	0	74	1
140	M	61.7	0	83	2	50.8	0	54	1	55	4	65.2	0	58	0	59	1
141	F	84.7	1	66	0	76.6	0	59	0	75	0	75.6	4	78	0	76	1
142	M	81.4	0	75	2	71.8	0	60	1	66	2	69.6	6	62	0	66	3
143	M	61.4	0	69	0	59.8	0	50	0	58	0	73.7	3	54	0	62	1
144	F	82	2	78	0	69.5	1	61	1	57	0	74.3	0	60	0	64	0
145	F	75	1	86	0	59.3	2	60	1	75	0	70.9	0	62	1	69	0

S/N	sex	Pre SFP								Post SFP							
		2010 E.C		20	2012E		Nonatt endanc e (in averag e # of days)	Aver age score	2013 E.C		2014 E.C		2015 E.C		Aver age score	Nonatt endanc e (in averag e # of days)	
		Score	Nona ttend ance in (in # of days)	Sc ore	Nona ttend ance in (in # of days)	Score			Nona ttend ance in (in # of days)	Score	Nona ttend ance in (in # of days)	Score	Nona ttend ance in (in # of days)	Score			Nona ttend ance in (in # of days)
146	F	56	0	89	0	79.8	0	57	0	67	0	79.6	0	54	0	67	0
147	M	78	0	92	0	67.2	0	64	0	79	0	72.4	0	57	0	69	0
148	F	78	0	62	0	71	0	54	0	82	0	82.7	0	61	0	75	0
149	F	67	0	78	0	80.5	2	57	1	77	0	85.4	0	57	1	73	0
150	F	85	0	95	0	66.5	1	67	0	75	0	69.9	0	76	0	74	0
151	F	74	1	69	0	70.8	0	56	0	86	0	81.4	0	68	0	78	0
152	F	71	1	85	0	95.7	3	63	1	59	0	93	0	70	0	74	0
153	F	56	2	90	0	64.1	2	56	1	86	2	83.1	0	79	0	83	1
154	F	80	0	85	0	77	3	64	1	59	1	64.4	0	55	0	59	0
155	F	68	0	89	0	79	2	61	1	67	0	61.6	0	49	0	59	0
156	F	63	1	50	1	84.9	1	47	1	75	0	78.2	0	71	0	75	0
157	M	78	2	85	0	90.2	0	64	1	72	0	82.2	0	88	0	81	0
158	F	64	0	58	0	69.4	1	48	0	76	0	56.7	0	68	0	67	0
159	F	82	0	84	0	95.7	0	66	0	73	0	55.3	0	69	0	66	0
160	M	91	1	74	2	79.8	0	64	1	72	0	75.3	0	72	2	73	1
161	M	77	2	86	0	65.9	0	62	1	76	0	91.8	0	59	0	76	0

S/N	sex	Pre SFP								Post SFP							
		2010 E.C		20	2012E		Nonatt endanc e (in averag e # of days)	Aver age score	Sco re	2013 E.C		2014 E.C		2015 E.C		Aver age score	Nonatt endanc e (in averag e # of days)
		Score	Nona ttend ance in (in # of days)	Sc ore	Nona ttend ance in (in # of days)	Score				Nona ttend ance in (in # of days)	Score	Nona ttend ance in (in # of days)	Score	Nona ttend ance in (in # of days)	Score		
162	M	67	3	71	0	56.75	2	52	2	79	0	92.4	0	64	0	78	0
163	F	59	1	79	0	53	0	52	0	81	0	71.9	0	79	0	78	0
164	M	62	3	74	0	69	0	53	1	83	0	79.9	0	83	1	82	0
165	F	84	1	81	0	52.8	0	61	0	55	0	64	0	60	3	60	1
166	F	85	0	75	0	56	0	60	0	66	1	77.7	0	71	0	71	0
167	M	79	0	58	3	55	0	52	1	87	0	59.7	0	69	0	72	0
168	F	68	1	57	2	82.5	0	51	1	60	0	73.1	0	60	0	64	0
169	M	67	0	77	0	79.01	3	57	1	79	1	66.6	0	57	0	68	0
170	M	58	1	66	0	83	2	50	1	57	0	81.1	0	94	0	77	0
171	M	59	3	88	0	93	0	59	1	54	2	75.4	0	90	2	73	1
172	F	81	0	59	3	81.2	0	56	1	56	3	73.1	0	82	1	70	1
173	M	74.1	2	68	0	81.8	1	56	1	56	2	55.3	3	50	0	54	2
174	F	77.8	3	65	0	81.6	0	57	1	67	2	62.4	2	57	1	62	2
175	M	81	2	66	0	71.2	1	57	1	62	1	70.2	0	49	2	60	1

S/N	sex	Pre SFP								Post SFP							
		2010 E.C		20	2012E		Average score	Nonattendance (in average # of days)	2013 E.C		2014 E.C		2015 E.C		Average score	Nonattendance (in average # of days)	
		Score	Nonattendance in (in # of days)	Score	Nonattendance in (in # of days)	Score			Nonattendance in (in # of days)	Score	Nonattendance in (in # of days)	Score	Nonattendance in (in # of days)				
190	M	64	1	54	1	61.2	0	46	6	61	0	67.3	5	46	2	58	1
191	M	63.3	4	60	2	59.8	0	48	6	64	0	57.7	1	45	1	56	2
192	M	58.6	4	62	0	54.2	2	46	6	65	0	61.2	3	45	0	57	2
193	F	62.8	8	54	0	95.4	1	50	6	58	1	79.9	5	50	0	63	3
194	M	60.7	1	57	1	44.4	0	44	6	58	0	81.5	1	49	3	63	1
195	M	71.4	1	61	2	68	0	52	6	60	1	74	3	49	1	61	1
196	M	59.4	2	57	3	59	1	45	6	59	0	81.8	4	54	2	65	2
197	M	65.4	1	76	1	94.6	3	58	6	66	0	76.1	3	63	0	69	2
198	M	74.2	5	71	0	56	1	55	6	66	0	59.1	3	47	1	57	2
199	M	71	6	84	0	79.3	0	61	6	55	2	72.1	4	49	0	59	2
200	M	72.6	0	63	1	64.9	2	53	6	56	1	62.5	1	57	0	59	1
<b>STDEV</b>								<b>5</b>	<b>0</b>							<b>4</b>	<b>1</b>
<b>MEAN</b>								<b>47</b>	<b>6</b>							<b>56</b>	<b>2</b>

## ANNEX D: KII GUIDELINE

1. What do you say about School Feeding Program?

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2. How do you get the effect of school feeding program on the student enrolment? Would you compare academic years (2018-2020) off program against academic years (2021-2023) on program?

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3. How do you get the role of school feeding program on the student school attendance? Would you compare academic years (2018-2020) off program against academic years (2021-2023) on program?

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