



**EFFECTS OF ENHANCED SCHOOL-BASED FEEDING PROGRAM ON THE ACADEMIC
PERFORMANCE OF PUPILS IN THE
DISTRICT OF TAYTAY I-A**

A Thesis

Presented to

The Faculty of the Graduate Studies Program

Tomas Claudio Colleges

Morong, Rizal



In Partial Fulfilment

Of the Requirements for the Degree

Master of Arts in Education

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May 2018

APPROVAL SHEET

In partial fulfillment of the requirements for the degree Master of Arts in Education, this thesis entitled, **EFFECTS OF ENHANCED SCHOOL-BASED FEEDING PROGRAM ON THE ACADEMIC PERFORMANCE OF PUPILS IN THE DISTRICT OF TAYTAY I-A**, has been prepared and submitted by **CARMENA N. BELARAN**, and is hereby recommended for corresponding oral examination.

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ACKNOWLEDGMENT

The researcher wishes to express her deep gratitude and appreciation to the following persons who bestowed their support in the completion of this research work.

Dr. RODOLFO S. SAN FELIPE, President, Tomas Claudio Colleges, for his encouragement to conduct the study;

Dr. EVA R. DE ROSAS, Dean, Graduate Studies Program, for her generous advice and support during the study;

Dr. EMELITA F. JIMENEZ, her adviser, for her kind and endless support, creative and comprehensive advices until this work came to existence;

Dr. AURORA F. TRINIDAD, Chairman of the Oral Examination Committee, for her invaluable comments and suggestions during the oral defense;

Dr. OLIVIA F. DE LEON and **Dr. CONCEPCION C. PEÑERANDA**, panel members, for their useful comments and suggestions for the improvement of the study;

Dr. MARITES A. IBAÑEZ, CESO V, Schools Division Superintendent, Division of Rizal, for granting permission to conduct the study

Mr. ANGELO D. DASALLA, Public Schools District Supervisor, for the motivation to pursue this study;

Mrs. AILEEN SG. MARTINEZ, Principal, Taytay Elementary School, for her moral support;

The respondents of the study, for their cooperation in providing the needed information.

Her FAMILY for their affection and support and support in all aspects and served as an inspiration in seeking this endeavor.

Above all, to **MERCIFUL GOD**, for offering all the countless gifts.

THE RESEARCHER

DEDICATION

This work
is humbly dedicated.
to my family, my husband, and my best friend,
JERRY VALE BELARAN, my children: **JERMAINE KRISHNA**,
JERAINA FRANCES and **JEANNA BRIELLE**, to my parents in heaven,
and friends, who gave moral support and
encouragement and who served
as my inspiration to pursue
this study, and most of all, to **GOD ALMIGHTY**,
for the endless guidance and blessings

Carmena

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ABSTRACT

TITLE : THE EFFECTS OF ENHANCED SCHOOL –BASED FEEDING PROGRAM ON THE ACADEMIC PERFORMANCE OF PUPILS IN THE DISTRICT OF TAYTAY I – A

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COURSE : Master of Arts in Education

MAJOR : Educational Management

TYPE OF DOCUMENT : Master’s Thesis

NAME AND ADDRESS OF INSTITUTION: Tomas Claudio Colleges,
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Methodology

Descriptive Survey Research Design

Findings, Conclusions and Recommendations

This study aimed to determine the extent of effects of enhanced school-based feeding program on the academic performance of pupils in public elementary schools in the District of Taytay I-A. These schools include Felix M. Sanvictores Elementary School, Sitio Simona Elementary School, Sitio Tapayan Elementary School, and Taytay Elementary School. The study considered 100 pupil-beneficiaries of enhanced school based feeding program in the said district. Moreover, their parents were considered respondents. From July to March of School Year 2017-2018, these pupils were under the enhanced school-based feeding program wherein each pupil was entitled for a free breakfast and lunch three times a week. The fund of the enhanced school-based feeding program came from the school canteen of the public elementary schools which is the project of each school.

Each quarter, the subjects underwent assessment through average grade and measure of body mass index. The pupil-beneficiaries were described in terms of sex, monthly family income and number of children in the family. On the other hand, parent respondents were given the questionnaire-checklist to determine the effects of school-based feeding program on the academic performance of the pupils with respect and motivation to learn, class participation and co-curricular involvement. Descriptive survey research design was applied. Documentary analysis was also used since the average grades of the pupil-beneficiaries were taken from their form 138 as basis of their academic performance.

The study revealed that most of the pupil-beneficiaries are males, Majority belong to families with monthly income of ₱11,000-₱15,000. Most of them are either 5th or 3rd born child. Many among them belong to family with 2-3 children. The level of academic performance of pupil-beneficiaries is Satisfactory. The effects of enhanced school feeding program on the performance of the pupils as perceived by their parents with respect to motivation to learn and co-curricular involvement is Much. However, the effect is Moderate when it comes to class participation. The effects of school-based feeding program on the performance of pupil-beneficiaries with respect to motivation to learn class participation and co-curricular involvement when grouped by sex, sibling position, monthly family income and number of children in the family is Significant. The perceived effects of enhanced school-based feeding program with respect to motivation to learn, class participation and co-curricular involvement is Significantly correlated to the academic performance of pupil-recipients.

The study concluded sex, sibling position, monthly family income and number of children are variables that affect the perceived effects of the school-based feeding program on the performance of

pupil-beneficiaries with respect to motivation to learn, class participation and co-curricular involvement. The academic performance of pupil-recipient is directly correlated to the perceived effects of enhanced school-based feeding program with respect to motivation to learn, class participation and co-curricular involvement.

The study recommended that enhanced feeding program may be continued to strengthen pupils' academic achievement. Parents and teachers may be made aware of the pupils' nutritional needs in school. The proposed action plan is recommended for implementation. Parallel studies may be conducted considering other variables.

Chapter 1

THE PROBLEM AND ITS BACKGROUND

Introduction

Education is the foremost concern of a nation. It plays a vital role in the development of every individual. Through education, people become equipped with the essential knowledge, usable skills, rightful attitudes, and moral values.

As provided in the 1987 Philippine Constitution, Article XIV, Sections 1 and 2:

“The State shall protect and promote the right of all citizens to quality education at all levels and shall take appropriate steps to make such education accessible to all.

The State shall establish, maintain, and support a complete, adequate, and integrated system of education relevant to the needs of the people and society.”

The cited provision emphasizes that the school is one of the sources of education, a social network that requires cooperation from pupils, teachers and staff. Both parents and pupils should behave on what the school demands as in this environment depends partly on pupils who are getting

to school well fed. Hunger can distract pupils and make them irritable, while eating healthy breakfast has been shown to improve both alertness and mood.

Healthy eating habits have positive effects on everyone, but pupils can especially benefit from meeting the particular nutritional demands of the school day. To excel academically, children in school must be physically able to attend class, collaborate with their peers and focus on the tasks at hand. The mental rigors of math, language study, reading and creative thinking also require physical support from food energy and nutrients. If pupils want to excel and get good grades, a healthy diet can improve their performance in school's social, physical and mental arenas.

Thus, to realize the main goal of R.A. 10533 otherwise known as “Basic Education Enhancement Act of 2013,” Section 2 on declaration of policy denotes that the State shall establish, maintain and support a complete, adequate, and integrated system of education relevant to the needs of the people, the country and society-at-large.”, to wit further:

“Likewise, it is hereby declared the policy of the State that every graduate of basic education shall be an empowered individual who has learned, through a program that is rooted on sound educational principles and geared towards excellence, the foundations for learning throughout life, the competence to engage in work and be productive, the ability to coexist in fruitful harmony with local and global communities, the capability to engage in autonomous, creative, and critical thinking, and the capacity and willingness to transform others and one’s self.”

Breakfast is widely acknowledged to be the most important meal of the day. Children who habitually consume breakfast are more likely to have favorable nutrient intakes including higher intake of dietary fiber, total carbohydrate and lower total fat and cholesterol. Breakfast also makes a large contribution to daily micronutrient intake. Iron, B vitamins (folate, thiamine, riboflavin, niacin, vitamin B6, and vitamin B12) and Vitamin D are approximately 20–60% higher in children who regularly eat breakfast compared with breakfast skippers. Consuming breakfast can also contribute to maintaining a body mass index (BMI) within the normal range. Two systematic reviews report that children and adolescents who habitually consume breakfast, including ready-to-eat-cereal have reduced likelihood of being overweight. Breakfast consumption is also associated with other healthy lifestyle factors.

Children who do not consume breakfast are more likely to be less physically active and have a lower cardio respiratory fitness level. Moreover, there is evidence that breakfast positively affects learning in children in terms of behavior, cognitive, and school performance.

The assumptions about the benefit of complete meals for children's learning are largely based on evidence which demonstrates acute effects of feeding correctly on children's cognitive performance from laboratory based experimental studies. Although the evidence is quite mixed, studies generally demonstrate that eating complete meal, especially breakfast in the morning, has a positive effect on children's cognitive performance, particularly in the domains of memory and attention. Additionally, the positive effects of breakfast are more demonstrable in children who are considered undernourished, typically defined as one standard deviation below normal height or weight for age using the US National Center for Health Statistics (NCHS) reference. More recent evidence compares breakfast meals that differ in Glycaemic Load (GL), Glycaemic Index (GI) or both. This evidence generally suggests that a lower postprandial glycaemic response is beneficial to children's cognitive performance however the evidence is equivocal. Moreover, it remains unclear whether this effect is specifically due to GI or GL, or both, or to other effects unrelated to glycaemic response.

Studies rarely investigate the acute effects of nutritious meals on behavior in the classroom and there remains a lack of research in this area. This may be, in part, attributed to the complicated nature of the measures used to assess behavior in class and the need to develop standardized, validated, and comparable coding systems to measure behavior. Similarly, few studies examine the effects of breakfast on tangible academic outcomes such as school grades or standardized achievement tests relative to cognitive outcomes. While crude measures of academic performance may not provide the most sensitive indicator of the effects of meals, direct measures of academic performance are ecologically valid, have most relevance to pupils, parents, teachers, and educational policy makers and as a result may produce most impact.

Cognitive, behavioral, and academic outcomes are not independent. Changes in cognitive performance are likely to be reflected by changes in behavior. An increase in attention following breakfast, compared with no breakfast, may be reflected by an increase in on-task behavior during lessons. Similarly, changes in cognitive performance may also impact school performance and academic outcomes in a cumulative manner. The beneficial effects of eating breakfast on cognitive performance are expected to be short term and specific to the morning on which breakfast is eaten and to selective cognitive functions. These immediate or acute effects might translate to benefits in academic performance with habitual or regular breakfast consumption, but this has not been evaluated in most studies. Short term changes in cognitive function during lessons (e.g., memory and attention) may therefore translate, with habitual breakfast consumption, to meaningful changes in school performance by an increased ability to attend to and remember information during lessons. In class behavior also has important implications for school performance. This is because a prerequisite for academic learning is the ability to stay on task and sustain attention in class. Greater attention in class and engagement in learning activities (referred to as on-task behavior) are likely to be associated with a more productive learning environment which may impact academic outcomes in the long term.

Presently, pupils of the different schools in District of Taytay I-A, are way behind other national high schools in terms of socioeconomic profile which may be the cause of poor academic achievement of students. This has been observed by the researcher, being one of the faculty members of the said school. In addition, almost all of the residents' sources of income is fishing as the place is surrounded by water, hence, majority of the students belong to the poverty threshold. As such, it is observed that basic daily nutritional content is not consumed by most students. It is for this reason that a study on the extent of effects of enhanced school-based feeding program on the academic performance of pupils was conceived.

Setting of the Study

The study will be conducted in public elementary schools in the District of Taytay I-A Rizal, Division of Rizal. These schools include Felix M. Sanvictores Elementary School, Sitio Simona Elementary School, Sitio Tapayan Elementary School and Taytay Elementary School. The schools are located mainly in Taytay, Rizal.

These schools are aligned with the DepEd Vision which states that: “We dream of Filipinos who passionately love their country and whose competencies and values enable them to realize their full potential and contribute meaningfully to building the nation. As a learner-centered public institution, the Department of Education continuously improves itself to better serve its stakeholders.”

Moreover, the mission of DepEd is: “To protect and promote the right of every Filipino to quality, equitable, culture-based and complete basic education where: Students learn in a child-friendly, gender-sensitive, safe and motivating environment; Teachers facilitate learning and constantly nurture every learner; Administrators and staff, as stewards of the institution, ensure an enabling and supportive environment for effective learning to happen; Family, community, and other stakeholders are actively engaged and share responsibility for developing life-long learners.”

The school implements the supplementary feeding program for identified elementary grades pupils. The school allocates fund for the program. Other non- government organizations were also tapped for the continuous implementation of the program. Likewise, coordination between the teachers and the parents of the pupils has also been the concern to enhance the highlights of the program.

Figure 1 shows the Map of Taytay, Rizal where the schools are located.

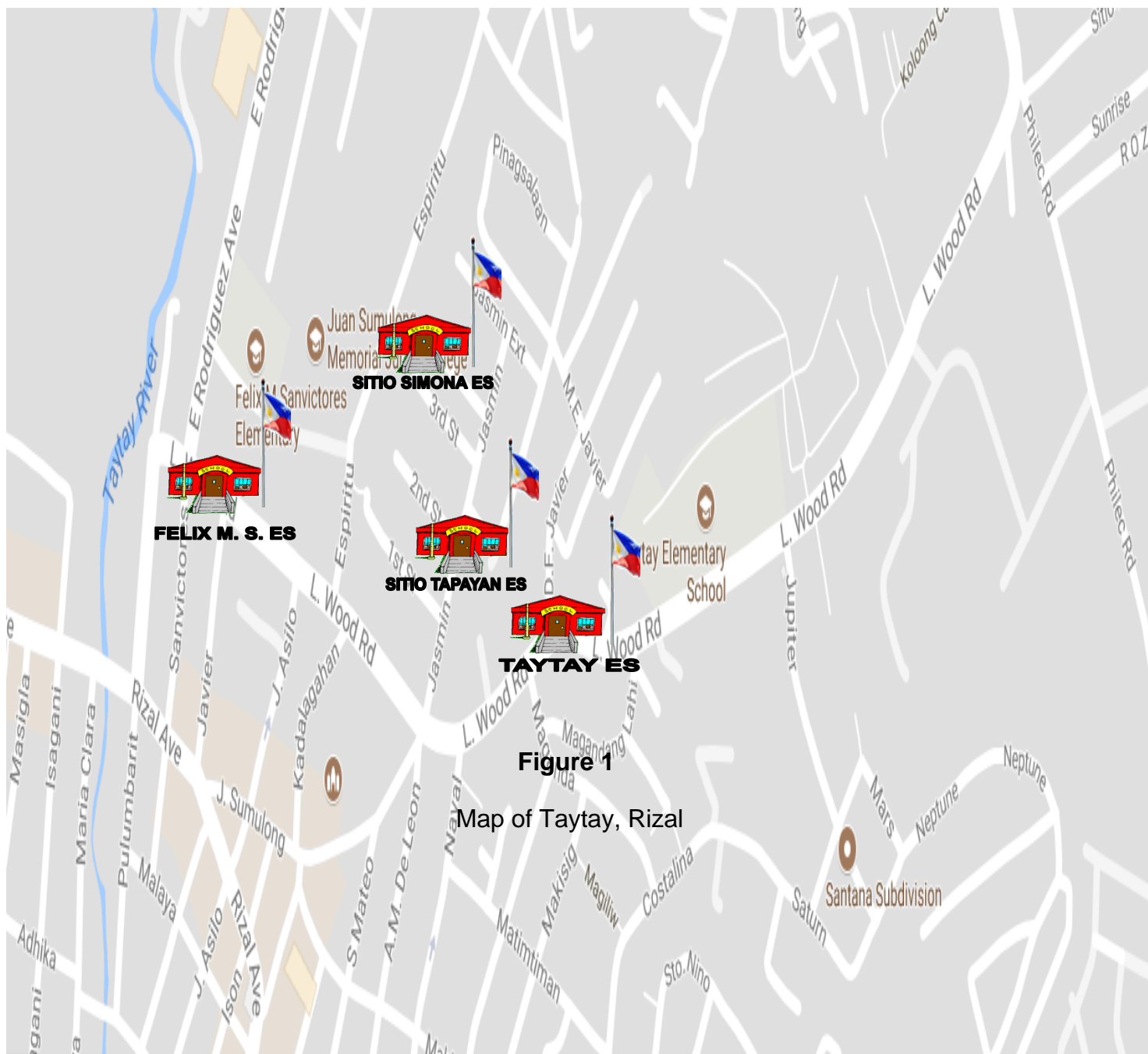


Figure 1

Map of Taytay, Rizal

Theoretical Framework

The study is anchored on Gestalt Theory based on phenomenological-existential therapy founded by Frederick as cited by Bryk (2012). It teaches therapists and patients the phenomenological method of awareness, in which perceiving, feeling, and acting are distinguished from interpreting and reshuffling preexisting attitudes. Explanations and interpretations are

considered less reliable than what is directly perceived and felt. Patients and therapists in Gestalt therapy dialogue, that is, communicate their phenomenological perspectives. Differences in perspectives become the focus of experimentation and continued dialogue. The goal is for clients to become aware of what they are doing, how they are doing it, and how they can change themselves, and at the same time, to learn to accept and value themselves.

Gestalt therapy focuses more on process (what is happening) than content (what is being discussed). The emphasis is on what is being done, thought and felt at the moment rather than on what was, might be, could be, or should be.

Awareness without systematic exploration is not ordinarily sufficient to develop insight. Therefore, Gestalt therapy uses focused awareness and experimentation to achieve insight. How one becomes aware is crucial to any phenomenological investigation. The phenomenologist studies not only personal awareness but also the awareness process itself. The patient is to learn how to become aware of awareness.

The field is a whole in which the parts are in immediate relationship and responsive to each other and no part is uninfluenced by what goes on elsewhere in the field. The field replaces the notion of discrete, isolated particles. The person in his or her life space constitutes a field.

The existential view holds that people are endlessly remaking or discovering themselves. There is no essence of human nature to be discovered "once and for all." There are always new horizons, new problems and new opportunities.

The cited theory is related to the present study as there are observable changes as stressed in the Gestalt theory when applied on individual therapy which is relevant to the present study focused on feeding program of students to determine its effectiveness on their academic achievement.

Conceptual Framework

Shown in Figure 2 on the next page is the research model which served as a guide in the conduct of the study.

In the model, there are two enclosed identical boxes which are the independent variables and the dependent variables. The rectangle on the left is the independent variable which consists of the supplementary feeding program as the main focus of the study. This also consists of the student-beneficiaries with their personal profile such as sex, monthly family income and number of children in the family. The parent-respondents are also included as input.

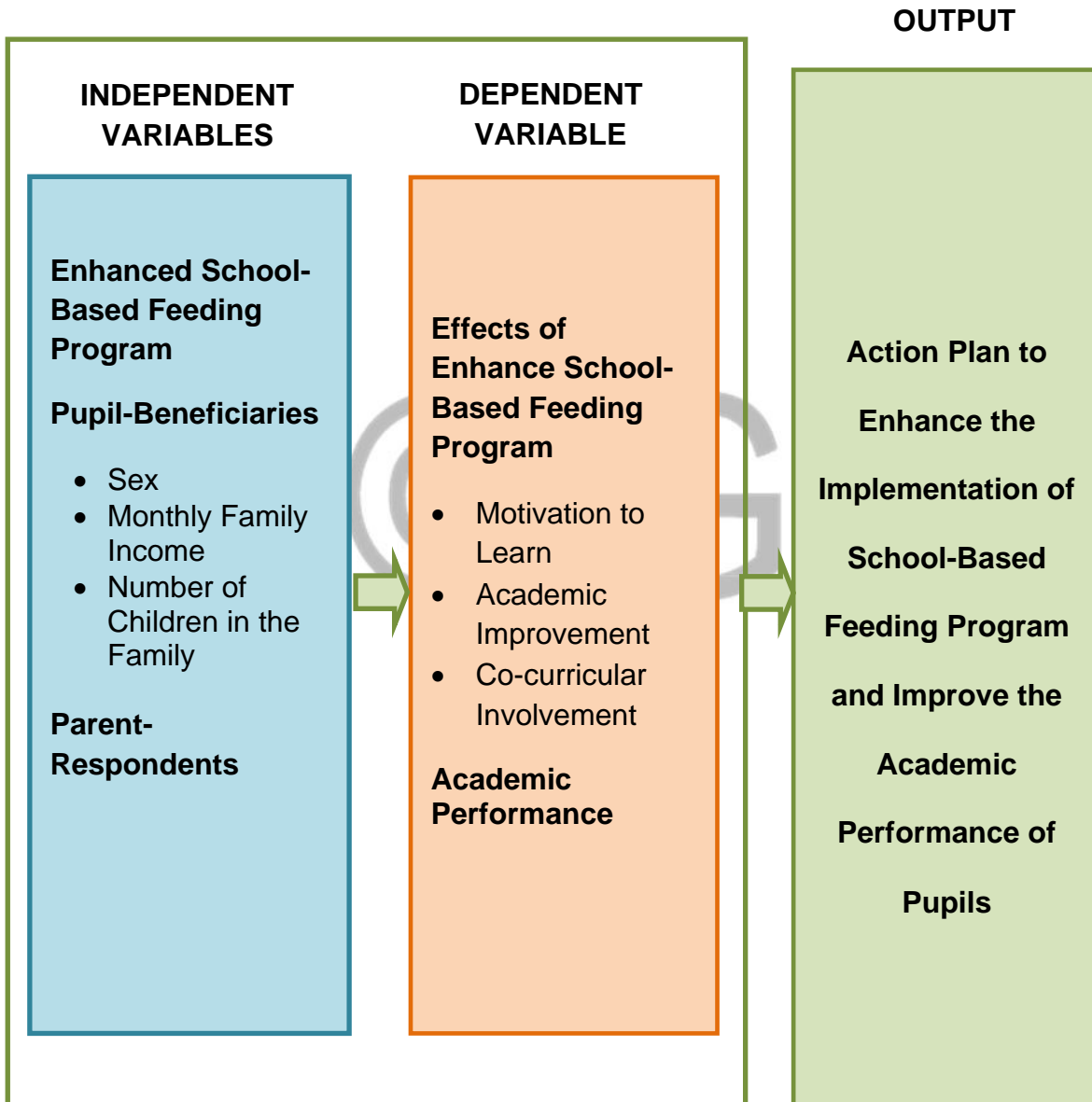


Figure 2

Conceptual Model Showing the Effects of Enhanced School-Based Feeding Program on the Academic Performance of Pupils in the District of Taytay I-A

The second frame refers to the dependent variable which includes the effects of enhanced school-based feeding program on the performance of pupils with respect to motivation to learn, class participation, and co-curricular involvement.

The third frame refers to the output which is an action plan to enhance the implementation of school-based feeding program and improve pupils' performance.

Statement of the Problem

The main concern of this study was focused on the effects of enhanced school-based feeding program on the academic performance of pupils in public elementary schools in the District of Taytay I-A during the School Year 2017-2018.

Specifically, this study will seek to answer the following questions:

1. What is the profile of pupil-beneficiaries of enhanced school-based feeding program in terms of:
 - 1.1 sex;
 - 1.2 monthly family income ;and
 - 1.3 number of children in the family?
2. What is the level of academic performance of the pupil-beneficiaries of enhanced school-based feeding program as revealed by their average grades?
3. Is there a significant difference on the academic performance of the pupil- beneficiaries in terms of their profile?
4. How do the pupils and parents perceive the effects of enhanced school-based feeding program with respect to:
 - 4.1 motivation to learn;

- 4.2 class participation ; and,
- 4.3 co-curricular involvement?
5. Is there a significant difference on the perceptions of the two groups of respondents on the effects of enhanced school-based feeding program on the academic performance of pupils with respect to the cited aspects?
6. What action plan may be proposed to enhance the implementation of school-based feeding program and improve the academic performance of pupils?

Hypotheses of the Study

The study will test the following null hypotheses that:

1. There is no significant difference on the academic performance of the pupil-beneficiaries in terms of sex, monthly family income and number of children in the family.
2. There is no significant difference on the perceptions of the two groups of respondents on the effects of enhanced school-based feeding program on the academic performance of pupils with respect to motivation to learn, class participation and co-curricular involvement.

Significance of the Study

This study would be significant to the following:

Curriculum Planners. The results of the study would serve as benchmark on the existing feeding program of the school. Whichever of the selected strategies is found to be effective would serve as an eye-opener to curriculum planners to revise and improve academic and co-curricular activities in basic education subjects for the pupils' performance.

School Administrators. The results of the experiment would help administrators to easily figure out the out plans to further enhance the present status pupils' academic performance, thus,

long term vision can be strategized for the improvement of performance of the entire school in terms of school-based feeding program.

Stakeholders. The outcome of this study would contribute to stakeholders' interest for further invest on the development of the academe by simply inculcating in them the importance of nutrition whose end gainers are pupils and the country as a whole.

Community. The community being part of the country would benefit in the sense that performing pupils are pride of the community. Further, teachers are assured that they are doing their tasks and exploring other strategies and models in instruction. Likewise, pupils are guaranteed of a safe and sound learning environment, thus, the community can solely rely on the compensation that schools give to the learning modes of the pupils.

Teachers. The results of this study will guide the teachers on how they will motivate their pupils to value the nutrients in the food they eat and likewise encourage the pupils to participate actively in school-related activities.

Students. The students would surely be changed into high performing citizens in terms of academics and practicality in life situation since teachers inculcated in their minds new approach in learning management which would be significant in their journey to learn.

Parents. They will be informed of the benefit of supplementary feeding program in the school.

Future Researchers. The study will serve as reference for future similar studies.

Scope and Limitation of the Study

This study is centered on the extent of effects of enhanced school-based feeding program on the academic performance of pupils in public elementary schools in the District of Taytay I-A. These schools include Felix M. Sanvictores elementary School, Sitio Simona Elementary School, Sitio Tapayan Elementary School, and taytay Elementary School. In investigating the problem, 100 pupil-beneficiaries were identified through their body mass index at the start of the school year. Moreover,

100 parent-respondents are also included in the study. From July to March of School Year 2017-2018, these pupils are under the enhanced school-based feeding program wherein each pupil is entitled for a free breakfast and lunch three times a week. The fund of the enhanced school-based feeding program came from the school canteen of the public elementary schools which is the project of each school. Each quarter, the subjects underwent assessment through average grade and measure of body mass index. The pupil-beneficiaries will be described in terms of sex, monthly family income and number of children in the family.

On the other hand, parent respondents will be given the questionnaire-checklist to determine the effects of enhanced school-based feeding program on the academic performance of pupils with respect to motivation to learn, class participation and co-curricular involvement. Descriptive evaluative research design will also be applied. Documentary analysis will also be used since the average grades of the pupil-beneficiaries will be taken from their form 138 as basis of their academic performance.

Definition of Terms

For a common frame of reference, the following terms used in this study was operationally defined:

Academic Performance. This pertains to the average grades of the students in their previous year level.

Class Participation. This pertains to the students' involvement in the class during the teaching-learning process.

Co-curricular Involvement. It refers to one of the categories used in the instrument that pertains to school activities outside of academics

Effectiveness. This refers to the degree of depth in the program implemented which is the supplementary feeding program for students.

Monthly Family Income. This refers to the combined monthly earnings of the members of the family.

Motivation to Learn. It refers to students' ability to change in terms of his/her attitude in studies. It could be observed in his/her eagerness to go to school and initiative to be involve in school affairs.

Enhanced School-Based Feeding Program. It refers to the enhanced feeding activities for pupils which is funded by the school canteen. In this study, beneficiaries are students who were identified at the start of the school year by measuring their body mass index

Chapter 2

REVIEW OF RELATED LITERATURE AND STUDIES

This chapter discusses pertinent information about the study. This information is in the form of literature of foreign and local colors. Similarly, studies with bearing on the topic are also presented to give light on topic for investigation.

Foreign Literature

For Butler (2011), a number of countries (e.g. United States, United Kingdom, Sweden) have government or non-government funded school breakfast programs, which aim to provide a free healthy breakfast to children and thereby improve nutrition and academic outcomes. In New Zealand, some school breakfast programs have been introduced in recent years, although none are official government programs. The Red Cross Breakfast in Schools program, which is available to decile 1 primary schools (areas of low socioeconomic resource), was established in 2007. The program is run with support from Countdown supermarkets (Progressive Enterprises) who supply breakfast foods free of charge. In 2008, the KickStart Breakfast program for decile 1-4 schools (areas of low to

moderate socioeconomic resource) was launched by Fonterra Co-Operative Group Limited and Sanitarium Health Food Company.

Bundy et al. (2011) School feeding has two very important functions, As part of a social protection system, it promotes human capital in the long run by supporting families in securing education for their children, and provide direct support to poor households in the short term by transferring income to the families. Additionally, the programmes are relatively easy to scale up in a crisis, especially in fragile or low-capacity context.

Like cash transfers or any other type of conditional transfer, school meals represents a transfer of income to a household. If we count the economic value of the meals, they amount, on average, to more than 10 to 15 percent of household expenditures, a significant amount for a poor household. In the context of the crisis, the transfer element of the programme is particularly useful. Providing income support to vulnerable household through school feeding enhances their ability to withstand a shock.

Research about children's habit in eating according to Chan (2007), indicates that school breakfast programs have benefits in relation to nutrition, school attendance, academic performance and psychosocial function. However, findings have been inconsistent, limited by poor study design and methods, and frequently confuse correlation with causation. A Cochrane review identified seven randomized, controlled trials investigating the effects of school feeding programs (breakfast, lunch or snacks). However, only two were undertaken in high income countries, one of which experienced substantial contamination between trial intervention groups, whilst the other did not include a full school breakfast (just milk). Based on all studies, the Cochrane review concluded that there is a dearth of high quality evidence on school feeding programs and recommended further well-designed studies, particularly cluster randomized controlled trials.

On the other hand, according to Halpin (2012), breakfast is widely acknowledged to be the most important meal of the day. Children who habitually consume breakfast are more likely to have

favorable nutrient intakes including higher intake of dietary fiber, total carbohydrate and lower total fat and cholesterol. Breakfast also makes a large contribution to daily micronutrient intake. Iron, B vitamins (folate, thiamine, riboflavin, niacin, vitamin B6, and vitamin B12) and Vitamin D are approximately 20–60% higher in children who regularly eat breakfast compared with breakfast skippers. Consuming breakfast can also contribute to maintaining a body mass index (BMI) within the normal range. Two systematic reviews report that children and adolescents who habitually consume breakfast [including ready-to-eat-cereal (RTEC)] have reduced likelihood of being overweight. Breakfast consumption is also associated with other healthy lifestyle factors. Children who do not consume breakfast are more likely to be less physically active and have a lower cardio respiratory fitness level. Moreover, there is evidence that breakfast positively affects learning in children in terms of behavior, cognitive, and school performance.

Lawson (2012) Poor nutrition is a chronic problem linked to poverty, poor nutrition understanding and practices, and deficient sanitation and food security. Malnutrition globally provides many challenges to individuals and societies. Lack of proper nutrition contributes to worse class performance, lower test scores, and eventually less successful students and a less productive and competitive economy. Malnutrition and its consequences are immense contributors to deaths and disabilities worldwide. Promoting good nutrition helps children grow, promotes human development and advances economic growth and eradication of poverty.

One successful method to ensuring that children attend school on a regular basis is through school feeding programs. Many different organizations fund school feeding programs, among them the World Food Programme and the World Bank. The idea of a school feeding program is that children are provided with meals at school with the expectation that they will attend school regularly. School feeding programs have proven a huge success because not only do the attendance rates increase, but in areas where food is scarce and malnutrition is extensive, the food that children are receiving at school can prove to be a critical source of nutrition. School meals have led to improved

concentration and performance of children in school. Another aspect of school feeding programs is take home rations. When economic reasons, the need to care for the elderly or a family member suffering from HIV, or cultural beliefs keep a parent from sending their child (especially a female child) to school, these take home rations provide incentives to sending their children to school rather than to work.

Local Literature

But hunger and insufficient nutrition have been linked to low test scores said Lage (2010), for example. One study found a significant association between achievement test scores of city kindergarteners and the deviation of these children's weight from the normal weight for children of that age and gender¹. In addition, iron-deficiency anemia, which is twice as common in poor children as in wealthier children, has been shown to affect cognitive ability. When dietary deficiencies were addressed in some experimental studies, children given vitamin and mineral supplements showed significantly improved test scores.

In the report made by Roperas (2010), Butuan City (23 September) the Social Security System (SSS), Butuan Branch through its branch manager raine Jamero, officially launched this morning, September 21, the SSS Supplementary Feeding Program at Mahay Elementary School, Brgy. Mahay Butuan City.

The feeding program will be conducted three times a week for two months to 129 children-beneficiaries from the said school. The SSS Supplementary Feeding Program is a part of SSS' corporate social responsibility thrust. Since 2008, SSS has allocated funds to be utilized for the supplementary feeding of undernourished school children. For 2010, by virtue of SSC Resolution No. 358-s 2010, SSS has allotted P 4.5 million pesos for the said program. To date, 68 public schools and institutions and 5,444 school children have already benefited from the program.

For Ramos (2008), the poor academic performance that has been linked to nutritional deficiencies has also been tied to unstable or unsuitable housing. One study found that children whose families received subsidies from DSWD were less likely to have abnormally low weights than were children whose families were on waiting lists to receive such subsidies. Authors of this study noted that DSWD Statistics show that families who receive subsidies spend a higher proportion of their incomes on food than do eligible families who do not receive subsidies. Thus, subsidies, allowed needy families to redirect more of their incomes to nutrition, sparing their children the damaging effects of nutritional deficiencies.

Stabilized housing arrangements may also impact students' academic achievement. When housing is affordable in low-income communities--through housing subsidies, for example—families may be able to afford apartments with more adequate space for children to study or do homework. With affordable, adequate housing, families should need to move less often, thereby also reducing the rate of student mobility, another important indicator of academic success.

Through their community partnerships and public services, community schools can address the needs of their families in ways that traditional schools cannot, to ensure that students are prepared to perform to their full potential.

Florentino and Pedro (2008) stated that the government has been implementing a Food Assistance Program for malnourished children as a short term palliative intervention. Supplementary feeding has been the most popular strategy resorted to in countries where malnutrition is a concern. The Philippine Food Assistance Program reportedly reaches an average of 1.3 million preschoolers, 1.2M schoolchildren and 0.3M pregnant and lactating women annually (PPAN). More mothers participating in community services or changes in child feeding knowledge, attitudes and practices among child care providers are examples of social and behavioral impact attributed to food assistance. The demonstration of government concern and action to a wide segment of the population and the ability to address the problem is an evident positive political impact.

According to Angara (2010) he launched a pilot School Feeding Program (SFP) called Kalusugan ng Bata, Karunungan ng Bayan (K & K) in public elementary schools around the country, selected on the basis of the National Nutrition Survey. It was conducted on a 120-day cycle, where milk and noodles fortified with egg were distributed to schoolchildren from grade levels 1,2 and 3. Before each feeding cycle, the pupils' weight and height were measured by the school nurses. They also underwent a de-worming program. These children, aged 7-9 are at their most important mental and physical development stage. After each cycle, the students are evaluated by both teachers and school nurses.

The program saw spectacular improvements in attendance, learning capabilities, academic performance, weight, height, overall nutritional status, as well as the reduction of drop-out rates among beneficiaries. Studies show that the benefits of investing in childcare and preschool learning could be greater than investing in education at later ages. This is because a significant part of cognitive and non-cognitive skills development occurs before children start school. Early education and good health are proven ways to put children ahead in life.

The choice for children under five (5) was not random. There are eleven million children under five (5) years of age, and one in five are underweight. Only 20% have access to day care or pre-school services, especially as many of our children and their mother belong to the disadvantaged sector.

Led by the team of experts, the project was launched in Aurora with the hope of bringing it to the different regions of the country. We have implemented a Zinc Supplementation program after experts found deficiency signs of this essential mineral among children in the province. The team also found a pressing need for emergency obstetric care to reduce maternal deaths, an alarming nutrition deficiency among mothers and children, and the absence of early infant stimulation programs.

Villanueva (2011) reported that a total of 11,593 preschoolers from Aklan's 17 municipalities benefited from the government's Supplementary feeding Program. In a report release by the

Provincial Social Welfare and Development Office (PSWDO) here, it was revealed that beneficiaries are enrolled currently at 430 Day Care Centers located in the province's 327 barangays.

The government's supplementary feeding program will be conducted for 65 days. The program was spearheaded by the Department of Social Welfare and Development (DSWD) in coordination with the National Food Authority (NFA). The latter will deliver the rice component of the program, m to each Day Care Center with a total number of 1,507.1 sacks and a delivery fee of P 63,995.76. Under the arrangement the parents will take turns in cooking the preschoolers' meals daily during school days with a budget of P 12.50 per day. Together, the amount would already be enough for the children's meal for the day, considering that the amount will only be used to prepare the day's viand combined with vegetables that could also be sourced in the community. Supplementary feeding program is the provision of food, in addition to the regular meals to currently enrolled day care center children. This will be in the form of hot meals as recommended by the Food and Nutrition Research Institute (NFRI) to be serve during break times.

Foreign Studies

A study conducted by Doran (2009) describes the results of a detailed study relating the performance of undergraduate students admitted to Brazil's State University of Campinas (Unicamp) and their socioeconomic and educational background. The study is based on a hierarchical model for the relevant variables involved. The main result is that students coming from disadvantaged backgrounds, in both educational and socioeconomic aspects, have a higher relative performance than their complementary group. The report on an affirmative action program established at Unicamp for undergraduate admissions, partially motivated by those findings, and present evidence from an initial evaluation and showing the program's positive impact. Finally, positive comment on the effect this study and the Unicamp programs have had on the present debate about affirmative action access policies in Brazilian higher education institutions.

The study of Doran is related to the present study because it focused on the performance of pupils. Moreover, both studies focused on the effectiveness of school-based feeding program.

Direct measures of classroom behavior were utilized in the study of Kefford (2009). Although there are inconsistent findings, the evidence indicated a mainly positive effect of breakfast on on-task behavior in the classroom in children. Seven of the eleven subjects demonstrated a positive effect of breakfast on on-task behavior. This was apparent in children who were either well-nourished, undernourished and/or from low SES or deprived backgrounds. Two subjects carried out in undernourished samples and three subjects in children from low SES backgrounds demonstrated positive effects on on-task behavior following breakfast. One subject reported a negative effect of a SBP on behavior in undernourished children and three subjects in children with behavioral problems demonstrated no effect of breakfast composition on behavior. Most subjects included small samples of the order of 10–30 children which, although limited in terms of power and generalizability to the larger population, are more feasible and appropriate given the nature of the data and extensive coding methods required.

The study of Kefford is aligned to the present study because it was rooted on positive effect of breakfast on on-task behavior in the classroom in children which is akin to the present study. The difference is that the subjects in the cited study were children while the present study were elementary pupils.

Similarly, a study by Hargreaves (2011) stated that approximately 55,000 children in New Zealand do not eat breakfast on any given day. Regular breakfast skipping has been associated with poor diets, higher body mass index, and adverse effects on children's behavior and academic performance. Research suggests that regular breakfast consumption can improve academic performance, nutrition and behavior. This paper describes the protocol for a stepped wedge cluster randomized trial of a free school breakfast program. The aim of the trial is to determine the effects of

the breakfast intervention on school attendance, achievement, psychosocial function, dietary habits and food security.

Sixteen primary schools in the North Island of New Zealand will be randomized in a sequential stepped wedge design to a free before-school breakfast program consisting of non-sugar coated breakfast cereal, milk products, and/or toast and spreads. Four hundred children aged 5-13 years (approximately 25 per school) will be recruited. Data collection will be undertaken once each school term over the 2010 school year (February to December). The primary trial outcome is school attendance, defined as the proportion of students achieving an attendance rate of 95% or higher. Secondary outcomes are academic achievement (literacy, numeracy, self-reported grades), sense of belonging at school, psychosocial function, dietary habits, and food security. A concurrent process evaluation seeks information on parents', schools' and providers' perspectives of the breakfast program.

The cited study is related to the present study because it focused on regular breakfast consumption which can improve academic performance, nutrition and behavior. Although the cited study focused only on breakfast and the present study on feeding program, both investigations sought to find significant effects of having feeding program on the academic performance of pupils.

In the study of Omwami (2010), a randomized controlled school feeding intervention offered an opportunity to determine whether school feeding resulted in improved school attendance among elementary schoolchildren in a rural district of Kenya. Twelve schools with a total of 554 children in the 1998 first-grade cohort were randomly assigned to four research groups, three of which received a fortified local staple-based snack (Githeri meal) at morning recess. The groups--- designated as Meat-Githeri, Milk-Githeri, and Energy-Githeri---received a recess meal that provided 240 kcal in the first school year and 313 kcal for the remainder of the study period. The intervention study covered the second school term of 1998 through the second school term of 2000. Assessment for all indexed children included baseline assessment of anthropometric measures of height-for-weight, weight-for-

age, and height-for-age, and socioeconomic status at baseline, as well as daily school attendance for each of the school terms. Analysis included descriptive statistics, partial correlations statistics, regression analysis, X^2 , and General Linear Model (GLM) repeated measures analysis. In all the analyses, $P < 0.05$ was used as the criterion of statistical significance.

Baseline regression analysis for the overall study sample population showed that age-dependent anthropometric measures of nutritional status were statistically significant predictors of school attendance rates. Partial correlation analysis evidenced a statistically significant positive association between baseline attendance rates and the measures of socioeconomic status and the age dependent anthropometric measures. The intervention groups performed better than the control group on the repeated measure of school attendance.

Omwami's study and the present study are related since both studies determined the effects of school-based feeding intervention program on the attendance of school children.

The cohort study of August (2010), including secondary data on 25,433 low-income children aged between six to 24 months, participating in a fortified milk distribution program known as Projeto Vivaleite, was performed in the state of São Paulo, Southeastern Brazil, between 2003 and 2008. Weight gain was measured using weight-for-age z- score value, calculated according to the World Health Organization standards (2007). These values were obtained in the program routine, when a child started it and every four months during their stay. Children were divided into three z-score groups when starting the program: weight gain not compromised; risk of low weight; and low weight. Multilevel linear regression (mixed model) was used, enabling the comparison, at each age, of adjusted mean z-scores between children starting the program and those who had been participating for at least four months, adjusted for correlation between repeated measurements.

The program had a positive effect on child weight gain, varying according to child nutritional status when starting this program. The program is effective for weight gain in children younger than

two years, with a more pronounced effect on children who start the program under less favourable weight conditions.

The study of August is relevant to the present study since both studies evaluated the effectiveness of a supplementary feeding program. However, they differ on the research design used. The former study is experimental while the present study is a descriptive one.

Local Studies

Similarly, a study by Halili (2009) on proper nutrition among children utilized teacher completed rating scales to assess children's behavior at school following breakfast. The study employed global scales to assess a range of behavioral domains including: attention, disruptive behavior, hyperactivity, pro-social behavior, and aggression. The majority used standardized, established measures of behavior comparable across studies. Measures included the Strength and Difficulties Questionnaire (SDQ) and Social Skills Rating System (SSRS). It was found out that those who do not eat nutritious food demonstrated a positive effect of breakfast on behavior at school, which was mainly hyperactivity and disruptive behavior.

The cited study is aligned to the present study because it focused on proper nutrition among children and utilized teacher completed rating scales to assess children's behavior at school following breakfast. Although the present study employed supplementary feeding to students, both studies aimed to find out the effect of nutrition to academic performance.

Lopez (2010), it has been proven that no amount of teacher's effort can compensate the lack of proper nutrition to children in the public school system. Nutrition plays a vital role in the progress of a nation. The Department of Education is a factor in the realization of the dream of a healthy and a happy community. It is therefore a must that no matter how small a community is the

government official, the school and the community should work together to achieve a healthy, happy and nutrition educated populace.

One of the factors evaluated and rated in the Performance Appraisal System for school in the DepEd is the presence of Effective School Feeding Program, but how the school can really run such program. Some NGO has boldly and effectively helped feeding program in the depressed community of our country. Among the principles that are followed in the school feeding program are it is important to follow a period of feeding because a day or two less a subtracted will defeat the purpose of the program. Nutrition-fortified food should be given to the beneficiaries for the whole period giving emphasis particularly on the use of malunggay, kalabasa, alugbati and backyard vegetables to enhance the nutritional value of the food to be fed to the children with less expense. Monitor pupils weight constantly after the program. If possible, conduct home visit and dialogue with the parent to detect early if what has been done in school is being applied in their homes. Conduct livelihood training and possible employment for the parent of the beneficiaries, so that they can continue feeding their children even after the feeding program in the school. The five principles will lessen if not eradicated “the hungry stomach” that affect more than eight million Filipino children of school age being taught by teachers.

The reviewed study and the present study are similar since both focused on school feeding program. Moreover, this study focused on the effects of the feeding program on the benefits of this on the academic performance of the pupils.

A study by Jeremias (2010) examined the effects of breakfast on average school grades. The majority of the subjects produced a composite score from school reported grades across a range of subjects, usually considered “core” subjects. Others relied on self-reported school grades or self-reported subjective ratings of school performance. Seven of the ten subjects were in 12–18 year olds, reflecting the schooling system in which grading is more common in older pupils. Only three subjects were carried out in primary school children aged 7–11 years. One subject included children of low

SES and undernourished children. All 10 subjects identified and demonstrated that habitual breakfast (frequency and quality) and SBPs have a positive effect on children and adolescents' school performance, with three subjects observing clearest effects on mathematics grades.

The study reviewed is related to the present study because the effects of breakfast on average school grades was its focus which is also the same as the present study, i.e. determining the effects of supplementary feeding on academic performance of high school students.

Rufo (2009) investigated on students' performance and nutrition through an intervention study which demonstrated positive effects of SBPs on school grades, particularly mathematics grades in both well-nourished, undernourished and low SES children aged 7–10 years. Effects were demonstrable after an intervention period of 3–6 months. A significant increase in school grades was apparent following an intervention providing 250 ml 2.5% fat milk at breakfast, which was apparent in girls only. Although it was not clear if the sample included undernourished children, the effect coincided with a significant increase in weight of the girls following the intervention in schools which received the intervention compared to control schools. Supportive evidence from other studies found that following a 6-month SBP, children who had improved their nutritional status from at risk (energy and/or >2 nutrients <50% RDA) to adequate significantly increased their mathematics grades. Further results reported that following a 4-month SBP, children who increased participation were significantly more likely to increase their mathematics grades compared to those who had decreased or maintained participation.

The cited study is akin to the present study because the discussion focused on students' performance and nutrition through an intervention study which is also the same as the present study is on feeding program for elementary pupils.

Valdez (2007) as cited by Paral on her study conducted a descriptive qualitative study on the level of participation of the program implementation partners in the supplementary feeding program of Malaybalay City Nutrition Council. The results can help the city government come up with a

sustainable nutrition program that can tap the corporate social responsibility, improvement of process, and accountability of organizations. This study determined the collaboration of the corporations, City Nutrition Council, teacher coordinators, and mothers as it looked into the level of participation, nutrition trends of school children, and impacts in terms of learning that these partners have on future nutrition programs. Two elementary schools were the identified research locales, and these were Casisang Elementary School and Laguitas Elementary School.

Only one corporation has partnered the Council in the two schools. Its corporate social responsibility has been a dynamic presence in these schools in the program. The level of participation depends upon those who have direct contact with the children. Sustained feeding program, after a thorough medical preparation and nutrition enriched recipes, can improve weight gain of school children from grades 1 to 6. The stages of designing, staffing, financing, implementing, monitoring and evaluating are present but these are not strengths.

The study of Valdez and the present study are related since both studies dealt with Supplementary Feeding Program.

A study by Kamahalan (2010) demonstrated a consistent positive association between habitual breakfast and school grades in adolescents. Frequency of breakfast consumption was associated with school performance. Breakfast skipping (eating breakfast <5 days/week) was associated with lower average annual school grades in a sample of 50 adolescents aged 11–18 years who were in higher educational streams. This association was evident in both sexes and independent of age. Additionally, breakfast skipping was associated with more self-reported attention problems, which partially mediated this relationship. Effects were seen in both genders, except for in 10–11 year olds, where the significant association between regular breakfast intake and school performance was only apparent in boys.

The reviewed study has clear indication of similarity to the present study because it is concerned with association between habitual breakfast and school grades in adolescents and the

present study on effects of enhanced school-based feeding program on the academic performance of pupils.

The reviewed literature and studies on feeding, breakfast eating, proper nutrition and the like bore relationship to the present study as it has helped shaped in the condu

Chapter 3

METHODOLOGY AND SOURCES OF DATA

This chapter presents the research design, setting of the study, subject of the study and the statistical treatment that will be used in the study.

Research Design

The researcher will use of descriptive research design utilizing a self-made instrument to validate the perception of the respondents based on the results of the experiment. Descriptive research focused on “what is” describing the present situation as it exists from the time of the research. According to Calmorin (2016) the descriptive research method is designed to gather information about the present/existing conditions. It is helpful to express the cause of the phenomena. It involved collection of data in order to test hypothesis or answer questions concerning the current status of the study.

Specifically, the descriptive evaluative research was applied since the effects of enhanced school-based feeding program on the academic performance of pupils will be determined. This investigation is also documentary in nature since the average grades of the pupils were obtained as basis of their academic performance.

Documentary analysis will be also used since the average grades of the pupil-beneficiaries will be taken from their form 138 as basis of their academic performance.

Respondents of the Study

The study will consider two groups of respondents from the schools from Felix M. Sanvictores Elementary School, Sitio Simona Elementary School, Sitio Tapayan Elementary School and Taytay Elementary School. The first group consists of 100 pupil-beneficiaries of the enhanced school-based feeding program in public elementary schools in the District of Taytay I-A, during the School Year 2017-2018. They will be described in terms of sex, monthly family income and number of children in the family. The second group of respondents will be the 100 parents of these beneficiaries. They will be chosen through purposive sampling technique.

Table 1 shows the distribution of respondents by school

Table 1

Distribution of Respondents by School

Schools	Pupil-Beneficiaries	Parents
Felix M. Sanvictores Elementary School	23	23
Sitio Simona Elementary School	22	22
Sitio Tapayan Elementary School	20	20
Taytay Elementary School	35	35
Total	100	100

Instrumentation

A researcher-made questionnaire checklist will be used as the main instrument in this study which measured the effects of enhanced school-based feeding program among the subjects. It is composed of closed-ended statements which describe the different parameters in feeding program. Statements begin with action words in order to observe consistency in the use of language. It also consists of two parts where Part I asks the profile of the pupil-beneficiaries which include sex, monthly family income and number of children in the family. Part II deals with the main problem on

different parameters used to measure the effects of enhanced school-based feeding program with respect to motivation to learn, class participation, and co-curricular involvement.

The following scale was used in rating each item

Scale	Range	Verbal Interpretation
5	4.50-5.00	Always
4	3.50-4.49	Often
3	2.50-3.49	Sometimes
2	1.50-2.49	Seldom
1	1.00-1.49	Never

Validation of the Instrument

After thorough examination of the contents, determining the veracity of the instrument will be done as well as to ensure that the data collected met the criteria for valid interpretation and analysis. After which, five experts in the field of education, supervision, health and nutrition, and research were consulted for further consultation and suggestion. Following all the comments given, the instrument will be then finalized. The instrument's validity and reliability was obtained where it will be pretested to some teachers in Cresdaville Elementary School who are not respondents of the respondents. The r-value will also be computed to determine its reliability.

Procedure of the Study

A Gantt Chart of Activities will be followed in the conduct of the study. Permission from concerned authorities was sought before the conduct of the study. After the construction and validation of the questionnaire-checklist, administration of the questionnaire-checklist to the respondents will be done. Retrieval of the questionnaire-checklist will follow. The data gathered will be tallied and tabulated. Appropriate statistical tools will be applied. Summary of findings,

conclusions and recommendations will be formulated. Revision of the manuscript will be based from the comments and suggestions of the Oral Examination Committee. .Afterwards, hardbound copies will be submitted to the Office of the dean of the Graduate Studies Program and other offices concerned.

Statistical Treatment

For the analysis and interpretation of data, the following will be considered:

To determine the profile of the student-beneficiaries, frequency, and percentage distribution will be used.

To determine the academic performance of the pupil-beneficiaries, mean and standard deviation will be applied.

To determine the significant difference on the academic performance of the student-beneficiaries in terms of their profile, one way analysis of variance will be utilized.

To determine the extent of effects of enhanced school-based feeding program on pupils' performance as perceived by the two groups of respondents, weighted mean will be applied.

To determine the significant difference on the perception of the two groups of respondents on the extent of effects of enhanced school-based feeding program on pupils' performance, independent t-test will be applied.

Chapter 4

PRESENTATION, ANALYSIS, AND INTERPRETATION OF DATA

This chapter presents the analysis and interpretation of data based on the sub problems.

Profile of the Pupil-Beneficiaries of Enhanced School-Based Feeding Program in Public Elementary School in the District of Taytay I-A

Table 2 presents the frequency and percentage distribution of the pupil-beneficiaries of Enhanced School-Based Feeding Program in terms of the selected variables.

Table 2

Frequency and Percentage Distribution of the Pupil-Beneficiaries of Supplementary Feeding Program in Terms of Selected Variables

Sex	f	%
Male	67	67
Female	33	33
Total	100	100
Monthly Family Income		
₱16,000 and above	36	36
₱11,000 - ₱15,999	37	37
₱5,000 - ₱10,999	15	15
Below ₱5,000	12	12
Total	100	100
Sibling Position		
5 th and above	27	27
4 th	15	15
3 rd	27	27
2 nd	18	18
1 st	13	13
Total	100	100
Number of Children in the Family		
1	13	13
2-3	45	45
4-5	27	27

6 and above	15	15
Total	100	100

Out of 100 respondents, 67% are males and 33% are females. The monthly family income showed 37% have income of ₱11,000-₱15,999, 36% have income of ₱16,000 above and 12% have income of below ₱5,000. Their sibling position indicated that 27% each are 5th and 3rd born child in the family. As to number of children in the family the highest percentage of 45 is for 2-3 children while the lowest percentage of 13 is for one child.

Level of Academic Performance of the Pupil-Beneficiaries of Enhanced School-Based Feeding Program as Revealed by their Average Grades

Table 3 represents the level of academic performance of the pupil-beneficiaries of enhanced school-based feeding program as revealed by their average grades.

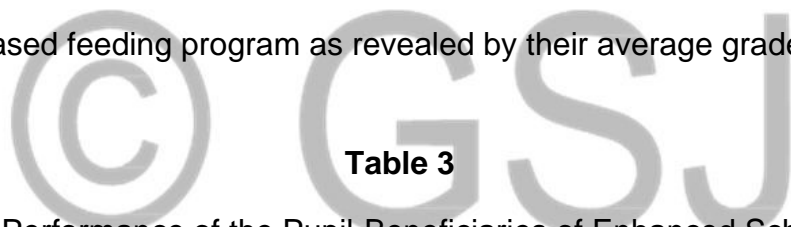


Table 3

Level of Academic Performance of the Pupil-Beneficiaries of Enhanced School-Based Feeding Program as Revealed by their Average Grades

Numerical Rating	Descriptive Rating	f	%
85-89%	Very Satisfactory	19	19
80-84%	Satisfactory	59	59
75-79%	Fairly Satisfactory	22	22
Total		100	100

Mean= 83.41 (Satisfactory) SD=2.43

The level of academic performance of the pupil-beneficiaries as revealed by their average grade showed 59% have grade of 80-84% interpreted as Satisfactory, 22% have grade of 75-79 interpreted as Fairly Satisfactory and 19% have grade of 85-89% interpreted as Very Satisfactory. The mean is 83.41 with a standard deviation of 2.43.

This result reflects that the pupil-beneficiaries are mostly performing satisfactory based on their average grade. This is related to the discussion of Butler (2011) that a number of countries (e.g. United States, United Kingdom, Sweden) have government or non-government funded school breakfast programs, which aim to provide a healthy breakfast to children and thereby improve nutrition and academic outcomes.

Effects of Enhanced School-Based Feeding Program on the Performance of Pupil-Beneficiaries as Perceived by their Parents.

The perception of parents on the effects of school-based feeding program on the performance of pupil-beneficiaries with respect to motivation to learn states that the enhanced school-based feeding program helps the pupil Much to find time to confer with parents on things learned which are hard to understand further since it obtained the highest weighted mean of 4.08. On the other hand, the enhanced school-based feeding program helps the pupil Moderately to work with interest in small or big groupings as indicated by the lowest weighted mean of 3.09. The obtained overall weighted mean is 3.70.

Table 4

Effects of Enhanced School-Based Feeding Program on the Performance of Pupil-Beneficiaries as Perceived by their Parents with Respect to Motivation to Learn

MOTIVATION TO LEARN	W	VI	Rank
Enhanced school-based feeding program helps the pupils to...			
1.manifest eagerness to go to school everyday	4.02	Much	3
2.express oneself at home informing family members on the topics learned in school	3.79	Much	5
3.feel the importance of going to school and attending class regularly.	3.39	Moderate	9

4.get approval from the teachers as they show appreciation in the discussion.	3.57	Much	6
5. find time to confer with parents on things learned which are hard to understand further	4.08	Much	1
6.be motivated in strategies used by teachers in the lesson for retention	4.06	Much	2
7.enjoy discussion with classmates about new topics learned	3.54	Much	7
8.finish activities on time and feel satisfied	3.48	Moderate	8
9.show eagerness during schedule of any subject	4.00	Much	4
10.work with interest in small or big groups	3.09	Moderate	10
Overall $\bar{W}\bar{X}$	3.70	Much	

This means that school-based feeding program has much effect on the performance of pupil-beneficiaries with respect to motivation. The result implies that school-based feeding program on the performance of pupil-beneficiaries develops the motivational area of the pupils to learn. They find ways to improve themselves. This is supported by the discussion of Lawson (2012) that lack of proper nutrition contributes to worse class performance, lower test scores, and eventually less successful students and a less productive and competitive economy.

Table 5 presents the effects of school-based feeding program on the performance of pupil-beneficiaries as perceived by their parents with respect to class participation.

Table 5

Effects of Enhanced School-Based Feeding Program on the Performance of Pupil – Beneficiaries as Perceived by their Parents with Respect to Class Participation.

CLASS PARTICIPATION	WX	VI	Rank
Enhanced school-based feeding program helps pupils to...			
1.participate actively in class participation	3.70	Much	3
2.get high score in quizzes and other formative tests	2.52	Moderate	9
3.cooperate with classmates in group activities	2.63	Moderate	6

4. accomplish tasks willingly	3.98	Much	1
5. perform group activities with confidence	3.66	Much	4
6. submit school projects on time	3.65	Much	5
7. finish school work easily	3.84	Much	2
8. work with classmate patiently	2.56	Moderate	7
9. make assignment independently	2.54	Moderate	8
10. answer teacher's questions immediately	2.50	Moderate	10
Overall \bar{Wx}	3.16	Moderate	

As perceived by the parents, the effects of school-based feeding program on the performance of pupil-beneficiaries with respect to class participation pronounced that enhanced school-based feeding program helps the Much to accomplish tasks willingly since it obtained the highest weighted mean of 3.98. However, the lowest weighted mean of 2.50 describes that enhanced school-based feeding program helps pupils Moderately to answer teacher's questions immediately. The obtained overall weighted mean is 3.16.

Results indicate that school-based feeding program has moderate effect on the performance of pupil-beneficiaries with respect to class participation. This implies that the class participation of the students are more involved and rewarding when it comes to accomplishing tasks. This is parallel to the study of Kenfford (2009) which demonstrated a positive effect of breakfast on on-task behavior in the classroom of children.

Table 6 presents the effects of school-based feeding program on the performance of pupil-beneficiaries as perceived by their parents with respect to co-curricular involvement.

Table 6

**Effects of Enhanced School-Based Feeding Program on the Performance of Pupil –
Beneficiaries as Perceived by their Parents with Respect
to Co-Curricular Involvement**

CO-CURRICULAR INVOLVEMENT			
Enhanced school-based feeding program helps pupils to...	WX	VI	Rank
1. perform well in group activities and school programs.	4.04	Much	1

2.enjoy working with peers if given chance to perform.	3.54	Much	8
3.manage to work with group mates on easy or hard school activities.	3.68	Much	4
4.find ways to form groups to present a given task with perfection.	3.57	Much	7
5.participate actively in all group activities.	3.52	Much	9
6.solve a problem with peers thoroughly following the directions.	3.66	Much	5
7.analyze situations in collaboration with classmates before getting into the right way.	3.58	Much	6
8.organize group activities and find solutions to any given problems.	3.53	Much	10
9.join and participate in school organizations	3.88	Much	2
10.demonstrate leadership skills in school organizations	3.76	Much	3
Overall WX	3.68	Much	

As reflected in the table, on the effects of school-based feeding program on the performance of pupil-beneficiaries with respect to co-curricular involvement described that enhanced school-based feeding program helps the pupils Much to perform well in a group activities and school programs as proven by the highest weighted mean of 4.04. Likewise, the lowest weighted mean of 3.53 designated that enhanced school-based program helps the pupils Much to organize group activities and finds solution to any given problems. The obtained overall weighted mean is 3.68.

Findings indicate that school-based feeding programs has much effect on the co-curricular movement of pupil-beneficiaries. The outcome implies that school-based feeding programs helps the pupils become aware of their environment and become responsible individuals as they interact with others.

This is parallel to the

to the text of Haplin (2012) that children who do not consume breakfast are more likely to be less physically active and have a lower cardio respiratory fitness level. Moreover, there is evidence that breakfast positively affects learning in children in terms of behavior, cognitive, and school performance.

Table 7 presents the summary on the effects of school-based feeding program on the performance of pupil-beneficiaries as perceived by their parents.

The table reveals that motivation to learn obtained the highest overall weighted mean of 3.70 interpreted as Much, followed by 3.68 for co-curricular involvement interpreted as Much and 3.16 for class participation interpreted as Moderate. The composite weighted mean is 3.51.

Table 7

Summary on the Effects of Enhanced School-Based Feeding Program on the Performance of Pupil-Beneficiaries as Perceived by their Parents

Aspects	Overall WX	VI	Rank
Motivation to learn	3.70	Much	1
Class Participation	3.16	Moderate	3
Co-curricular Involvement	3.68	Much	2
Composite WX	3.51	Much	

It could be deduced from the results that enhanced school based feeding program has much effect on the performance of pupil-beneficiaries. The findings imply that school-based feeding program is viewed by parents to improve the academic aspect of the pupil's life. This is parallel to the literature of Angara (2010) which stated that feeding program actually saw spectacular improvements in attendance, learning capabilities, academic performance, weight, heights, overall nutritional status, as well as the reduction of drop-out rates among beneficiaries.

Significant Difference on the Effects of Enhanced School-Based Feeding Program on the Performance of Pupil-Beneficiaries with Respect to the Different Aspects in Terms of their Profile

Table 8 presents the computed F-values on the significant difference on the effects of school-based feeding program on the performance of pupil-beneficiaries with respect to the different aspects in terms of profile.

The test on the significant difference on the effects of school-based feeding program on the performance of pupil-beneficiaries with respect to motivation to learn class participation and co-curricular involvement when grouped by sex, sibling

Table 8

Computed F – values on the Effects of Enhanced School - Based Feeding Program on The Performance of Pupil – Beneficiaries with Respect to the Different Aspects in Terms of their Profile

Sex	Fcomp	p-values	Ho	VI
Motivation to Learn	3.52	.016	Rejected	Significant
Class Participation	4.01	.039	Rejected	Significant
Co-curricular Involvement	3.95	.017	Rejected	Significant
Sibling Position				
Motivation to Learn	4.22	.005	Rejected	Significant
Class Participation	4.35	.022	Rejected	Significant
Co-curricular Involvement	3.22	.039	Rejected	Significant
Monthly Family Income				
Motivation to Learn	4.98	.006	Rejected	Significant
Class Participation	4.40	.004	Rejected	Significant
Co-curricular Involvement	4.17	.007	Rejected	Significant
Number of Children in the Family				
Motivation to Learn	4.08	.014	Rejected	Significant
Class Participation	4.72	0.29	Rejected	Significant
Co-curricular Involvement	4.27	.011	Rejected	Significant

position, monthly family income and number of children in the family yielded p-values lower than .05. this revealed that the null hypothesis is rejected. The result implies that sex, sibling position, monthly family income and number of children in the family are responsible for the differing effects of the school-based feeding program on the performance of pupil-beneficiaries. This is in contrast to the findings of Kamahalan (2010) which demonstrated a consistent positive association between habitual breakfast and school grades in adolescents. Frequency of breakfast consumption was associated with school performance. This association was evident in both sexes and independent of age.

Significant Relationship Between the Perceived Effects of Enhanced School-Based Feeding Program and Academic Performance of Pupil-Beneficiaries

Table 9 presents the computed r - values on the relationship between perceived effects of enhanced school-based feeding program and academic performance of pupil-recipient.

The computed p-values for the correlation between the perceived effects of enhanced school-based feeding program with respect to motivation to learn, class participation and co-curricular involvement, and academic performance of

Table 9

Computed r - values on the Relationship Between Perceived Effects of Enhanced School-Based Feeding Program and Academic Performance of Pupil-Beneficiaries

Aspects	r-values	p-values	Ho	VI
Motivation to Learn	.88	.035	Rejected	Significant
Class Participation	.84	.022	Rejected	Significant
Co-curricular Involvement	.81	.031	Rejected	Significant

pupil-recipient failed to meet the value of significance. This means that the null hypothesis is rejected. Findings indicate that school-based feeding programs have impact on how well a pupil performs in school. This is congruent to the findings of Omwami (2010) that the nutritional status was statistically significant predictors of school attendance rates.

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QUESTIONNAIRE/CHECKLIST

EFFECTS OF ENHANCED SCHOOL-BASED FEEDING PROGRAM ON THE ACADEMIC PERFORMANCE OF PUPILS IN THE DISTRICT OF TAYTAY I-A

PART I. DEMOGRAPHIC PROFILE (For Pupil-Beneficiaries)

1. Sex :

_____ Male _____ Female

2. Monthly Family Income:

_____ ₱16,000– ₱19,999

_____ ₱ 11,000 – ₱15,999

_____ ₱ 5,000 – ₱10,999

_____ ₱ 4,000 and below

3. Number of Children in the Family:

_____ 1

_____ 2 - 3

_____ 4 – 5

_____ 6 and above

PART II. EFFECTS OF ENHANCED SCHOOL-BASED FEEDING PROGRAM

Directions: Please rate each item on the extent of effects of supplementary feeding program on your performance following the given scale:

- 5 - Always
- 4 - Often
- 3 – Sometimes
- 2- Seldom
- 1 – Never

MOTIVATION TO LEARN					
Enhanced school-based feeding program helps the pupils to...	5	4	3	2	1
1. manifest eagerness to go to school everyday.					
2. express oneself at home informing family members on the topics learned in school.					
3. feel the importance of going to school and attending classes regularly .					
4. get approval from the teachers as they show appreciation in the discussion.					
5. find time to confer with parents on things learned which are hard to understand further.					
6. be motivated in strategies used by teachers in the lesson for retention.					
7. enjoy discussion with classmates about new topics learned.					
8. finish activities on time and feels satisfied.					
9. show eagerness during schedule of any subject.					
10. work with interest in small or big groupings.					

CLASS PARTICIPATION					
Enhanced school-based feeding program helps the pupil to...	5	4	3	2	1
1. participate actively in class discussion.					
2. get high scores in quizzes and other formative tests.					
3. cooperate with classmates in group activities.					
4. accomplish tasks willingly.					
5. perform group activities with confidence .					
6. submit school projects on time.					
7. finish school work with easily.					
8. work with classmates patiently.					
9. make assignment independently.					
10. answer teacher's questions immediately.					

CO-CURRICULAR INVOLVEMENT					
Enhanced school-based feeding program helps the pupil to...	5	4	3	2	1
1. perform well in group activities and school programs.					
2. enjoy working with peers if given chance to perform.					
3. manage to work with group mates on easy or hard school activities.					
4. find ways to form groups to present a given task with perfection.					
5. participate actively in all group activities.					
6. solve a problem with peers thoroughly following the directions.					

7. analyze situations in collaboration with classmates before getting into the right way.					
8. organize group activities and finds solutions to any given problems.					
9. join and participates school organizations.					
10. demonstrate leadership skills in school organizations.					

GANTT CHART OF ACTIVITIES

Activities	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	
1. Submission of Proposed Titles	→										
2. Title Defense		→									
3. Preparation of Chapters 1, 2 & 3			→								
4. Search for Related Literature and Studies											
5. Colloquium			▶								
6. Preparation and Validation of Questionnaire-Checklist				→							
7. Permission to Conduct the Study					→						
8. Administration of Questionnaire-Checklist						→					
9. Retrieval of the Questionnaire-Checklist							→				
10. Tallying, Tabulating and Analyzing of the Questionnaire- Checklist								→			
11. Revision of Chapters 1, 2 & 3									→		
12. Preparation of Chapters 4 & 5										▶	
13. Final Oral Defense										→	
14. Revision of Chapters 1-5										→	
15. Final Printing of the Manuscript											→
16. Bookbinding											→
17. Submission of Hardbound Copies											→