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Regional Centre for Food and Nutrition
SEAMEO RECFON
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**Practical Guidelines
Healthy School Canteen Development**
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Foreword

A **School Canteen** is one of the essential facilities that an educational unit should have. As students usually spend most of their time at school, the availability of healthy and safe foods for their consumption at school is crucial. A functional school canteen that provides healthy and nutritious foods as well as maintains good hygiene and sanitation can support educational activities and academic performance of students. However, many school canteens are still struggling to comply with the required health standards because the school community members lack awareness and commitment. In addition, the teachers' lack of knowledge and skills in conveying nutrition and health messages to school children hinders the achievement of the objectives of a healthy canteen.

The development of a healthy school canteen involves the active participation of multiple parties which often poses a big challenge to the school. It is because of this challenge as well as our Centre's profound interest to contribute in addressing food safety issues in schools that led to the publication of this practical guidebook on healthy school canteen development and management. This guidebook is meant to be a reference for schools to establish and/or improve their existing school canteens to better cater to the health and nutrition needs of their school community. This guidebook also features good practices by some schools amidst their existing limitations to inspire other schools to also develop and maintain their own healthy canteens.

This book also introduces the four main components Pillars of Healthy School Canteen development called as Four Pillars , developed by SEAMEO RECFON team. The pillars are consisted of 29 indicators which are considered about the issues on 1) Commitment and management of the school; 2) Human resource; 3) Hygienic facilities and 4) Good

quality of foods provided for school communities. A simple observation form is also shared in order to facilitate the school in assessing the canteen achievement.

We earnestly hope that through this guidebook, there will be a proliferation of healthy school canteens towards creating healthier school environments for students and teachers in Southeast Asia.



Prof. dr. Muchtaruddin Mansyur, Ph.D

Purpose and Organization of the Book

This **book** is expected to provide insights into the development of a Healthy School Canteen as set forth by the Ministry of Education and Culture of the Republic of Indonesia, the Ministry of Health of the Republic of Indonesia, and other relevant agencies. The guidelines set out in this book refer to the technical guidelines developed by the authorized agency in Indonesia. In accordance with the expertise of SEAMEO RECFON, this book also displays practical information related to food and nutrition, which may serve as a reference where necessary.

The main content of this book is the experiences shared by practitioners and coaches comprising the principals, the teachers, and the foundation directly involved in the development and guidance of their respective school canteens. As they come from schools with different conditions and challenges, readers are expected to learn differing lessons from the continuous efforts in achieving the Healthy School Canteen despite the various obstacles faced by each school.

Although at the moment their effort to gain the certification for a Healthy School Canteen is still in progress, their experience explained in "Chapter V: Good Practices towards a Healthy School Canteen" may presumably be learned by other schools, which have similar conditions and challenges in order to motivate them in initiating improvement towards a Healthy School Canteen.

The Healthy School Canteen is a vast and complex achievement and may require cooperation in its implementation. Therefore, the schools under the leadership of the Principal may take significant points in this book to gather resources, to plan the efforts towards a Healthy School Canteen, and to start them with the easiest activity or step. The achievement of a Healthy School Canteen is the outcome of cooperation among various parties, which can eventually increase the school's prestige and benefit the school.

This book may serve as a reference for:

1. The principals, the School Health Program implementation teams, the teachers, the school superintendents, the canteen administrators
2. Other communities (parents)
3. Education and health observers, and stakeholders in relation to the school canteens.

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Table of Content

Foreword	i
Purpose and Organization of the Book	iii
The Module Team	v
Table of content	vi
Chapter 1 Introduction	1
A. Conditions and Current Issues Pertaining to the School Canteen	1
B. The Role of the School Canteen in Meeting the Standards of Health and Nutrition of Students	3
Chapter 2 Healthy School Canteen	5
A. Definition of a Healthy School Canteen	5
B. Four Pillars of a Healthy School Canteen	6
Chapter 3 Balanced Nutrition	19
A. Food Sources and Nutrients	19
B. Ten Principles of Balanced Nutrition	20
C. Food Pyramid and "My Plate"	25
D. Nutritional Requirements by Age and Sex	28
E. The Need of Nutritious Foods from the School Canteen	28
Chapter 4 Strengthening Partnerships	31
A. The Role of Partners in Healthy School Canteen Development	31
B. The Role of Partners in Healthy School Canteen Development	36
C. Healthy School Canteen in Partnership with the Community	39
Chapter 5 Towards a Healthy School Canteen: A Collection of Best Practices	42
A. School Policy	42
GP 1. The Strong Commitment of the Principal towards a Healthy Canteen at a State Elementary School	42
GP 2. The Development of a Semi-Permanent Canteen	45

B.	School Policy	51
GP 3.	School Cooperative as the School Canteen Administrative Agency	51
GP 4.	Publication of the Guidelines for Healthy Canteen Management as an Effort to Synchronize the Perceptions about and Commitment on the Healthy School Canteen	55
GP 5.	Involvement of Students in the Operation of a Healthy School Canteen	58
C.	Nutrition Education for Students and the School Community	62
GP 6.	Nutrition Education for the School Community with No School Canteen	62
GP 7.	Highlighting the Need for Safe, Healthy, and Nutritious Food from the School Canteen for School community	67
D.	Canteen Supervision and Guidance System	71
GP 8.	School Canteen Working Group to Supervise and Protect Consumers	71
GP 9.	Hygiene and Sanitation Training from the Academics for School Canteen Food Vendors	75
GP 10.	The Role of the Public Health Center in Providing Guidance on Food Safety and School Healthy Canteen	79
E.	Partnerships	82
GP 11.	Increasing the Awareness of Food Vendors through Collaboration with the Academics and the Health Department.....	82
References		87
Appendix		89
Appendix 1.	90
Appendix 2.	92
Appendix 3.	94
Appendix 4.	97
Appendix 5.	100
Appendix 6.	104

Chapter 1

Introduction



Chapter 1

Introduction

Topic

Conditions and Current Issues Pertaining to the School Canteen

The Role of the School Canteen in Meeting the Standards of Health and Nutrition of Students

A Conditions and Current Issues Pertaining to the School Canteen



The school canteen is one of the essential facilities at school in support of the teaching-learning processes. However, a large number of schools in Indonesia has no canteen, while canteens at several other schools lack the necessary quality.

Schools which do not have a canteen are usually hampered by the lack of space, funds, or human resources for managing the school canteen. Due to the limited space and funds, numerous schools turn a semi-permanent structure into a school canteen.

Meanwhile, schools with low-quality canteens generally deal with typical constraints, such as a poor management of the canteen, insufficient trainings for canteen administrators, vendors, and handlers, and poor partnerships with relevant agencies, for instance, the local Education Department Office, Health Department, and Public Health Center. Moreover, acceptable levels of hygiene and sanitation facilities are generally not appropriately maintained at those schools.

Schools with proper canteen facilities are no exception to difficulties in maintaining an optimal condition of their canteen. The quality of foods sold at their canteen needs to be regularly monitored in order to ensure that the foods contain no hazardous additive and are full of nutrients.

Unfortunately, on the part of the schools, obtaining a certification of a healthy school canteen is not easy as they have to follow a certain mechanism involving several agencies and sectors.

Another issue concerns street vendors outside schools who have generally long established their presence and attracted many students as consumers. School authorities are most likely aware that many street vendors are selling food of below-par safety and nutrition standards and that students' health may be at risk. Nevertheless, school authorities tend to feel helpless in facing this issue as they may see that it is not their authorities to educate the street vendors.

Regardless of the above challenges, various agencies have actually facilitated schools in developing a healthy school canteen by issuing various guidelines (Appendix 1), assisting schools in operating healthy school canteens, and stimulating the schools' motivation through contests in which the existence of a healthy school canteen is one of the assessment indicators. However, these efforts need to be complemented with effective guidance and encouragement, especially for schools which are about to initiate the development of a healthy school canteen. More importantly, every effort should not go beyond the capability of each school.





B The Role of the School Canteen in Meeting the Standards of Health and Nutrition of Students



To achieve their optimal growth and development, students need to consume safe, healthy, and nutritious food. Therefore, schools play an important role of providing quality food and beverages for their respective students. Students commonly spend 4-8 hours at school. Given this length of time spent and the intensive activities they do at school, it is imperative that students pay attention to the quality of the food they consume. The energy and nutrient requirements for students while at school can be fulfilled by the foods sold at the school canteen or by street vendors around the school. To this end, space for a canteen must be provided at each school, as stipulated in the Indonesia Government Regulation No. 19 of 2005 on National Education Standards, which was later revised by the Government Regulation No. 32 of 2013 Article 42 Paragraph 2.

Furthermore, as a provider of various food and beverages needed by students and the school community, the school canteen should also serve as a place to:

1. Learn about safe and nutritious food
2. Educate students on entrepreneurship and creativity
3. Reach hygiene and sanitation standards in preparing, processing, and serving food
4. Develop healthier eating habits

Unhealthy and unsafe food and beverages can increase morbidity rates in students and decrease students' nutritional status. In fact, a high rate of morbidity in students may dampen their academic performance and eventually ruin the school's reputation.

Chapter 2

Healthy School Canteen



Chapter 2

Healthy School Canteen

Topic

Definition of a Healthy School Canteen

Four Pillars of a Healthy School Canteen

A Definition of a Healthy School Canteen

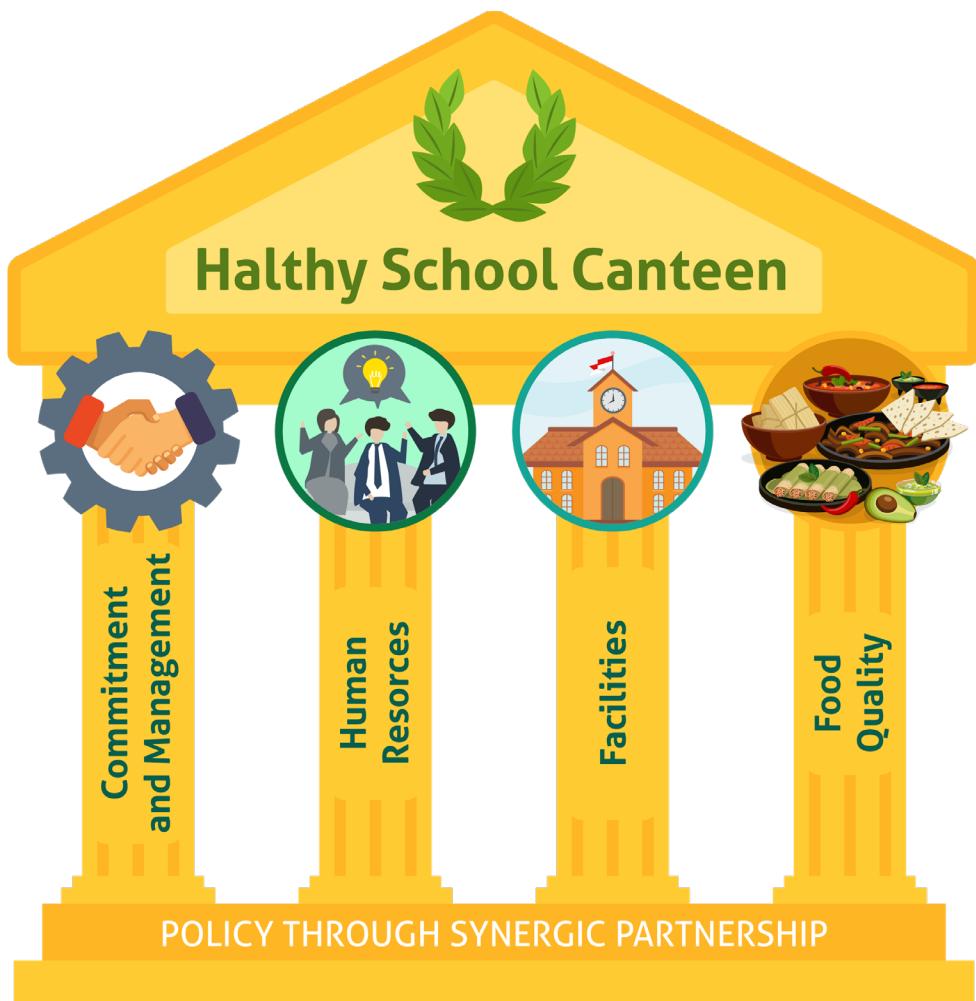
The school canteen is a space for providing and/or selling food located in the school area, which is managed by the school communities and usually opened during school days.

A healthy school canteen is a unit activity at school which functions to improve health by providing healthy (i.e. nutritious, hygienic, and safe) food or snacks for students and the overall school community.

To develop a healthy school canteen, the following essentials facilities are required:

- **A CANTEEN SPACE** or an area that is spacious enough to sell food and beverages
- **CLEAN WATER FACILITIES** which are proper to support hygiene and sanitation activities at the canteen

B Four Pillars of a Healthy School Canteen



1. The First Pillar: Commitment and Management
2. The Second Pillar: Human Resources
3. The Third Pillar: Facilities
4. The Fourth Pillar: Food Quality



1. The First Pillar: Commitment and Management

Commitment and strong leadership to the implementation of a healthy school canteen is crucial for the canteen management to achieve the goal of the healthy school canteen. The school needs to show commitment to providing healthy food for the school community. The results of the SEAMEO RECFON's comparative study in various cities in Indonesia indicate that schools with a written commitment statement signed by the Principal or the school committee have established and consistently maintained a proper and healthy school canteen.

Having a supervisory team monitoring the quality of snacks, including those sold at the school canteen, can help to ensure the availability of safe food. An official assignment letter from the Principal may be needed by the team members to strengthen their roles and responsibilities.

Furthermore, to assure a continuous provision of healthy food at school, written rules or policies about the management of a healthy canteen, including the quality and types of food and beverages sold at the canteen, as well as an effective supervision of the implementation, are essential.

2. The Second Pillar: Human Resources

School canteen vendors are people responsible for preparing, processing, and serving food and beverages to the consumers. Unwittingly, they can be human hosts of microorganisms. Naturally, the surface of all parts of the human body, particularly the hands, may transmit microorganisms, for example, the *Staphylococcus aureus*, which is a toxin-producing bacteria. Food handlers may also become carriers of typhoid fever (*Salmonella typhi*) although sometimes the symptoms of the illness are not present. Therefore, it is vital for food handlers to practice personal hygiene in order to steer clear of any hazardous microorganisms.

Food handlers should wear clean clothes and maintain their personal hygiene. Washing hands using soap should be performed after any activities in the toilet.



They must also put on a Personal Protective Equipment (PPE), particularly an apron and a head cover, to prevent microorganisms from contaminating the food and beverages being served. Gloves should be worn when cooking and preparing food (e.g. decorating sushi or a tart). If necessary, to avoid contamination from a handler's mouth, a face mask can be used when processing and serving food.

When handling food, the handler must be in good physical shape (i.e. not suffering from diarrhea, cough, or cold), must not have any undressed wound, and must not wear excessive jewelry. The handler must regularly practice personal hygiene (e.g. having trimmed and clean nails, not smoking, not spitting, and using clean footwear), to prevent food contamination.

Food vendors and handlers who have been trained about food hygiene, sanitation, and safety shall have knowledge and awareness in maintaining personal health, hygiene, and the quality of safe and healthy food and beverages. Therefore, regular training for handlers needs to be conducted in order to foster their awareness.

3. The Third Pillar: Facilities

Canteen building or space

- The environmental conditions around the canteen are vital because microorganisms may grow and survive around the canteen building, that may further contaminate the food. The canteen space may be built inside or outside the schoolyard. The canteen building or space should be constructed out of permanent materials to allow easy cleaning.
- Tools and equipment in the canteen space should be arranged according to their functions and routinely cleaned to avoid any contamination. Tools and equipment which are not used for processing food and beverages should not be stored in the canteen space. It is not advisable to stockpile cardboards because they may attract pests and insects.
- The canteen floor should be made of waterproof materials and have an even surface so that the floor is easy to clean. The floor should always be kept dry and clean.



- The building **walls** should be made of waterproof materials and have an even surface to avoid dust from piling up quickly and to make it easy to clean.
- If cooking activities are performed inside the canteen space, ventilation should be provided to allow for air circulation so that vapor, gas, smoke, odor, and dust in the room may easily escape. Insect screens can also be set up to prevent flies, insects, or other animals from entering the windows (if any).

Sanitation facilities

- **Water conditions** need to be paid attention too, as microorganisms may survive in the water. In regard to the management of food and beverages at the canteen, it is important to make sure that the supply of water available is sufficient in amount and complies with the set health standards. Maintaining water sanitation can be performed by checking the physical properties of the water against the health standards (i.e. whether the water is colorless, odorless, and tasteless). The water included in the ingredients of a beverage (e.g. ice cubes) must be free from microorganisms (i.e. boiled or processed) and chemicals that may endanger health.
- **To prevent wastewater** from being a source of contamination, the wastewater disposal system should be appropriately managed, for instance, by using a waterproof drainage system, ensuring that the wastewater flows smoothly, and protecting the wastewater drainage. To avoid wastewater from contaminating the water source, the minimum distance between the septic tank and the groundwater source should be set at 20 meters.
- **Garbage** bins, which may become a source of contamination, should always be cleaned, closed, and removed regularly.
- Food handlers would need a **toilet** for defecating and/or urinating. Handlers need to wash hands after defecating or urinating as feces and hands can transmit *Escherichia coli* bacteria and other microorganisms. Therefore, it is necessary to equip clean toilets with a sufficient amount of soap and clean water.

- Hands of the consumers may also pass on the pathogens. Therefore, **washbasins**, along with a sufficient amount of soap and running water, should be made available for the canteen's consumers.
- **Cooking and eating utensils** must be cleaned regularly. Therefore, it is necessary to provide washing basins, as well as an adequate amount of soap and clean water, for utensils.
- To maintain the cleanliness of the canteen space, it is necessary to provide **cleaning tools** which are not only functioning well but also clean. Moreover, cleaning tools must be stored properly (e.g. in the cabinet or by using a broom holder) to avoid any contamination. The canteen and kitchen must be cleaned daily, and all cleaning tools must be disinfected regularly.

Pest and insect control

- Pests and insects are potential sources of microorganism transmission. Therefore, such animals (e.g. flies, cockroaches, rats, and cats) must be gotten rid of the school canteen area. Preventive measures can also be taken, for example, by covering the tray containing ready-to-serve food and installing fly traps and mouse traps.

Kitchen, dining room, equipment, and storage

- To avoid cross-contamination during food and beverage production, the kitchen space must always be cleaned regularly. The space of the kitchen must be large enough to accommodate the cooking and preparation of food to be made. The air circulation must be maintained properly so that smoke or vapor can easily escape from the kitchen; if necessary, a smoke ventilation can be provided.
- The dining area for consumers must always be kept clean; the size also needs to be adjusted to the number of consumers.
- Cooking and eating utensils must be washed, dried, and stored in a clean state before use. To avoid contamination, clean equipment can be stored in a sealed



storage shelf and should not be kept together with dangerous chemicals (e.g. insecticides, household disinfectants, or room fragrance).

- The food storage facilities must function well. Moreover, raw food ingredients (e.g. meat, fish, and egg) should not be stored together with cooked or ready-to-eat food ingredients. The proper cold storage temperature in the refrigerator is 5-10°C, and the proper frozen storage temperature in the freezer is -10°C. To maintain an optimum temperature, food ingredients stored in the refrigerator shall not be in an excess quantity. The food container cover must not be opened too often. If necessary, labels with information about the date of storage can be put on the containers.
- Cooking and eating utensils and also food containers should be kept in a clean state. It is preferable to use utensils and containers made of food-grade materials (e.g. aluminum foil and mica), rather than rusty and non food-grade materials (e.g. Styrofoam or used newspaper)
- Always use a clean rag, and the rag should be cleaned daily. To avoid cross-contamination, the rag for cleaning utensils and for cleaning canteen space must be separated.
- Ready-to-eat food needs to be stored and served in a safe manner i.e. in a sealed (transparent) cupboard or container. Ready-to-eat food stored at room temperature for more than 4 hours should be reheated before consumption

4. The Fourth Pillar: Food Quality

The food provided and/or sold at the canteen should be healthy, safe from any biological, bacterial, chemical, or physical hazards, and full of nutrients needed by students.

Preventing food from being contaminated by biological hazards (microorganisms) can be done by:

- Implementing correctly the principles of the Second Pillar (Human Resources) and the Third Pillar (Facilities) of the Requirements for a Healthy Canteen.

- Implementing the principles of GIGO (Garbage In, Garbage Out), in which food quality should be maintained since the beginning, for instance, by choosing raw ingredients which are fresh, clean, and of high quality (i.e. not expired, not rotten, not being taken out of a bulging can, not moldy, not slimy or emitting a foul odor) and by washing fruit and vegetables in clean and running water before being eaten raw.

Ensuring that food is safe from chemical hazards can be achieved by:

- Not using food ingredients that may contain illegal hazardous chemical substances (e.g. formalin, borax, rhodamine B, and metanil yellow).

According to the research and survey conducted by SEAMEO RECFON, Indonesia Food and Drug Administration (FDA) and Ministry of Health of the Republic of Indonesia, snacks sold/provided at schools are often reported containing:

- borax (e.g. in meatballs)
- formalin (e.g. in bulk yellow noodle, dried squid, dried fish,
- rhodamine B (e.g. in bright-colored syrup, bright-colored crackers, and bulk spicy sauce)
- metanil yellow (e.g. in bright-colored syrup)

- Not using food additives in an amount exceeding the dosage permitted by the government (in accordance with the Regulation of the Minister of Health of the Republic of Indonesia No. 1168/Menkes/Per/X/1999). **Appendix 2** lays down simple procedures for testing the presence of hazardous chemicals in food.
- Not frequently using used cooking oil (dark-colored) as this type of oil may contain the carcinogenic substance called PAH (polycyclic aromatic hydrocarbon).
- Using safe cooking and eating utensils (e.g. the ones made of stainless steel or glass). Unsafe containers are usually made of plastic with logo 3 (polyvinyl chloride/PVC) or 7 (Styrene AcryloNitrile/SAN, Acrylynitrile Butadiene Styrene/ABS, or polycarbonate/PC), for instance, thin plastic bags and styrofoam. It



is important to note that when plastic material is in contact with hot food, it will produce the chemicals of styrene and benzene, which potentially cause cancer. Used paper with traces of ink on it is also unsafe as it may contain lead, which can endanger health when unintentionally consumed for a long period of time.

Ensuring that food is free from **physical hazards** can be done by supervising the preparation, processing, and serving of food and making sure that these are carried out in line with hygienic practices so that any hazards (e.g. staples, glass shards, nail cuts, bone shards, wood chips, and pebbles) can be avoided. Even a strand of hair found in food or beverages indicates unhygienic practices, which can increase the risk of microorganism contamination.

For Indonesian readers, for more detailed information about how to choose safe food, please refer to the book "*Gizi dan Kesehatan Anak Usia Sekolah Dasar*" published in 2016 (the link to download can be found in **Appendix 1**).

All of the above principles should be applied at schools, and their implementation must be monitored from time to time.

Specifically, the principles of all Four Pillars shall be explained to be more detailed practices; these will be helpful for the Healthy Canteen Supervisory Team to evaluate the accomplishment of the indicators for a Healthy School Canteen. For the same purpose, some government agencies in Indonesia, such as the National Agency for Drug and Food Control, the Ministry of Health, and the Ministry of Education and Culture, have issued some guidelines which set forth the indicators for a Healthy School Canteen (**Appendix 1**).

With its experience, research, and discussions with various schools in the "Nutrition Goes to School" (NGTS) program, SEAMEO RECFON conducted a study and finally issued NGTS-SEAMEO RECFON indicators for a Healthy School Canteen which consist of 29 indicators inspired by the four pillars. These indicators are simpler but more complete. When applied correctly, the indicators can be effective for achieving the desired quality of a Healthy School Canteen.

The following is an observation sheet of NGTS-SEAMEO RECFON indicators for a Healthy School Canteen to be used for an internal supervision by the school.



Observation Sheet of a Healthy Canteen

SEAMEO RECFON – Nutrition Goes to School

Put a checklist (✓) on the column **YES** if the specified item is IMPLEMENTED or AVAILABLE, a checklist (✗) on the column **NO** if the item is NOT IMPLEMENTED or AVAILABLE at school, or a checklist (✗) on the column **IRRELEVANT** if the item is irrelevant/unsuitable for the given conditions at the school.

WHENEVER NECESSARY, the Description column may be used to put down additional information about the canteen conditions during the observation.

School Name	: _____
School Address	: _____
Observer	: _____
Observation date	: _____

No	Indicator	Observation/Assessment			Description
		Yes	No	Irrelevant	
First Pillar: Commitment and Management					
1	A written commitment from the school management which ensures that food supply at school is safe				
2	A Healthy Canteen team is established to monitor the safety of foods and beverages for students				
Second Pillar: Human Resources					
3	Food handlers put on Personal Protective Equipment (PPE), such as an apron and a head cover				



No	Indicator	Observation/Assessment			Description
		Yes	No	Irrelevant	
4	Food handlers maintain a high degree of personal cleanliness (e.g. their clothes and hands) and health conditions (e.g. not suffering from diarrhea, influenza, or cough), do not have any undressed wounds, and do not wear too much jewelry				
5	Food handlers have received trainings on food safety, personal hygiene, and sanitation				
Third Pillar: Facilities					
6	The canteen building stands on a permanent structure				
7	The canteen layout matches its function to prevent contamination				
8	The floor of the canteen should be non-absorbent, flat, clean, and dry				
9	The surface of the walls is smooth, non-absorbent, and easy to clean				
10	Good ventilation is available to ensure air circulation for removing steam, gas, odor, and dust from the canteen space				
11	Room lighting is sufficient to process food and sanitize the canteen space effectively				
12	Clean water is available in a sufficient quantity				

No	Indicator	Observation/Assessment			Description
		Yes	No	Irrelevant	
13	Wastewater flows smoothly; the sewage system shall be a close system and work well; the drainage shall be made of waterproof materials				
14	Toilets are available with sufficient clean water and soap				
15	Trash bins with closed covers are available; the waste is disposed regularly				
16	Hand washing stations are provided with sufficient clean running water and soap				
17	Wash basins for cleaning the equipment are available, along with soap and clean running water				
18	Cleaning kits (e.g. broom, mop, brush) are available and properly stored				
19	Preparation and serving areas are protected from animals (e.g. flies, cockroach, rats, cats) that can contaminate food				
20	Efforts to keep food away from pests and insects are put in (e.g. using food covers, a cupboard, as well as insect, fly, mouse traps)				
21	The kitchen area is clean, has sufficient space, and has a smoke ventilation				



No	Indicator	Observation/Assessment			Description
		Yes	No	Irrelevant	
22	The dining area is clean and has sufficient space				
23	Cooking and eating utensils must be washed, dried, and stored in a clean state before use				
24	Food containers and/or packaging are made of safe materials (not styrofoam or non food-grade plastic bags)				
25	The food storage facilities (i.e. refrigerator, freezer) function properly				
26	Tongs and/or gloves are used in order to avoid contamination				
27	Cooked foods should be displayed safely (e.g. with cover)				
Fourth Pillar: Food Quality					
28	Food does not contain any hazardous chemical substances (e.g. formalin, borax, textile dyes)				
29	Foods served are nutrient-rich (i.e. containing essential vitamins, minerals, protein, and fibre)				

Adapted from: The Ministry of Health of the Republic of Indonesia, 2011; The Ministry of Education and Culture, 2011; The National Agency for Drug and Food Control 2012.

Chapter 3

Balanced Nutrition



Chapter 3

Balanced Nutrition

Topic

Food Sources and Nutrients

Ten Principles of Balanced Nutrition

Food Pyramid and My Plate

Nutritional Requirements by Age and Sex

The Need of Nutritious Foods from the School Canteen

A Food Sources and Nutrients

The word “nutrition” is derived from the Arabic word “*ghidzay*”, which means “food”. In the Great Dictionary of the Indonesian Language, “*gizi*” (or “nutrition” in English) is defined as staple food needed for growth and health. However, “Nutrition Science” has a broader definition, covering not only food but also nutritional status, programs, and the relevant matters in relation to nutritional problems.

There are five types of major nutrients, namely carbohydrates, proteins, fats, vitamins, and minerals. Nutrients perform three main functions to our body: 1) being our energy sources; 2) regulating the process of bodily metabolism; and, 3) spurring growth and maintaining healthy tissues.



To meet our daily nutritional needs, we need to consume a variety of foods. This is because each type of food source contains different nutritional contents. There is no single food which completely contains all nutrients, except for breast milk for infants aged 0-6 months. The more varied the foods we consume, the more diverse the nutrients absorbed in the body will be.

Nutritional requirements can be fulfilled by consuming varied foods on a daily basis according to our age and sex, and when done properly, this can help stimulate optimum physical growth, development, and intelligence. For Indonesian readers who needs more detailed information about nutrients, types of nutritious food, and their benefits, please refer to the book "*Gizi dan Kesehatan Untuk Remaja*" published in 2016 (the link to download it can be found in **Appendix 1**).

B Ten Principles of Balanced Nutrition

The fulfillment of nutritional requirements entails the concept of "Balanced Nutrition". In the 1950s, the Government of Indonesia introduced the slogan "4 Sehat 5 Sempurna" (or "Four Basic Five Excellent" in English). As science and public health problems progressed over time, in 1995, the Government introduced a new concept called Balanced Nutrition, which was then revised in 2014 into the "Guidelines for Balanced Nutrition".

The latest guidelines encompass 10 Principles of Balanced Nutrition:

2014 Guidelines for Balanced Nutrition	1	Be grateful for and enjoy the variety of foods available	Have a regular breakfast	6
*The 2014 Guidelines for Balanced Nutrition is the latest official dietary guidelines from the Ministry of Health in replacement of the General Guidelines for Balanced Nutrition and/or "Four Basic Five Excellent"	2	Eat more vegetables and enough fruits	Drink enough and safe water	7
	3	Consume a wide variety of staple foods	Read food labels regularly	8
	4	Consume high protein source foods	Wash hands with soap in clean running water	9
	5	Limit the consumption of sweet, savory, and fatty foods	Perform adequate physical activities and maintain a healthy weight	10

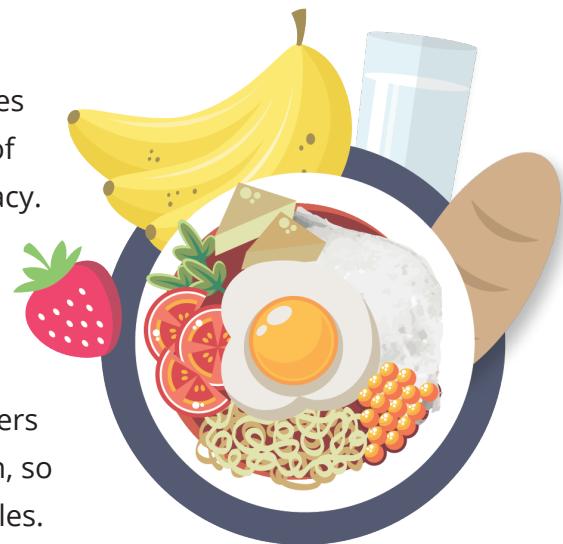
In the Guidelines, these four main pillars are set forth to support the fulfillment of balanced nutrition:



1. Consuming variety of food

Nutritional contents vary across different types of food; therefore, consuming various kinds of food is vital in meeting the nutritional adequacy. In addition, there are interactions between nutrients that may help optimize nutrient digestion and absorption in the body.

Aside from the aforementioned nutrients, fibers are essential to aid a healthy digestive system, so it is important to consume fruits and vegetables. For example, while rice contains a lot of calories, it lacks vitamins and minerals. In contrast, fruit and vegetables are generally rich in vitamins, minerals, and fibers but contain a low level of calories and proteins. Meanwhile, fish contains a high level of protein but has few calories. Consuming a combination of different foods would enrich our daily intake of nutrients.

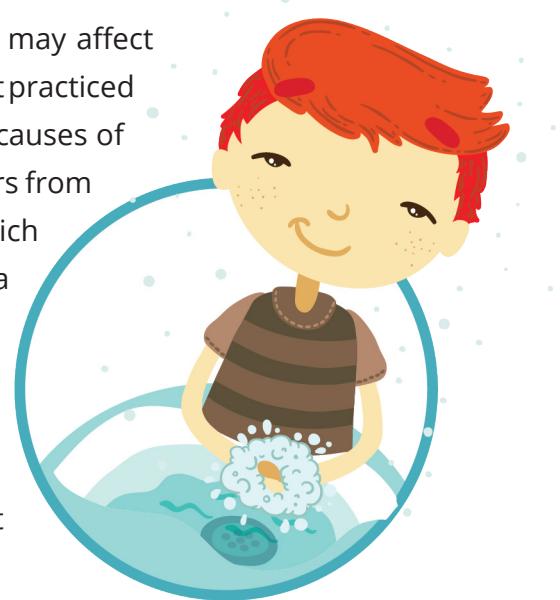


Similarly crucial is the consumption of mineral water, as it can boost metabolism. Moreover, having morning breakfast regularly is necessary as it offers primary sources of energy needed to start the day optimally. We also need to limit our consumption of sugary, savory, and fatty foods.

Last but not least, the First Pillar suggests the consumption of various foods according to the amount and proportion needed by our body.

2. Practicing Hygiene and Sanitation

Personal hygiene and environmental sanitation may affect health and can cause infectious diseases when not practiced properly. Infectious disease is one of the direct causes of a person's nutritional status. A person who suffers from under-nutrition usually has low immunity, which can increase his/her risk of infections. In turn, a person suffering from an infectious disease may experience a decrease in appetite, so that the amount and types of nutrients absorbed by his/her body could lessen. At the same time, the body needs more energy and nutrients to boost metabolism and accelerate recovery.



Thus, personal hygiene and sanitation need to be practiced, including:

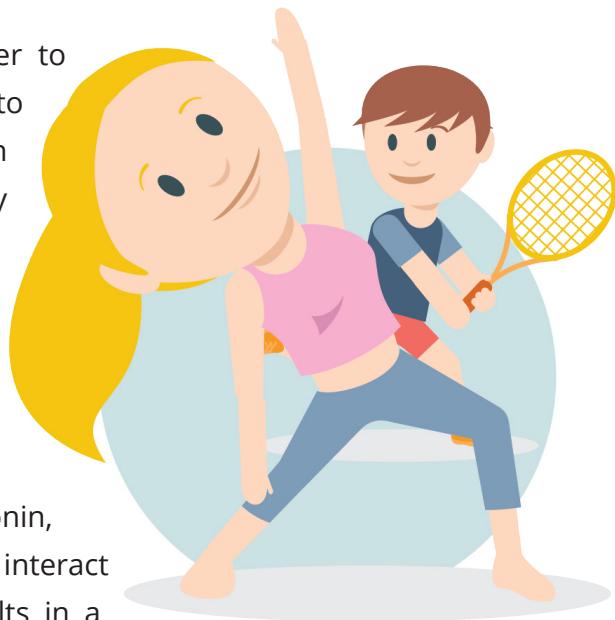
- Always washing hands with soap under running clean water at crucial times (i.e. before eating, before preparing food and beverages, and after defecating and urinating).
- Covering food to keep it away from flies and other animals and dust
- Covering mouth and nose when sneezing
- Putting on footwear to avoid worm infections



3. Performing physical activities

The Guidelines for Balanced Nutrition refer to physical activities as any activities that aim to burn calories in achieving a balance between the energy produced from food in the body and the energy used.

Physical activities are very beneficial to improve fitness and the functions of the heart, lungs, and muscles, as well as preventing overweight. They also boost the production of hormones such as serotonin, dopamine, and endorphins. Endorphins interact with receptors in the brain, and this results in a lower perception and sensation of pain and ache, thus helping to lower heartbeat and blood pressure. Endorphins are able to stabilize breathing and help to restore our body temperature to normal. Meanwhile, dopamine and serotonin are associated with feelings of comfort, pleasure, and happiness.



Physical activities are not limited to sports only. Household chores (e.g. sweeping and cleaning the house) and other activities, such as walking, are also regarded as physical activities. To maintain body fitness, it is recommended to perform physical activities for 30 minutes every day or at least 3-5 days a week.

4. Monitoring body weight

Body weight is one of the determining factors of the nutritional status. Among children aged 0-18 years old, body weight, height, age and gender are used to determine whether a child is categorized as normal, under-nourished, or over-nourished. To assess the nutritional status of children aged 0-18 years old, the World Health Organization (WHO) has introduced growth chart for males (blue) and females (pink) that includes information on body weight, height, and age.

Meanwhile, among adults, body weight is used to calculate the body mass index (BMI) value with the following calculation:

$$\text{BMI} = \text{Weight (kg)} / \text{Height}^2 (\text{m}^2)$$

The BMI cut-off is set according to FAO/WHO reference. For the Indonesian population, the cut-off points are adjusted to accommodate clinical experiences and research results in other similar developing countries. The BMI cut-off points for Indonesian adults are as the following:



BMI cut-off points for Indonesian adults

	Category	BMI
Underweight	Severe	< 17,0
Thin	Mild	17 - < 18,5
Normal		18,5 - 25,0
Overweight	Mild	>25,0 - 27,0
Obese	Severe	> 27,0

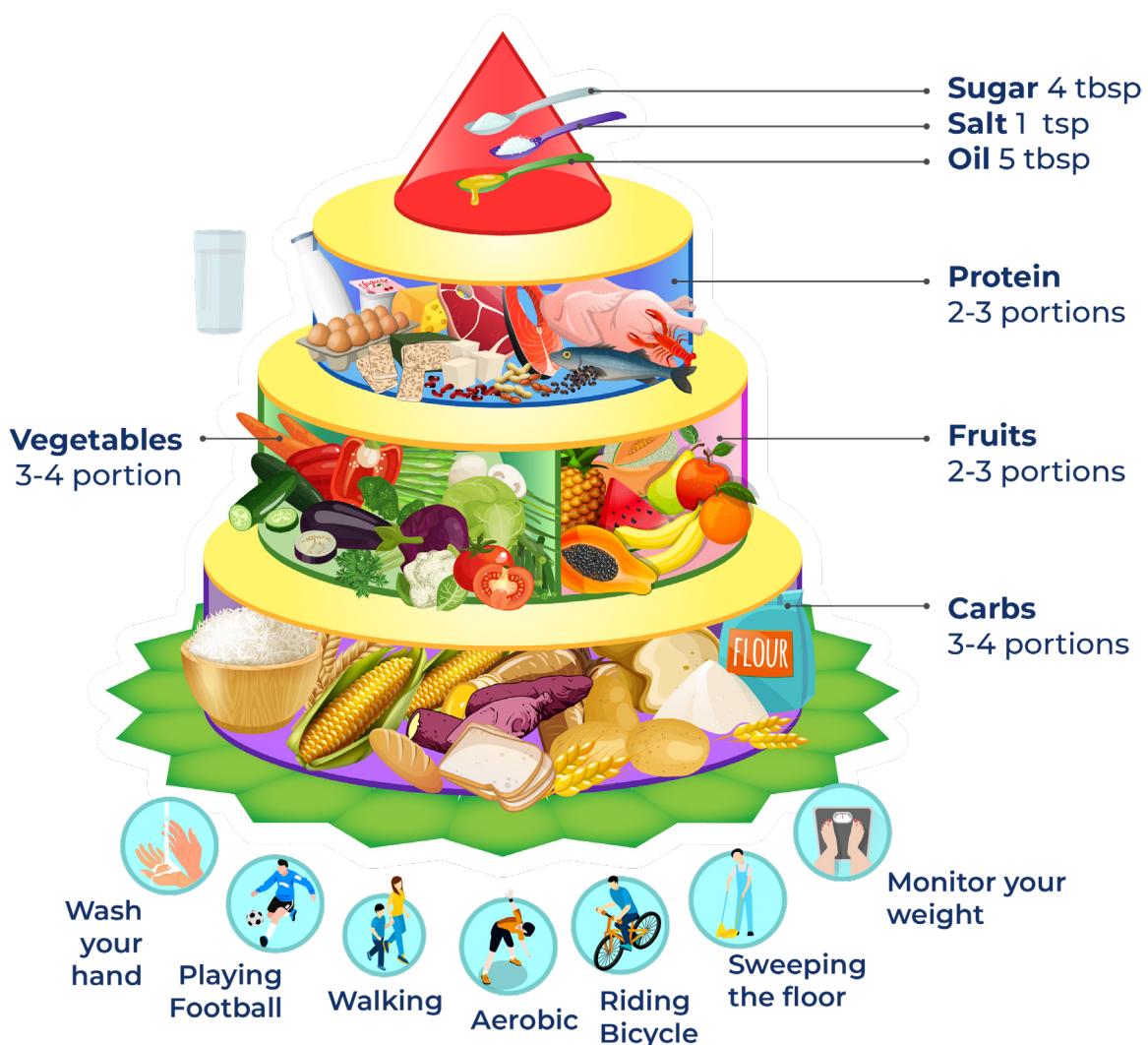
Weight needs to be continuously monitored to determine one's current nutritional status. By knowing our nutritional status, one can be more aware of his/her health conditions and maintain health optimally.



C Food Pyramid and My Plate

"Tumpeng Gizi Seimbang"

"Tumpeng Gizi Seimbang" (or "the Cone of Balanced Nutrition" in English) is the food pyramid used in Indonesia as a guideline for daily food intake for Indonesians. The position of a particular type of food as placed on the cone indicates its recommended amount of consumption; the higher the position is (nearing the cone's top), the less the food should be consumed.



The food pyramid of "Tumpeng Gizi Seimbang"

The first (bottom) layer represents sources of energy that contain large amounts of carbohydrates, such as rice, corn, cereal, yam, potatoes, cassava, wheat, etc. This food group is recommended to be consumed in 3-4 servings a day. The second layer represents sources of food function as regulators containing vitamins and minerals such as vegetables and fruits. The suggested serving of vegetables is the same as that of carbohydrates (i.e. 3-4 servings per day), while fruits shall be consumed in 2-3 servings per day. The next layer represents sources of the building blocks of body tissues which contain protein, from both animals and plants. Animal proteins include fish, eggs, chicken, beef, milk, and cheese. Meanwhile, the examples of plant-based proteins are tofu, tempeh, and legume. The top of the cone represents additives, whose daily consumption is recommended to be limited to four tablespoons of sugar, one tablespoon of salt, and five tablespoons of oil.

In addition, "*Tumpeng Gizi Seimbang*" suggests substituting foods for each food group, for example:

- in the animal protein group, one glass of milk is equivalent to an egg,
- in the carbohydrate group, rice can be substituted by cassava, potatoes, or noodles

"*Tumpeng Gizi Seimbang*" also advises on healthy living habits, including:

- performing physical activities
- washing hands
- monitoring weight
- drinking eight glasses of water a day





"My Plate"

Accompanying the food pyramid, Indonesians are also guided by a meal guide similar to "My Plate" as used in many other countries. Calculating the recommended amount of nutrients to be consumed in one meal can be tricky, but this has actually been set down in the Regulation of the Minister of Health No. 41 of 2014 as a guideline called "*Piring Makanku*" (or "My Meal Plate" in English), which was revised in 2017 into "*Isi Piringku*"

"*Isi Piringku*" sets forth the recommended portion of food per meal to maintain health. As illustrated in "*Isi Piringku*", one serving should contain 1/3 portion of staple food, 1/3 portion of vegetables, and the remaining 1/3 to be evenly divided for a portion of side dish and a portion of fruits. "*Isi Piringku*" also reminds us to drink mineral water, wash hands with soap under running water, and perform physical activities.



The meal guide of "*Isi Piringku*"



D Nutritional Requirements by Age and Sex

The amount of nutrients required between one person and another is not always the same. To achieve an optimum level of health, nutritional requirements shall be determined based on one's age, sex, physical activities, genetic conditions, and physiological state.

The adequacy of daily nutrition intake is referred to as the Recommended Dietary Allowance (RDA). In Indonesia, it is known as *Angka Kecukupan Gizi* (AKG). The amount of daily nutritional requirements for the general public of Indonesians can be seen in the AKG table published by the Ministry of Health of the Republic of Indonesia in 2013 (**Appendix 3**). The AKG table lays down the recommended dietary allowance for Indonesian healthy individuals based on their age and sex group.

E The Need of Nutritious Foods from the School Canteen

At school, the school community including students can fulfill their nutritional needs by buying foods at the school canteen or from food vendors or bringing food from home. Thus, the school plays a vital role in providing healthy foods for the school community. The school canteen particularly holds a strategic position in terms of both supply and demand. On the supply side, the school canteen has a role in providing safe, healthy, and nutritious food and beverages for the school community. It can also be a place for the school community to apply knowledge on nutrition and health. On the demand side, the school canteen may serve as a place to increase the nutrition literacy of students and the overall school community.

As a provider of food and beverages for the school community, the school canteen is expected to play its major role of maintaining the health conditions of students and the overall school community, particularly to lower the risk of non-communicable diseases, such as obesity, hypertension, diabetes, and heart attack. Non-communicable diseases may be prevented by controlling the daily intake of sugar, salt, and fat/oil. It is advisable that the school canteen provides information on both the nutrient contents and the amount of sugar, salt, and fat in every food sold. The maximum daily intake of sugar, salt, and fat as recommended by the Ministry of Health Republic of Indonesia is as follows:



1. Sugar: 50 gr (4 tablespoons)
2. Salt: 2000 mgs or 5 gr of sodium (1 teaspoon)
3. Fat/oil: 67 gr (5 tablespoons)

To put it simply, the formula for Sugar-Salt-Oil daily intake is S4-S1-O5. For example, one piece of chocolate doughnut contains about 1.5 tablespoons of sugar, while a glass of carbonated drink contains about 2.5 tablespoons of sugar. The consumption of a doughnut and a glass of carbonated drink alone has exceeded the maximum limit of sugar consumption per day (four tablespoons or 50 grams). Meanwhile, these foods/drinks may not be the only foods and beverages containing sugar that we consume during the day.

The table below provides information on some nutrient contents as well as salt in some foods commonly sold at the school canteen in Indonesia. By knowing the nutrient contents of the foods available at the canteen, students can estimate the amount of calories and other nutrients they consume. The AKG table in Appendix 4 can also be used to estimate the adequacy level of daily nutrient intakes.

Table 3.2 Nutrient contents of several types of food often found at the school canteen*

No	Food Name	Serving Size	Size in gram**	Calorie (kcal)	Protein (gr)	Fat (gr)	Sodium/salt (mg)
1	<i>Nasi goreng</i> (Fried rice)	1 medium serving	200	500	7.0	34.4	18.0
2	<i>Nasi uduk</i> (Rice cooked in coconut milk with some side dish)	1 medium serving	200	263	4.2	3.0	2.0
3	<i>Bakso</i> (Meatball soup with noodle)	1 bowl	400	564	19.2	2.8	4.0
4	<i>Bubur ayam</i> (Congee/Chicken porridge)	1 bowl	300	477	15.3	6.3	21.0
5	<i>Soto ayam</i> (Chicken noodle soup)	1 bowl	250	270	18.5	11.5	75
6	Fried egg (scrambled/sunny-side-up)	1 piece	60	191	12.0	15.1	70.8
7	Doughnut	1 piece	30	120	1.6	6.5	6.0
8	<i>Martabak manis</i> (Sweet stuffed pancake)	1 slice	55	122	1.4	9.4	13.8
9	<i>Pisang goreng</i> (Fried banana)	1 slice	60	95	0.5	6.2	0.6
10	<i>Tahu isi goreng</i> (Fried stuffed tofu)	1 piece	100	206	7.3	20.3	6.0
11	<i>Bakwan</i> (Vegetable fritter)	1 piece	50	270	2.7	20.3	0.5
12	<i>Siomay</i> (Steamed dumpling)	5 pieces	40	83	1.5	0.2	2.4

*nutrient content was based on the 2007 Nutrisurvey database

Chapter 4

Strengthening Partnerships



Chapter 4

Strengthening Partnerships

Topic

Combining Demand-Based, Supply-Based, and Policy-Based Approaches in the Development of a Healthy School Canteen

The Role of Partners in Healthy School Canteen Development

Healthy School Canteen in Partnership with the Community

A Combining Demand-Based, Supply-Based, and Policy-Based Approaches in the Development of a Healthy School Canteen

The school provides extensive learning facilities in developing students' characters early on. The learning methods used at school range from specific subjects in intra-curricular lessons to interest-based learning through innovative clubs known as extra-curricular lessons. There are also co-curricular lessons to support and strengthen the intra- and extra-curricular lessons, such as visiting a museum, co-watching films containing educational value, and attending seminars on relevant themes.

1. Demand-Based Approach

To gain knowledge on balanced nutrition, particularly nutritious, safe, and healthy snacks, students can be exposed to relevant topics on nutrition and health using the aforementioned methods. A **demand-based approach** can be taken to strengthen students' knowledge on nutrition and health topics. This way, students are expected to be aware of their needs for safe, healthy, and nutritious food.



For students to understand that they need safe, healthy, and nutritious food, this requires a continuous process that cannot be done in just a few learning sessions. The students need to receive constant encouragement through various learning modes and methods. The students' needs for safe, healthy, and nutritious food may promote a healthy lifestyle to be adopted as a life skill for their future.

Fortunately, these days, learning methods used at school are more varied and can be implemented according to the conditions of the students, teachers, and the respective school. This results in a wide range of presentation techniques in nutrition education, thanks to teachers' creativity in developing various fun learning methods. Teachers' creativity in presentation techniques and learning methods can now even reach a wider audience by means of social media.

The following ideas can be tried out according to the circumstances and conditions of each school.

Using the time slot of the homeroom teacher, students are asked to tell their favorite foods; then the teacher discusses the importance of a well-balanced menu as a concluding activity	During a literacy session, students are asked to read a book on Indonesian cuisine or a recipe book on their favorite food; then the teacher may conclude the session with an explanation on the benefits of main nutrients for students' growth and development
The teacher asks students to bring a packed meal to be eaten together with classmates during breakfast time on the next day; this is to be followed by a teacher-led discussion on the importance of consuming side dishes and vegetables	Many studies have found that gardening and cooking harvested products together with schoolmates may increase students' interest in different types of vegetables. Schools having gardening facilities are recommended to try those activities.
Nutrition education may also be carried out during the class break, girl-only activity hours, a physical education session, and sports time or using an appropriate thematic subject (for the elementary school level) in an out-of-classroom setting, for example, at the school canteen, in the school garden area, and in the sports field	The school can hold a contest of making a well-balanced menu or cooking simple snacks using nutritious ingredients as a creative learning method that can be implemented at all school levels.



The following ideas can be tried out according to the circumstances and conditions of each school.

A bazaar can be conducted at the end of the academic semester in which students would cook/prepare and sell nutritious food and snacks (low in sugar, high in fiber) while explaining to prospective customers why the food sold is safe, nutritious, and healthy. This can help to sharpen students' self-confidence and entrepreneurial skills	The school can place posters containing information on healthy, safe, and nutritious food and snacks in strategic places (e.g. the canteen, library, computer laboratory, wall magazine board, and the Student Health Care Unit room). The posters would be more meaningful if they are created by the students themselves. One practical example is from a study conducted in Jakarta; at a school canteen, a menu board was put up at each kiosk as a learning medium for high school students to consider the contents of sugar, salt, and fat/oil in the snacks/food and beverages sold.
Other than the teachers and the school principal, a speaker from the local Public Health Center or any other related institutions can be invited to share their knowledge in a discussion on safe, healthy, and nutritious food.	Alternatively, students may be interested if parents can come to school and deliver some materials on nutrition and health topics
The teacher can invite students to play a guessing game on fruits and vegetables and then discuss the benefits of fruits and vegetables as a concluding activity	During an outing, a seminar, or another out-of-class activity, the school should provide safe, healthy, and nutritious snacks. The teachers in charge of the activity may also allocate some time before the lunch break to discuss the contents and benefits of nutritious food.

2. Supply-Based Approach

Despite all of the aforementioned innovative ideas for nutrition education, regrettably, some studies found that those efforts do not necessarily result in students' selecting safe, healthy, and nutritious food. External factors are found to have significantly interfered with the understanding and need of the students to consume safe, healthy,



and nutritious food. School canteen vendors and street vendors surrounding the school belong to the category of external factors, and snacks sold outside the school often complicate the problems further. Tempted by mouth-watering yet possibly unhealthy snacks, students often give in and disregard all of the lessons they have been taught about nutrition. In this context, the school canteen and the nearby street vendors need to be taken into account in the **supply-based approach**.

Various studies reveal that food selection by both children and adults is often driven by: 1) Taste; 2) preference; 3) price; and, 4) availability. As a provider of food, the school canteen is the first resort for students to go to in order to quickly recharge their energy after doing so many activities at school. However, the results of a food quality mapping at the canteen at various school levels show that the food and beverages provided generally contain a lot of sugar, salt, oil, with a much less variety of vegetables and fruits. Even at some schools, there are still food and beverages which are suspected to contain harmful additives due to their striking color and smell. Snacks sold by street vendors have a similarly low quality, but these can only be bought and consumed by the students after school.

The above situation certainly calls for a major improvement. Schools need to apply relevant rules and guide both of the school canteen and street vendors. A number of schools have shown a high commitment to developing a healthy school canteen by drafting an agreement with the school canteen vendors regarding their rights and obligations to participate in the implementation of a healthy school canteen. These schools also establish a task force involving students as field supervisors to monitor if the snacks sold at their school canteen already comply with the health standards.

3. Policy-Based Approach

The teaching and learning of balanced nutrition have now entered a new era, in which a learning process followed by actual practices is perceived to be more relevant to students. Therefore, the combination of demand-based and supply-based approaches by teachers and the school principal is essential to facilitate students in practicing the consumption of balanced nutrition. In addition, the contests of healthy schools have motivated many schools to obtain the title of a Healthy School Canteen, which is



one of the components for assessment in the reward program . Equally important is the commitment of the school principal, which has been proven to be a driving force behind a school's achievement; continued commitment is usually followed by the establishment of a supporting policy. Thus, the **policy-based approach** complements the demand-based and supply-based approach, and these can collectively create a synergy.

- Without a specific school policy, teachers may perceive it unnecessary to receive training on nutrition and may not be motivated to provide creative and innovative nutrition education (e.g. through interesting presentations) for the students.
- Without any commitment from the school, the school canteen would not progress into a healthy canteen that offers safe, healthy, and nutritious food and acts as a place for students to practice their knowledge on nutrition.

Publishing a written commitment of the school policy is proven to improve the motivation and a sense of belonging of the school community to play a role in developing a healthy school canteen, forming good habits, and putting in sustainable effort. Ideally, the school policy should be formulated out of the collective input from the overall school community.

Some schools even put up a pledge board specifying their commitment or a certificate of recognition for their healthy canteen in a strategic location in the school area to remind the school community that the efforts to achieve a healthy school canteen shall be performed continuously.

A school with a Healthy Canteen or Healthy School award would certainly possess more value compared to other schools, and this can appeal to more prospective students.

In conclusion, the three approaches mentioned above should be adopted simultaneously and continuously for students to lead a healthy lifestyle, including the consumption of safe, healthy, and nutritious food.



Steps towards the development of a healthy school canteen

1. The school shall coordinate with the local Education Department Office and local Health Department/Public Health Center
2. The school shall keep the students' parents, the canteen manager, and the canteen vendors updated
3. The school shall appoint a school canteen manager and a supervisor
4. The school shall assign the school canteen manager and supervisor to attend healthy canteen trainings organized by relevant institutions
5. The school shall organize trainings and provide guidance for the canteen manager and the canteen vendors
6. The school shall put in place the written policy about the Healthy School Canteen
7. The school shall provide proper utilities and facilities at the canteen
8. The school and the supervisor shall monitor and evaluate the implementation of the healthy school canteen

(Adapted from the Ministry of Education and Culture, 2014)

B The Role of Partners in Healthy School Canteen Development

In order to bring in positive impacts on the students' learning process, the school community and relevant stakeholders need to play their active role so that healthy, safe, and nutritious food can be provided at the school canteen.

The aforesaid stakeholders include the school principal, teachers, students, the canteen superintendent, food vendors/handlers, the school committee, the local Public Health Center officers, the education supervisor/Technical Implementation Unit, and the local government. Each of them has a role in supporting the continuous implementation of the school canteen program.



1. Local Government

The local government is responsible for financing the procurement of school canteen facilities and formulating regulations to support food safety at school, such as the establishment of the School Health Unit team and the construction of a physical building and food kiosks/stalls in accordance with the applicable rules.

2. Education Supervisor/Technical Implementation Unit

The Education Supervisor/Technical Implementation Unit plays a role in supervising the school canteen vendors in preparing, cooking, transporting, and serving food according to the health standards.

3. Public Health Center Officers

The local Public Health Center team engaged in the School Health Program consists of a Health Promotion team, Nutrition Implementation Personnel, and Environmental Health Personnel. Their role is mainly to determine if the food provided at the school canteen is nutritious and safe and to ensure that the quality of food sold by vendors meets the health requirements. The local Public Health Center team may also deliver training on a healthy school canteen and balanced nutrition.

4. School Principal

The school principal plays a role in coordinating all activities related to food safety at school. This includes the selection of school canteen vendors (as well as issuing a license to sell food at school) and the provision of a clean space and the necessary facilities. The principal should also provide clean water and garbage bins in a sufficient quantity for the food vendors. In choosing a canteen supervisor, the principal may sit together with the school committee in a forum according to the available resources owned by the school.

5. Teachers

Teachers perform a vital role of providing education, guidance, and direction to the students to choose, buy, and consume nutritious and safe food, as well as supervising the school canteen vendors in selling food and beverages so that these meet the health requirements.

6. Parents (School Committee)

The students' parents (School Committee) play a role in assisting the school principal in coordinating all activities related to food safety at school. Moreover, they shall assist the school principal in determining the vendors allowed to sell food at the school canteen and in providing a clean space and facilities for the food vendors.

At home, parents' role is still needed to provide safe and nutritious lunch boxes to be consumed by students at school. Parents may also guide their children through practices of a balanced diet, such as by consuming homemade food and maintaining an adequate intake of fruits and vegetables.

7. Students

Students play a role in selecting, purchasing, and consuming safe food with excellent nutritional value under the teachers' guidance and direction. The school may strengthen the Program of Students as Health Assistants and ask the participating students to be role models in applying a clean and healthy lifestyle at both school and home. These students may also be trained to become personnel to supervise the school canteen in coordination with the Public Health Center team and the teachers.

8. Canteen Owner and Manager

The canteen owner and manager play a role in selling nutritious and safe food for students, teachers, and the whole school community. In addition, they must maintain the facilities and the canteen space well.



9. Food Vendors/Handlers

Food vendors/handlers play a role in preparing, cooking, and serving food properly according to the applicable health standards.

All of those stakeholders need to communicate and cooperate with each other, as well as being committed to continuously planning and implementing the supervision of food safety at school. In particular, the school principal is a key person in charge of developing a communication forum for all stakeholders on an ongoing basis.

c Healthy School Canteen in Partnership with the Community

If a school has no canteen, it would be more likely that street vendors keep selling food around the school area. Generally, these street vendors are residents of the surrounding area, the students' parents, or even part of the school community itself (e.g. the family member of a school gardener or keeper). Street vendors sometimes sell food after school hours. In response to this, teachers often feel helpless to prevent their students from buying unsafe snacks from those street vendors. Surprisingly, the same problem is also faced by schools with proper canteen facilities. Even though the school policy prohibits street vendors from selling food around the school area, students can still come to them after school hours.

Consequently, the school should be able to urge street vendors to sell healthy and safe food only for the students. In this case, a cross-sectoral collaboration (e.g. **the local government, the local Public Health Center, and other stakeholders**) is vital to be initiated by the school in maintaining a harmonious partnership with the surrounding community. Training can be conducted to provide guidance for street vendors. This should be followed by close supervision through a personal approach to monitor the improvement in the quality of snacks sold, even if such progress is achieved gradually.

As stipulated in the general school policy, a healthy school canteen may have an extensive role in educating the **community around the school**. The understanding of safe, healthy, and nutritious foods by the surrounding community will help the students to develop a healthy lifestyle. In turn, tailored education through counseling and training targeted for the surrounding community shall address their respective needs.



Nutrition and health are examples of the topics that can be delivered and discussed with the community surrounding the school in specific events, such as community service activities. The food produced by the community around the school can also be sold during a **Market Day** or **School Bazaar** provided that the food is safe, healthy, and nutritious. The teachers, students, and other parties should actively participate in those efforts to achieve a harmonious partnership with the surrounding community in creating a healthy, clean, and safe school environment.

Through a healthy school canteen, students can also influence their family to consume safe, healthy, and nutritious food. If a student routinely brings a pack of safe, healthy, and nutritious meal from home, it means that the information on nutrition received by the student at school may have been passed on to his/her family members at home. Enjoying safe, healthy, and nutritious food together with family members at home can be listed as one of the collaborative activities to be conducted and agreed upon by the school and parents through the school committee. As a complement, counseling activities may be held by the school by inviting a **speaker from the local Public Health Center**.

The school can also seek **sponsorship from the private sector** or collaborate with a company that provides safe, healthy, and nutritious food, a supermarket that sells fresh fruits and vegetables, or a farm that produces local fresh food ingredients. The Market Day, School Bazaar, and Cooking Contest are some activities that may need external funding. Although many schools may lack proposal writing skills or the ability to manage a collaborative activity with sponsors, the opportunity to look for sponsorship is definitely worth pursuing. On the part of the sponsors, conducting collaborative activities with a school may bring about learning opportunities and ideas on how to support the public education and the health sector.

The existence of a healthy school canteen which provides safe, healthy, and nutritious food can be deemed **news-worthy**. Thus, the school can also collaborate with **the local media** to disseminate information about the school's activities, while promoting the school's excellence. The media sector should be regularly involved in documenting inspiring activities at school so that best practices can be learned and replicated by other schools and the public.

A list of ideas on activities to gain potential funding and other resources is specified in **Appendix 4**.

Chapter 5

Towards a Healthy School Canteen: A Collection of Best Practices



Chapter 5

Towards a Healthy School Canteen: A Collection of Best Practices

This chapter lays down a collection of best practices written by the canteen managers, teachers and school principals from various educational levels across Indonesia. This may provide insights into efforts and achievements in developing a school canteen amidst differing conditions and capabilities of the schools.

The best practices are categorized into five themes:

Topic

School Policy

Canteen Management

Nutrition Education for Students and the School Community

Canteen Supervision and Guidance System

Partnerships

A School Policy

BP 1: The Strong Commitment of the Principal Towards a Healthy Canteen at a Public Elementary School

Background

Management is an essential process of planning, organizing, implementing, leading, and controlling an organization's members to achieve the defined objectives. It is regarded as a process because all managers with their respective agility and skills must



strive and utilize the various resources available to support related activities to achieve the objectives.

As the highest person-in-charge, the school principal should put in maximum efforts to achieve the objectives, in line with the school's vision and missions, and carry out his/her main responsibilities. As a manager, the school principal should be able to plan, organize, and motivate all of the school community in aiming for both physically and spiritually healthy students.

Hence, to accomplish the school's vision and missions, the principal must demonstrate a strong commitment, and the effort shall be devoted by the whole school community as a collective responsibility.

Early Challenges and Conditions

We are aware that canteen facilities are vital for meeting students' daily needs, so we constructed simple building structures and provided facilities to build a canteen in a previously idle space. Therefore, our canteen cannot be considered decent. However, the Head of the Sub-district Education Office approached our school and asked us to participate in a healthy school canteen contest to represent the sub-district. We were given three weeks to prepare for it.

Steps Taken

Being trusted to represent our sub-district in the healthy school canteen contest was indeed a pride, even though we were quite overwhelmed due to the considerably limited preparation time. Nevertheless, we always believe that the school canteen is essential in supporting learning activities and also in meeting the nutrition and health requirements of our students, so we accepted the challenge and took the initial steps as follows:

1. Holding intensive meetings with our colleagues to establish the commitment of working together to participate in the healthy canteen contest. This served as a foundation for the next step related to the robust planning to face the contest.
2. Collectively learning the criteria and indicators for a healthy school canteen so that we would have similar expectations to achieve the ultimate goal.

- 
3. Establishing the organizational structure of our school canteen to enhance collaboration and coordination between the school principal, the executing team, and other stakeholders. An example of the organizational structure of a healthy school canteen can be seen in **Appendix 5**.
 4. Issuing a principal decree and an assignment letter for all team members who were involved in the preparation. These documents were deemed necessary for the team members to understand their respective duties and roles so that the expected results could be achieved.

The above four steps were taken under the direction of the school principal who coordinated and synergized all of the parties involved and the efforts in improving the school canteen so that we could be an eligible participant in the contest.

Further efforts made for the school canteen are as follows:

1. Working out a School Budget Activity Plan
2. Drafting a proposal and sending it to various relevant institutions (e.g. business entities and the alumni) to collaborate with us
3. Signing an MoU with relevant parties and conducting joint programs
4. Implementing the guidelines for a Healthy School Canteen
5. Conducting periodical information sessions for the teachers, students, vendors, and parents once in 3 months
6. Establishing the “Little Doctors” program among the students

We gained numerous benefits after participating in the contest, such as:

1. Gaining the attention from the local Public Health Office, after which our canteen was frequently visited, given counseling and even funding support for the procurement of hand-washing facilities (which were initially made of used materials and then replaced with faucets)
2. Being assigned to compete in another healthy school contest to represent the District level
3. Being awarded the Adiwiyata (an environmental-based reward program) at the national level
4. Gaining trust from the community



We earned the award by always coming up with various innovations to motivate the students, the team, and other relevant stakeholders. We also monitored, evaluated, and guided everyone involved regularly.

Fast forward to the current condition of our school, we have gained numerous benefits, especially increased trust from the public which has boosted the number of student applicants to our school.

"At the beginning, we felt as if everything was FORCED and performed BY FORCE and abruptly. However, as time went by, we were more convinced that we COULD do everything and got ACCUSTOMED to the work we were putting in. Over time, the healthy living and hygienic environment implemented at our school have become a CULTURE. We call this strategy DTB3 (an Indonesian abbreviation) as Dipaksa (FORCED), Terpaksa (BY FORCE), Bisa (COULD), Biasa (ACCUSTOMED), Budaya (CULTURE)

Evidently, after the evaluation, everything was carried out passionately and responsibly in collaboration with relevant stakeholders. Coupled with sufficient preparation, all of the plans could be executed properly."

BP 2: The Development of a Semi-Permanent Canteen

Background

There are two types of Healthy School Canteen: 1) an indoor canteen; and, 2) an outdoor canteen (e.g. in the corridor or the schoolyard). Although a canteen is outdoor, it should still have an enclosed space dedicated for food preparation and serving. Regardless of the type, a canteen must have enough facilities and utilities, including clean water sources, storage rooms, processing facilities, serving tables, dining rooms, sanitation facilities, work supplies, and an enclosed waste disposal system.

In reality, many schools face challenges in providing standardized facilities and infrastructure for their school canteen. However, given the important role of the

school canteen in meeting the needs for food, beverages, and snacks of the school community, these schools make efforts to seek alternatives for establishing a canteen, such as by utilizing an existing place (e.g. the space under the stairs or along the school corridor), sharing room with the storage room, or even for schools with no canteen facilities, allowing the street vendors present outside the school premise to sell foods to the students during the lunch break or after school.

Canteen with permanent building and semi-permanent building



Other than space, it is also important for schools to arrange seating facilities for students to enjoy food at the canteen. A school canteen which has no dedicated place for seating should think creatively in finding an alternative space that may be used for a seating area, for example, in the corridor between classes or in the school's backyard.

Challenges and Early Conditions

Our school is located in a densely populated area in Jakarta. Due to the limited space, the canteen facilities were somehow improper. The school canteen space sits on a semi-permanent structure in an outdoor setting (i.e. a space in the school's backyard) with a roof over it. Our school canteen was almost always crowded, especially during the lunch break. The narrow area left no space for seating, so most students could not eat at the canteen and just wandered around while eating or took the food back to their classrooms.



Steps Taken

We understood that we could no longer let students wander around while eating given the unavailability of a seating area at the canteen. We also wanted the school to be a learning center for our students in adopting good habits, including eating and drinking in a sitting position. Eventually, we found an idea of turning some space in the school's backyard, which is located next to our school canteen, into a seating area.

The School Principal then formed a team consisting of the health program teachers and the school canteen managers. The team drafted a budget proposal on the provision of tables and chairs for the school canteen's seating area. At that time, the calculations were done at a minimal cost. We submitted the budget proposal of school facilities maintenance to the Principal to be allocated in the regular budgeting.

Aside from the regular budget, the budget proposal included the proposed purchases of materials such as wood, paint, tables, and chairs, and this was communicated in the following steps:

1. Informing the school community about the importance of seating facilities for the students during the lunch break and the call for their contribution, either directly or indirectly. Examples of direct contributions were giving ideas/suggestions or giving donations in the form of required building materials because the school could only accept non-monetary donations. Meanwhile, indirect contributions were offered to the local community surrounding the school, such as building material stores, relevant offices, and restaurants.
2. Sending the budget proposal to the alumni and inviting them to contribute the building material needed.

The school also involved the relevant parties, for instance, the school superintendent team, local Public Health Center, and police station.

Results Achieved

Thanks to the teamwork and support of the Principal and also the community around the school, we could finally provide a reasonably comfortable dining area close to our school canteen.

The preparation stage



The final look on the seating area



In addition to providing a dining area, we performed sanitary maintenance, including the provision of sufficiently clean water, an enclosed wastewater drainage system using waterproof material, enclosed garbage bins (continued with supervision over the regular disposal of the garbage), hand-washing facilities (equipped with soap and running water in a sufficient quantity), and environmental sanitation tools and storage, as well as ensuring that the toilet location is far from the canteen (at a minimum distance of 20 meters).

Furthermore, our school earned the title of "Healthy School" in 2016 at the municipal level of Central Jakarta. This achievement motivated us to keep up the good work, and as a result, our school won the same award in 2017.

Follow-Up Plans

Our next plan is to build a semi-permanent canteen according to the defined standards. This effort started when we prepared our school for the 2018 Healthy School Award Program at the provincial level of DKI Jakarta , after earning the title of "Healthy School" at the municipal level twice.

The development of our school canteen is never free from challenges, and these need to be solved with the involvement of the overall school community. Some efforts we have put in so far, include:



1. Informing the teachers and employees

Teachers have a significant role and influence in developing the school canteen concept, while the school employees are expected to contribute to the accomplishment of our shared goal.

2. Forming a building planning team, a budget planning team, and a building material procurement team, as well as setting a timeline for the implementation.

Building planning team

The team consists of the school management (the principal and the teachers), as they have a better understanding of the layout and availability of space to be utilized as a school canteen. This team can choose between designing the canteen themselves and getting assistance from another party.

Budget Planning Team

The work of this team starts once the building planning team has finished their plan. This team would involve the building planning team in specifying the construction material needed and the minimum standards that should be met.

Building Material Procurement Team

Limited funding is a common challenge for many schools in developing a healthy school canteen as the school's facility and utility budget must be allocated for other activities as well. It is for this reason that the school formed a building material procurement team.

Why is it called a "building material procurement team"?

According to the applicable regulations, the school could not accept monetary assistance, even if it comes from the parents, for supporting the school canteen development. Alternatively, the school has assigned this team specifically to receive donations in the form of required building materials from parents and the related community members.



As the first step, the building material procurement team will list down all of the building materials required for the school canteen construction. These details are elaborated on in the procurement plan of the building materials (note that the school also provides the necessary building materials, but the quantity depends on the availability of the school's funds). The building material procurement team further details both primary and supplementary building materials. As the construction begins with the foundation, the walls, the roof, and then the flooring, the list of building materials needed should follow this order, starting from the foundation up to the floor.

Construction Team

This team carries out its functions according to the workflow of the building material procurement team. Once the material for the foundation is available, the construction team will work on the foundation first and so on until the installment of the roof and the flooring. It would be helpful to have dedicated human resources as the construction team. However, other schools may not have these extra resources, so they can make a good use of the existing team(s) to also cover the construction work.

3. Informing the school community, the surrounding community, and the alumni of the plan. The plan for the school canteen development, the rationale behind it, and all of the construction needs are important to be communicated to relevant stakeholders.

Informing the teachers and employees

Each team shall explain their respective roles so that the school community can get an overview of the desired results in the school canteen development.

Informing the students' parents, the surrounding community, and the alumni

In one dedicated session, the building material procurement team can detail the building materials required to construct the school canteen, as listed down in the proposal. Next, constructive input and feedback should be welcomed.



The parents, the surrounding community, and the alumni are also invited to contribute to the provision of building materials.

4. Involving the relevant parties

This activity is mainly meant to seek guidance and supervision from the relevant authorities, such as the school's superintendent team, local Public Health Center, and police station.

5. Starting the construction

The construction team shall work based on the canteen construction plan in stages, starting from the foundation, the walls, the roof, to the floor.

B Canteen Management

BP 3: School Cooperative as the School Canteen Administrative Agency

Background

Many schools are still hampered by limited resources when it comes to the development of a healthy school canteen. Moreover, maintaining the operation of the school canteen alone requires considerable effort, from providing standardized facilities and utilities, to finding human resources responsible for running the school canteen. None of these can be done in a short span of time. Therefore, in addition to the required involvement from various parties, the operation of a healthy school canteen entails careful planning to achieve sustainability; it is unfortunate that many schools run a healthy school canteen only temporarily, especially for the sake of participating in an award program.

The complex challenges presented in the operation of the school canteen require the school principal's role as an innovator. The principal needs to be knowledgeable and able to encourage ideas from the teachers and other staff.

While some schools assign a third party to manage the school canteen, some other schools involve the school's cooperative as the school canteen administrative agency. Most importantly, each school should base the selection of the school canteen management on its needs.

The School Cooperative

The legal basis for the establishment of the school cooperative is stipulated in the Joint Decree between the Ministry of Transmigration and Cooperatives and the Ministry of Education and Culture dated July 16, 1972, No. 275/SKPTS/Mentranskop and No. 0102/U/1983, which is then elaborated further in the Decree of the Minister of Manpower, Transmigration and Cooperatives No. 633/SKPTS/Men/1974.

Members of the school cooperative may include the teachers, the employees, and the students. The school's cooperative can be established at various educational levels, be it at an elementary school, a junior high school, a senior high school, or a vocational school. A cooperative may also exist in other informal educational institutions, such as foundations and community-based organizations.

The rationale behind the establishment of the school cooperative based on the Decree No. 633/SKPTS/Men/1974 includes the following:

1. To support the government's development programs in the cooperative business sector through the school's educational programs
2. To raise students' awareness of the school's cooperative
3. To foster the sense of responsibility, discipline, loyalty, and cooperative spirit
4. To improve the knowledge and skills to cooperate, which can be useful for the community
5. To fulfill students' needs and develop their welfare inside and outside the school

The school cooperative is not a legal entity. In this respect, the management of the school cooperative shall always strive to achieve the set educational purposes. The principles of the organization and management shall be in accordance with the principles of the cooperative in general, in compliance with the applicable laws and regulations, and intended for the students to gain an early understanding of the



cooperative/entrepreneurship and practical experience in applying the principles of cooperative.

In its operation, which is managed by the whole school community, the school cooperative sells learning and teaching supplies at relatively low prices. The management of the school cooperative involves planning, regulating, and assessing various resources available in the organization by utilizing the existing facilities to reach the defined objectives.

The school is an institution that facilitates the students in expanding knowledge and exploring their potentials from the scientific/intellectual aspect, as well as nurturing good manners through character building. The school does not only focus on academic achievements but also guides and educates students to have good habits and behavior.

Thus, the school and the cooperative are interconnected and should benefit each other. Both play a role in shaping the character of the students and the overall school community. Hence, those two entities should always cooperate with each other, rather than acting independently.

Challenges and Early Conditions

At the beginning of the school canteen establishment, we thought that

- The operation of the school canteen should pay attention to several aspects, such as the canteen's objectives and functions, the available funds, the existing facilities and utilities at the canteen, and supervision from the school
- The school canteen should be an integral part of the school's programs as a whole and should not be treated as a profit maker for the school
- On the above basis, the school can issue policies benefiting the school and the canteen management team



Since the students need food and beverages to satisfy their hunger and thirst, particularly if they have no time to have breakfast at home, our school initiated the development of a school canteen.

Our school is one of the junior high schools in Jakarta that underwent a conversion from a technical school established in 1964 to a junior high school in 1994. This change had also affected the school cooperative establishment, as well as the teachers and the employees of the cooperative. The school building went through several times of renovation because it was an old building, and the idea to develop a school canteen was initiated during the total renovation of the school building.

Steps Taken

Our school tried to develop a school canteen that could meet the expectations of various parties. Starting in 2010 on a gradual basis (using the available funds), the management of the cooperative started developing a school canteen using an unoccupied space in the western part of the school's backyard. Within approximately one year, the development of our canteen – consisting of five stalls sized 2x3m² plus one room for the school's cooperative office – was completed. The stalls are leased out annually to external parties, and the process is handled by the teachers and the cooperative's employees. We actually had an old canteen located on the east side, which occupied a room of 4x6m² and was rented by four tenants. However, the old canteen was operated only for a year. As for now, the cooperative is only managing the operation of the new canteen.

Results Achieved

Initially, the existing facilities and utilities at our school canteen had not met the indicators for a healthy school canteen. For example, the basins for washing dirty plates, glasses, spoons, and kitchen utensils were limited in quantity and used jointly by all of the tenants. Currently, improvements have been made, and our canteen now uses plates, bowls, and spoons as eating utensils, replacing styrofoam and other plastic containers previously used.



Year after year, the cooperative manager was making an effort to re-arrange the canteen, including installing an electricity meter. Thankfully, all parties contribute to the maintenance of the canteen. If there is any minor damage, the tenants will fix it. Meanwhile, any significant damage is the responsibility of the cooperative. Clearly, the cooperative's management has devoted their best effort to improve our school canteen to be a clean, healthy, and halal canteen.

BP 4: Publication of the Guidelines for Healthy Canteen Management as an Effort to Synchronize the Perceptions about and Commitment on the Healthy School Canteen

Background

The school canteen is one of the mandatory facilities needed to provide healthy, nutritious, and quality food for the school community (students, teachers, and employees). It also plays an essential role in disseminating knowledge on health and building the students' characters.

However, the management of the school canteen is a complex activity because it involves various parties, such as the canteen manager, the food vendors at the canteen, the food handlers, the cashiers, the janitors, and the canteen superintendent and relevant advisory board, all of whom need support from the whole school community as well as the external parties, such as catering companies, supervisory officers from the Public Health Center, and the local Education Department.

The involvement of multiple parties may result in differing understandings of the management procedures to achieve the desired results for the healthy school canteen.

Challenges and Early Conditions

As an educational institution that operates at various educational levels, from kindergarten to senior high school level in Jakarta, Bogor, Depok, Tangerang, and Bekasi (Jabodetabek), our school continues to strive in optimizing the role of the school canteen to fulfill the nutritional needs of the school community and to build the students' characters.

Steps Taken

We understand that the stakeholders' commitment is essential and mandatory in achieving a healthy school canteen. Therefore, with an approval from the stakeholders, we set out guidelines for healthy canteen management. The guidelines are to be used as the basis for preparing, operating, and evaluating the school canteen.

The Guidelines for Healthy Canteen Management include:

1. The rules on the types of food that are allowed to be sold at the canteen, the quality of food ingredients used, the food containers and serving place, the standards of the equipment used, as well as the hygiene and sanitation of the canteen staff
2. The conditions of canteen supervision
3. The authorities and responsibilities of each stakeholder

Canteen supervision is necessary to ensure a proper implementation of the rules and regulations. The supervisory team can include the school's health program teachers, the students, special staff from the Education Services and Support Department (under the Health Division), and the Building Management Department.

The supervision over the school canteen can be performed through incidental inspections by observing or interviewing the canteen manager based on a questionnaire (of 50 questions). The next step to be taken is to collect food samples for testing to check if the food additives used contain hazardous chemicals (e.g. formalin, borax, peroxide, rhodamine B, and metanil yellow). The chemical test results and the questionnaire results will become references for evaluating the school canteen and establishing the next strategies for improvement. The students shall also evaluate the canteen by completing a different questionnaire prepared by the Building Management Department.



Results Achieved

We realize that the canteen manager holds a central part of the operation of a healthy canteen; thus, at the beginning of each academic year, we carefully choose a candidate who will occupy the position of a school canteen manager. The canteen manager is required to meet the requirements as defined by the school foundation.

The stages to be passed by a prospective canteen manager:

1. The canteen manager candidates submit a proposal on the types and prices of food to be sold
2. The Building Management Department selects some proposals
3. Canteen manager candidates who pass the proposal selection are announced
4. The rights and obligations of a canteen manager and the food tasting schedule are informed to the candidates
5. A food testing session is conducted. Each canteen manager candidate is required to provide three types of food to be sold. The assessment will pay attention to: the preparation of the ingredients, the cooking and food preparation process, and the serving of food according to the principles of hygiene and sanitation, and the food's nutritional contents
6. The results of the food tasting and the fulfillment of other administrative requirements will determine which candidate to be the canteen manager
7. After a candidate is selected to be the canteen manager, he/she will be explained about the school policy as described in the guidelines for healthy canteen management and will sign a work contract

If the canteen manager fails to comply with the guidelines for healthy canteen management, the canteen manager will be penalized in stages, from receiving a verbal warning, obtaining a warning letter, to having his/her work contract terminated.

To maintain the quality of the school canteen, guidance and trainings for the canteen manager shall be regularly provided during regular meetings in each academic year (i.e. in a seminar, food serving contest, or workshop).



BP 5: Involvement of Students in the Operation of a Healthy School Canteen

Background

The school canteen development shall become the collective responsibility of the whole school community. The implementation of a healthy school canteen requires collaboration between all relevant parties and is expected to eventually benefit all members of the school community.

The operation of a healthy school canteen necessitates not only proper facilities and utilities but also qualified human resources, including the canteen manager (who is usually also the canteen owner and one of the food handlers), the cashier, and the canteen superintendent and governing board.

Ideally, the supervision of the school canteen should be performed by different personnel (e.g. teachers or other employees at school). For schools with adequate human resources, it is advisable to establish an organizational structure of the school canteen management. In addition, the supervising personnel should have attended various healthy school canteen training programs organized by relevant agencies, such as the local Public Health Office and Education Department.

Another innovative idea is to empower students to be involved in managing the school canteen, as has been initiated by many schools, commonly at the high school level. Numerous vocational high schools with culinary arts and entrepreneurship majors have also involved their students in the operation of their school canteen. The rationale behind this activity is to equip the students with hands-on experience and an opportunity to practice all of the knowledge they have gained in a real situation.

Challenges and Early Conditions

Our school is a private vocational school of information technology in Bogor which occupies an area of 4600 m² with approximately 1600 students. Since its establishment, our school has always emphasized character building education by teaching positive



values to the students as set out in the vision of the school – to become a national exemplary vocational school with environmental-friendly culture, nationalism vision, information technology basis, and excellence in the business world. Guided by this vision, our school has received various awards, either represented by the school as an institution, the teachers, or the students, at the municipal, provincial, and national level, including the "Sekolah Adiwiyata Nasional" award since 2012.

Our school's vision is pursued through the implementation of Competency-Based Training (CBT) which serves as the venue for applying the knowledge gained from some particular school subjects. Besides supporting the curriculum, the CBT is expected to nurture good values in students in their real life. The CBT at our school is implemented through a number of activities, such as CBT on Public Relations (for one day/year), CBT on Vocational education subjects (per major for three days/year), CBT on Environment education (for three days/year), and CBT on Entrepreneurship and healthy school canteen (for three days/year).

Moreover, the "Sekolah Adiwiyata Nasional" title we earned has motivated our school to advance further. Our next goal is to operate a healthy school canteen. Initially, our school canteen was managed by an external vendor. However, during the implementation, conflicts arose, and the school's regulations on a healthy canteen were violated. Our school finally took the school canteen over and has since then involved the students who enroll in the CBT Entrepreneurship.

Steps Taken

In the CBT Entrepreneurship activity, students are involved in real canteen management. This is an effort to achieve the school's aim of fostering entrepreneurial honesty, determination, and bravery of the students, so they will receive not only theoretical but also experiential learning.

The students are taught to care about the hygiene of the canteen space and learn the characteristics of food that is safe for consumption, the techniques to serve safe, hygienic, and healthy food, and how to manage the cash flow of the canteen. To attract the interest of the school community to shop at the school canteen, the canteen area



is divided into two sections. The northern area has tables, chairs, and several food stalls just like a typical school canteen, while the southern area resembles a mini café with a particular food ordering system. The supply of snacks to the canteen is from the students' parents, the teachers, and residents around the school, but they have to ensure that the snacks sold meet the health requirements. Meanwhile, the main meals and other additional snacks are prepared by the students of CBT who major in the culinary arts with the help of some teachers and facilitators.

The school formed a canteen management team that had received training on canteen supervision from the relevant parties. The canteen is led by a manager who oversees the overall canteen management and finances. The manager is assisted by 1) an entrepreneurship teacher who is assigned to coach the students of CBT Entrepreneurship; 2) a hospitality teacher who supervises the management of food and the canteen facilities; 3) a culinary arts teacher who guides the food preparation process; 4) a physical education teacher who is responsible for food quality control; and 5) the school health program team that monitors food hygiene and the canteen's sanitation.

Everyday, the assigned teachers supervise the school canteen's management and provide guidance. This is important to comply with the school's rule which prohibits the selling of packaged foods or beverages containing preservatives or other hazardous substances.

All activities at the canteen are centered on the students, who receive direction and guidance from the teachers or other relevant parties.

The implementation of our healthy school canteen is also supported by a school garden, which is located on the fifth floor. This garden produces various vegetables to be supplied to the school canteen. Just like the school canteen which involves the students in its operation, all activities in the school garden, ranging from seeding, tending the plants, to harvesting, are performed by the students under the teachers' guidance.



In the framework of the healthy school canteen implementation as elaborated above, our school has taken the following steps:

- Assigning teachers and staff to attend training programs and seminars organized by the relevant parties regarding the Healthy School Canteen in order to gain insights that can be applicable to our school.
- Establishing a Healthy School Canteen Control Team

Results Achieved

Our school canteen has been operating optimally. The students enjoy the practical learning process on how to manage a canteen. More importantly, the school canteen is helpful for the students and the whole school community to fulfill their needs for food and beverages.

The students also enjoy the benefits of managing the school garden as they gain an understanding of the vegetable production chain from the school garden to supply ingredients for the school canteen.

However, the management of the canteen does not always operate smoothly. Some issues still arise in the supervision process, such as:

- Student's lack of knowledge regarding the healthy school canteen, lack of sense of responsibility towards the school canteen facilities, and lack of financial management skills
- Customers' (i.e. students and the school community) orientation that the food must be "cheap and fulfilling"
- The high number of street vendors around the school who offer cheap and delicious food at the expense of safety and hygiene
- The cashier's multitasking as a food handler sometimes



To mitigate those issues, our school has expended the following efforts:

- Holding public lectures and training programs about food safety, sanitation, and balanced nutrition attended by the teachers, the students, and the school canteen personnel
- Holding continuous discussions on the Healthy School Canteen with the school community to earn their full supports and trust that the foods sold at the school canteen are healthier than the ones sold by the street vendors
- Accommodating all aspirations of the school community regarding the healthy canteen (e.g. facilities, utilities, menus)
- Establishing “e-canteen” as a financial transaction platform
- Increasing collaborations with relevant agencies, such as the local Public Health Center (PHC), local Agency of Drug and Food Control, local Health Office, local Education Office, and SEAMEO RECFON, to receive continuous guidance for and supervision over the school canteen

C Nutrition Education for Students and the School Community

BP 6: Nutrition Education for the School Community with No School Canteen

Background

In Indonesia, a large number of schools have no canteen facilities. Thus, in order to meet their nutritional needs, especially for breakfast and lunch, the school community would usually buy foods from canteens run by residents around the school area or the mobile food vendors who commonly stop by near the school during the lunch break.



Despite the absence of canteen facilities, the school must stay committed to maintaining the health of the school community. This includes ensuring the safety and nutritional contents of the foods sold by these external canteens and the mobile food vendors.

In particular, the leadership of the school principal is needed to meet the optimum health standards for the school community. One of the ways to achieve it is by providing a healthy school canteen. The principal may play the role of a motivator, initiator, mobilizer, and policymaker.

As a motivator, the school principal must be able to motivate the overall school community regarding the importance of a healthy school canteen. As an initiator, the school principal must initiate the establishment of a healthy school canteen by involving the whole school community. As a mobilizer, the school principal should act as the driving force behind the sustainability of the healthy school canteen. Finally, as a policymaker, the principal must formulate policies to continuously support the implementation of the healthy school canteen.

If there is no canteen facility at all, the principal's role as a policymaker is vital. Policies can be developed and implemented to run nutrition education programs for the school community. This way, it is expected that the school community will be more aware of the importance of consuming safe, healthy, and nutritious foods and beverages. Besides, they are expected to be able to protect themselves against unsafe and unhealthy snacks.

Challenges and Early Conditions

Located in a village in Bogor, all of the four senior high schools here have no canteen facility, given the limited space and the lack of human resources. In general, schools with no canteen facility are those recently established schools (<10 ten years) and have fewer than 300 students. For these schools, developing new classrooms is more prioritized over developing a school canteen.



Usually, schools with no canteen facilities rely on external canteens and street vendors (who sell food during the lunch break only) around the school area. The existence of this external canteen – as we call them collectively – significantly helps the school community to fulfill their nutritional needs, especially senior high school students who already have certain preferences for which foods and beverages to consume and require a relatively high energy intake after carrying out intense learning activities at school.

An external canteen is usually managed in a traditional manner in which the owner, the manager, and the seller are family members (i.e. run by a husband, a wife, and their children). The only existing facility at the external canteen is mostly a garbage bin with no separation between organic and inorganic waste. Hand washing facilities are mostly not available. Under such a circumstance, students have to wash their hands in the school toilet located far from the canteen. Furthermore, an external canteen has a limited seating area, so students would usually bring the food they buy back to the school.

Other than the school community, the external canteen also caters to the nutritional needs of the general public. Unfortunately, due to its unhygienic environment (i.e. located near a henhouse and goat pen), many insects, such as flies, are swarming around, possibly contaminating the foods and beverages served without a cover.

Some of the challenges faced by the external canteen are:

- The canteen manager is not qualified to operate a school canteen, and this has hindered the establishment of a healthy school canteen
- Partnerships with the authorities, such as the local Public Health Center and the local Education office, which may provide guidance and supervision, are lacking
- The structure of the canteen management and the supervisory team for the canteen menus have not been established
- The canteen's location is within the perimeter of the house of the canteen's owner



Steps Taken

Developing a school canteen requires substantial funds and other resources, yet the existing resources are usually prioritized for other needs. Therefore, our school has adopted a short-term policy focusing on nutrition education programs for the students by:

1. Engaging some teachers in Training-for-trainer (TOT) activities which are related to nutrition and health for adolescents
2. Providing socialization of the output of the TOT activities to other teachers
3. Discussing the importance of a school canteen that provides safe, healthy, and nutritious food and beverages through:
 - Socialization sessions for the teachers during regular meetings
 - Socialization sessions for the students during the teaching of relevant subjects and other activities outside the class
4. Reminding the school community of the importance of having breakfast regularly
5. Conducting a cooking and poster-making contest on the theme of balanced nutrition
6. Persuading the external canteen's manager to provide safe, healthy, and nutritious food and beverages

Results Achieved

1. Our school regularly conducts a breakfast program together with the school community at least once a month (generally on the 17th day of each month)
2. The school community has started to regularly bring food and beverages from home for lunch. This is particularly evident in those who perceive that the food and beverages sold at the external canteens around the school are unsafe and unhealthy
3. We continuously educate the school community on nutrition and health as an additional flagship program of our school



Follow-Up Plans

The next steps to be taken are:

1. To establish partnerships with the local relevant agencies (e.g. the Public Health Center, the Education office)
2. To train the managers of the external canteens to improve the quality of food sold there. This kind of trainings can be delivered by the staff from the nearby Public Health Center at the request of our school
3. To create a structure of management or a working group responsible for the management and supervision of the external canteens
4. To develop a proposal for the establishment of our own school canteen

Manfaat Kantin Sehat Sekolah terhadap Citra Sekolah

The realization of a healthy school canteen is the achievement of the overall school community. It may also involve other parties, such as parents, the alumni, business sector, and other relevant agencies. The school principal is a key person in this effort. Undeniably, the realization of a healthy school canteen will bring benefits in the future, which may become a benchmark for success of a school principal, such as:

1. *To establish partnerships with the local relevant agencies (e.g. the Public Health Center, the Education office)*
2. *To train the managers of the external canteens to improve the quality of food sold there. This kind of trainings can be delivered by the staff from the nearby Public Health Center at the request of our school*
3. *To create a structure of management or a working group responsible for the management and supervision of the external canteens*
4. *To develop a proposal for the establishment of our own school canteen*



BP 7: Highlighting the Need for Safe, Healthy, and Nutritious Food from the School Canteen for School community

Background

In addition to meeting the students' nutritional needs and developing their character, the school canteen functions as an economic business unit. The operation of a school canteen depends on the availability of food and demand from customers. The saying that "a customer is a king" indicates that the canteen manager should offer food which suits the customers' taste. If customers are satisfied, it is likely that the school canteen can increase sales and gain more profits.

Nevertheless, the concept of a healthy school canteen which revolves around the provision of safe, healthy, and nutritious food to create long-term impacts on health does not seem to be fully understood by the community, who opts for "cheap and also tasty" foods and beverages. Safe, healthy, and nutritious food is often perceived to be expensive. Such an assumption may hinder the progress of a healthy school implementation as it may reduce customer traffic to the canteen.

Therefore, the school needs to take an initiative to increase the understanding of the school community and the society regarding safe, healthy, and nutritious food and the roles of a school canteen in providing foods which meet health requirements. Using the DEPPIS (Demand, Supply, Policy, and Information System) framework in the Nutrition Goes to School (NGTS) program by SEAMEO RECFON, demand for safe, healthy and nutritious food should be encouraged among the school community, particularly the students.

Challenges and Early Conditions

The implementation of a healthy school canteen will never be free from issues and obstacles. Our school's foundation has sustained various challenges in managing different educational levels of schools, ranging from kindergarten to high school. Issues and obstacles arise, given the various socio-economic backgrounds of the students, the



number of students, and the different environments they live in Jabodetabek (Jakarta, Bogor, Depok, Tangerang, and Bekasi).

One of the obstacles highlighted is the quality of the food menu at our school canteen. It is a classical issue when the foods sold do not apply the principle of balanced nutrition. The one-dish meals often found at the school canteen are a set of rice and side dish (fried chicken), fried rice, fried noodle, and other meals without vegetables.

Meanwhile, the Guidelines for Healthy Canteen Management stipulate that the canteen manager shall provide vegetables in every one-dish meal. Whenever the school's management confronted the canteen manager regarding the food menu, the typical answers given by the canteen manager were:

- The existing food menu suits the customers' taste
- Vegetables were previously served, but the students would usually set the vegetables aside or throw them away. Thus, the canteen manager chose to remove the vegetables from the menu, instead of wasting them.

Steps Taken

The efforts we made to influence the demand factor include performing supervision and education on nutrition and health. We hope that increasing students' knowledge will lead to a behavioral change so that they will choose nutritious and healthy food at the school canteen.

We understand that providing knowledge of the students must be done comprehensively and continuously. The students' knowledge on nutrition gained at school should also be revised at home and vice versa. Therefore, we provide guidance and education not only for the students but also for the teachers and the students' parents.

The guidance and education performed are:



For the Students:

1. Integrating the materials on balanced nutrition and health into various subjects at school
2. Incorporating the materials on balanced nutrition in the "Peer Educator" training on health for junior-senior level students
3. Incorporating the materials on nutrition in the Life Skill Education materials for the elementary students
4. Incorporating the materials on the healthy school canteen in the program of Students as Health Assistants
5. Developing various EIC materials, such as posters and merchandises containing health messages, especially nutrition, and putting them up at many locations
6. Creating an intervention program for overweight-obese children at the elementary school level by involving the students and their parents/family

For the Teachers:

1. Increasing the knowledge of the school health program teachers on balanced nutrition through periodical coaching and trainings
2. Holding discussions on the guidance and supervision of the school canteen during the coordination meetings for the school health teachers in each semester
3. Conducting seminars on nutrition and health for all the school principals and vice principals from the kindergarten level to the senior high school level, as well as the structural officers at the school's foundation
4. Organizing visits to the hospitals which have specific nutrition programs to be attended by the teachers responsible for the overweight-obese children at the elementary level



For the Parents:

1. Conducting a seminar on “the Importance of Balanced Nutrition for Child Growth and Development” for parents from the kindergarten level to the senior high school level
2. Involving the parents of overweight-obese elementary students in family sports activities as part of the pilot intervention project

Results Achieved

The roles of teachers:

1. Delivering materials on nutrition and health to increase students' awareness and stimulate them to change their eating habits according to the principles of balanced nutrition
2. Performing daily regular supervision of the canteen by providing feedback, either directly to the canteen manager or through the Building Management Department (the department handling the canteen's facilities and utilities)
3. Completing the canteen supervision questionnaire regularly as a basis of evaluation for improving the canteen
4. Becoming role models for students in choosing nutritious food at the school canteen

By providing guidance and educational activities in implementing the healthy school canteen, we managed to optimize the involvement of various parties, including the teachers, the students, and the parents.



The roles of students:

1. Providing input for the school canteen to the school health program teachers through the program of Students as Health Assistants
2. Completing the canteen supervision questionnaire regularly as a basis of evaluation for improving the canteen

roles of parents:

3. Developing the students' habit of choosing nutrition-balanced food at home and at the school canteen
4. Providing input to the school for improving the school canteen management

D Canteen Supervision and Guidance System

BP 8: School Canteen Working Group to Supervise and Protect Consumers

Background

Supervision and guidance on the canteen management are vital for the operation of a school canteen. The supervision and guidance shall be performed by the canteen manager and the food handlers. An internal school canteen guiding and supervisory team, which usually consists of the school teachers and/or employees, is required. Meanwhile, external guidance and supervision shall be performed by the local Public Health Center and the Education Office. The internal guiding and supervisory team usually receives periodical training and guidance from the Public Health Center (PHC) and/or the Education Office. Furthermore, the internal and external supervisory teams



should work hand in hand from time to time to determine the work programs and their respective roles and responsibilities.

A Public Health Center in Indonesia is a unit responsible for implementing health development in a given area. Offering the first level of health services, the Public Health Center shall provide health services comprehensively, integrally, and continuously, covering individual and health services. As part of health development activities, the Public Health Center also performs the public health promotional efforts.

The cross-program role of the Public Health Center, such as health and environmental promotions, usually entails collaboration with schools to intervene and provide health counseling to the students, teachers, and other elements of the school community regarding hygienic and healthy lifestyle at school, including issues on the healthy school canteen.

Challenges and Early Conditions

In performing their guiding and supervising role, health personnel from the local Public Health Center would visit the school to share knowledge and provide guidance on health in general. From the visits, it turns out that these guiding and supervising roles cannot be undertaken alone by the Public Health Center staff as the external team; instead, it should be supported by an internal team. As the local PHC has limited personnel, they cannot monitor the operation of the school canteen every day.

Steps Taken

During the periodical visits by the local PHC, our school and the PHC established a school canteen working group through the Intra-School Student Organization. Members of the working group are students of grades VII and VIII, totaling 16 students from 16 classes. The roles and responsibilities of the working group are performed under the guidance of a coordinating teacher.

The members of the canteen working group had been trained before performing their duties. The training materials were presented by the local PHC team and the school's guiding team, covering various topics, such as hygienic lifestyle and the healthy



school canteen. The canteen working group has been authorized to participate in the formulation of the healthy canteen's procedures and operations.

The aim to establish the canteen working group is to have a consumer protection and individual supervision team that ensures consumers' convenience and safety in obtaining clean, healthy, and halal snacks.

Results Achieved

Aligning with the school's commitment to developing a healthy school canteen, our school has identified the focus of supervision to be carried out by the canteen working group, as follows:

- monitoring the physical appearance of tenants
- monitoring the types of food, beverages, and snacks (i.e. making sure that there is no striking color or pungent smell and that they look fresh and safe for consumption)
- checking the methods in serving food and beverages (e.g. if styrofoam and/or a plastic container is used) to meet our school's commitment to reducing garbage
- checking the use of additional ingredients, such as ice cubes, sauce, and coloring and flavoring agents

To support the role of supervision performed by the canteen working group, our school has also implemented the procedures for canteen vendors/tenants as follows:

1. Food or beverages delivery must be done before or after school hours in the school's backyard
2. The vehicles should be parked in the provided area
3. Smoking is prohibited on the school premises
4. Vendors/tenants must dress in a neat, clean, and polite manner



5. Food or beverages sold must:

- Not be the foods and beverages prohibited from selling by the government
- Not yet be expired
- Not contain melamine
- Not contain formalin
- Be packed in a good condition
- Be clean and healthy
- Be sold at affordable prices

To achieve sustainability, the canteen working group is assisted by another party, which is the hygiene working group that is tasked with disposing of and sorting out the garbage.

The results of the monitoring activities are recorded, analyzed, and then discussed with the coordinating teacher. Next, the findings are submitted monthly to the canteen's management, the principal, and the PHC to be followed up with coaching.

On February 17, 2016, the local PHC provided counseling on creating a healthy environment for the food handlers at the school canteen. This activity aimed to increase their knowledge and understanding regarding the food hygiene and sanitation regulations at the school canteen. It is expected that any foods processed and served by food handlers are safe for consumption.

Follow-Up Plans

Our next agenda is to collaborate with the relevant agencies, such as the National Agency of Drug and Food Control and the Council of Indonesian Ulema, to implement a healthy and halal canteen. Every vendor at the school canteen should receive training and have an understanding of the hygienic, healthy, and halal canteen. If necessary, every vendor and canteen staff should obtain a hygienic, healthy, and halal canteen certification.



Punishment should be enforced on any violations against the canteen procedures, ranging from a verbal warning, a written warning, to a termination of lease/contract of the school canteen. This is important as the canteen's consumers and the overall school community have the rights to receive proper services and protection.

BP 9: Hygiene and Sanitation Training from the Academics for School Canteen Food Vendors

Background and Challenges

Generally, in Indonesia, food vendors at the school canteen obtain only a low level of formal education. Their knowledge on food processing is usually gained from their friends, parents, or family. They are typically able to identify the types of food favored by students, choose raw ingredients, prepare food, store food, process food, and serve food. However, only a few vendors have the knowledge and capability to produce food which meets the food safety regulation.

Another issue is the quality of the food ingredients used. Many of them fail to meet the health requirements, for example, selling food which contains hazardous chemicals, such as formalin, borax, heavy metal, or textile dye. Ideally, food vendors must be well-informed about the types of hazardous chemicals or any food ingredients that may be potentially contaminated by hazardous chemicals and their impact on health.

Some other food vendors have received training on the safety of foods and beverages. However, such training is usually not followed up with further practice and, thus, does not offer continuous learning. This is due to the lack of support and commitment from the school regarding training activities. Therefore, the whole school community, including the principal and the teachers in charge of the school canteen, need to receive similar training so that they all will have a shared vision on the importance of a healthy canteen.

In the implementation, the topics may differ between the training for the school teachers and the one for the food vendors. Nevertheless, as a basic rule, the materials



must sufficiently equip them with the necessary knowledge and skills in producing healthy and hygienic food at the canteen.

Academics teaching at a college, university, or polytechnic are stakeholders who bear a certain mission in public education, training, and development in various fields, including food, nutrition and health. Therefore, they may be involved in the canteen development, particularly to provide training and counseling in collaboration with the local PHC and the local Agency of Drug and Food Control.

Steps Taken

1. Contacting academic institutions nearby the school which have competence in food, nutrition, and health topics.
2. Identifying the topics needed
 - Roles of the school canteen
 - Types of food hazards: bacteria, microbes, hazardous chemicals, physical hazards
 - The health effects of consuming contaminated food
 - Food safety and hygiene: food selection, preparation, storage, and serving
 - Individual hygiene of the food handlers and vendors
 - Roles of the school canteen in character building, health education, and student's health status
3. Identifying the number of participants to attend the training. The number of participants would affect the learning media, learning tools, and space needed. To ensure a two-way communication during the training, the maximum number of participants shall be 20 people.
4. Determining the learning tools and media. As food handlers generally lack formal education, it might be better to use attractive educational media, such as colorful posters and brochures with capital letters or colored images. The PHC usually has educational tools that can be utilized during the training and counseling.



5. Agreeing on the schedule of the training. The duration is usually 2-3 hours, possibly after office hours. Alternatively, the training can be conducted during their working hours, yet they should receive compensation for leaving their work.
6. Appointing the training personnel. Lecturers or teaching staff are competent persons in providing training. College students who have completed a particular studying period may also become the trainers. The training can be carried out as part of a community service program or as a public development activity.
7. Encouraging participation in discussions during the training. Food vendors with low formal education may be reluctant or shy to ask questions, so the trainers should stimulate discussions by asking questions or raising issues through games or brainstorming activities.
8. Conducting an evaluation. Some critical questions in the form of right or wrong statements or multiple choices may be asked to the participants before (pre-test) or after the training materials are given (post-test). This is to understand the effectiveness of the training in increasing the knowledge of the food vendors.

Results Achieved

It turned out that most of the food vendors received that kind of training for the first time. They felt appreciated when they were given a training certificate and involved in the healthy canteen development activities.

After the training session, they realized that their unhygienic behavior must be changed. The improvement in behavior showed by the food vendors includes:

- using an apron
- maintaining personal hygiene
- washing hands with soap after using the toilet
- using clean cooking utensils
- avoiding environmental contamination

- 
- using safe ingredients (free from hazardous chemicals)
 - using clean and safe food containers
 - storing and serving food properly

In addition to maintaining personal hygiene and sanitation, some of the food vendors required new utensils, such as:

- aprons
- tongs
- a sufficient quantity of clean rags to be replaced every day
- plastic or other containers to cover the food and beverages

However, they also pointed out some obstacles in improving their behavior, which were mainly related to the existing facilities at the canteen. This problem requires the school's direct role. Thus, after the training, the school needed to provide:

- hygienic and sufficient water supply to wash hands, clean the cooking utensils, and clean up the canteen area
- easily cleaned cabinets for storing cooking utensils
- transparent food display cabinets or food containers with covers for serving food at the school canteen

Further Activities

Refreshment training is necessary to be conducted every once in six months. Although the food handlers or vendors may possibly be replaced by new personnel, it is an effort to motivate the previous food handlers and vendors to keep practicing hygienic behavior.



On the other hand, food retailers and street vendors selling food outside the school often pose a challenge. Nevertheless, the school's commitment to developing a healthy canteen should also involve these external food providers, for example, by providing similar training and counseling for those food retailers and street vendors. This way, this activity can strengthen the commitment of the overall school community and the neighborhood.

BP 10: The Role of the Public Health Center in Providing Guidance on Food Safety and School Healthy Canteen

Roles of the Public Health Center

As set out in the Regulation of the Minister of Health Number 13 of 2015 on the Implementation of Environmental Health Services at the Public Health Center (PHC), it plays a role in performing activities related to environmental health, such as counseling, environmental health inspections, and/or environmental health interventions. In particular, the school canteen is one of the PHC's priorities in providing environmental health services.

The PHC is an extension of the Health Department in food safety supervision at the school level. Therefore, any activities carried out by the PHC should be aligned with the activities of the Health Department. The PHC also acts as a guiding team (external supervisor) of the food safety at school in its working area to prevent food poisoning at school.

Activities Performed

The activities performed by the Public Health Center are as follows:

1. Monitoring the level of hygiene and sanitation at the school canteen
2. Giving education and guidance to canteen vendors on food hygiene, sanitation, and healthy food

- 
3. Giving education and guidance to students, teachers, and the school's staff on balanced nutrition and food safety
 4. Conducting trainings for the program of Students as Health Assistants
 5. Inspecting any snacks or foods which are indicated to contain dangerous food additives, such as formalin, borax, metanil yellow, and rhodamine B
 6. Sending the food samples suspected of containing dangerous chemicals and bacteria to the regional health laboratory for inspection
 7. Guiding the students in choosing food through direct inspections of snacks and foods which are indicated to contain dangerous food additives
 8. Guiding the school canteen vendors that sell food containing dangerous additives
 9. Organizing a healthy school canteen contest
 10. Running a food safety program with a 1-star award

Challenges

Due to the limited human resources and funds, the guidance and supervision by the Health Department or the Public Health Center cannot be performed simultaneously at all schools every year. Thus, the guidance and supervision are performed by rotation based on the working area. It takes approximately 2-3 years for the Public Health Center to supervise all schools located within its working area. Unfortunately, food poisoning may occur at any time due to poor hygiene practices in food processing.

The challenges often faced by the Public Health Center officers in performing supervision and guidance activities are:

1. The external food retailers and street vendors are often moving around, making it difficult to guide and monitor them.



2. If there is food indicated to contain dangerous food additives from the market, it is necessary to find the source. However, due to the limited human resources, this step is not yet taken as the Public Health Center officers must also carry out their guidance and supervision duties in other areas.
3. In the case of food suspected to contain illegal food additives, the source is usually outside of the responsibility of regional authorities. Hence, there is no authority who can intervene, making it difficult to perform cross-border coordination.

Collaboration with Other Parties

The roles of guidance and supervision over the school canteen operation should be understood and performed collectively by all relevant parties.

The school principal holds a key role in establishing an internal guiding and supervisory team consisting of the school teachers and/or employees who have received adequate training on the healthy school canteen. The school may independently act on any failure in the supervision of the school canteen, while waiting for visitation from the Public Health Center. If there is a deviation from the requirements, the school shall provide guidance according to its capability through the internal team.

Another relevant agency in addition to the Public Health Center and the Health Department is the Education Department. The regional government also plays a role in issuing regulations and sanctions relevant to the health interest of the general public. At the household level, parents and the surrounding communities also need to be equipped with the basic knowledge on food safety and hygiene. The collaboration between all of those parties should provide a sound basis for students in choosing safe, healthy, and nutritious food and snacks.

Roles of the Health Department and the Public Health Center	Roles of the Education Department
<ol style="list-style-type: none"> 1. Food supervision 2. Supervision of the cooking and eating utensils 3. Supervision of the use of Personal Protective Equipment (PPE) 4. Supervision of waste and garbage 5. Supervision of vectors 6. Supervision of the implementation of hygienic and healthy behavior 7. Guidance for the school community 	<ol style="list-style-type: none"> 1. Provision of the canteen facilities 2. Formation of a food safety team at the school level 3. Recruitment of the food vendors 4. Selection of the types of food offered 5. Supervision of the canteen operation 6. Guidance for the human resources managing the canteen

Any guidance and supervision activities at the school canteen should be performed continuously by involving all parties in order to meet the set expectations, which are the provision and consumption of safe, healthy, and nutritious food for the school community, particularly the students as the nation's future generation.

E Partnerships

BP 11: Increasing the Awareness of Food Vendors through Collaboration with the Academics and the Health Department

Background

Competent human resources constitute one of the four pillars of a healthy school canteen, yet many schools still face a shortage of capable human resources. Generally, the canteen manager lacks the understanding of the basic principles of food safety, environmental hygiene and sanitation, and balanced nutrition.

The school definitely cannot address those issues alone. As an educational institution, the school can seek collaboration opportunities with the relevant and competent parties to provide guidance and supervision for the canteen management regularly.



Challenges and Early Conditions

Our school is located on the village's outskirts, situated between the teak wood and sugar cane plantation in the northeast of Malang District. Our school area spans across ± 5 hectares, with 1,234 students. Given the considerable number of students, our school's facilities and utilities are still considered inadequate, including the school canteen facility. The size of our school canteen is ± 72 m². It consists of four stalls with a size of 2x3 m² each. The buildings are made of fine walls and ceramic floors. The canteen is located away from other buildings, including the toilet, the restroom, and the garbage bin, but it is connected to a large yard.

Originally, our school canteen only provided fast food, beverages, and snacks to fulfill the students' needs, so the canteen vendors were recruited without any selection health criteria. They commonly came from the village around the school. Generally being simple-minded, they did not understand any adverse health effects of unhealthy food, beverages, and snacks. They could only think about the strategy to sell as many products as possible to obtain as much profit as possible.

At that time, our school did not set any regulations regarding the quality of the food and beverages sold at the canteen. We only prohibited the canteen vendor from selling similar products to avoid unfair competition.

Steps Taken

Our school finally realized the urgency to improve the school canteen. The first step taken was providing training and guidance on relevant topics in collaboration with several institutions, such as SEAMEO RECFON, the State Health Polytechnic of Malang, and the Health Department Office of Malang District.

During the training and guidance sessions, a lot of materials were delivered to the food vendors. Initially, it was hard for the vendors to change their way of thinking. However, with the help of students, we kept supporting, reminding, and monitoring their progress.

The school and the canteen vendors also entered into an agreement with a number of specific clauses. If there is a violation (e.g. food vendors still selling the prohibited food), then the school will inflict the following punishments:

- First violation: Issuing a verbal warning
- Second violation: Issuing a warning letter (i.e. the relevant food vendor shall write a statement that she/he will no longer sell the prohibited food)
- Third violation: Terminating the contract

Results Achieved

After receiving education and attending training from competent institutions, the canteen vendors can now understand the types of food that is allowed and not allowed to be consumed by the students.

Their renewed understanding has convinced them to start providing healthier and nutritious food and beverages. They began to provide selected snacks, such as traditional snacks unknown to most students as they tend to prefer packaged snacks. The canteen vendors also started to sell non-carbonated, non-strongly flavored, non-strikingly colorful beverages. Besides, they no longer serve fast food, such as instant noodles. To provide freshly made food, the canteen vendors cook and process the food directly at their stall. Thus, the food can be consumed by customers immediately. The vendors also pay attention to the canteen's hygiene by separating the packaged food from freshly made or ready-to-eat food. To serve the food, they use clean equipment, such as tongs and lids for ready-to-eat food.

However, there is always a possibility that the vendors will resume their previous behavior (i.e. selling prohibited food and beverages). Therefore, the school should always monitor and remind them of the concluded agreement. Our school performs regular monitoring at least once a month, assisted by well-trained students. At our school, we uphold the slogan of "ASIK" (an acronym in Bahasa Indonesia which translates as Active, Healthy, Smart, and Creative), which is an output of prior research conducted in collaboration with SEAMEO RECFON. The students are trained to be health agents who are responsible for inspecting the food, beverages, and snacks sold at the school canteen once a week.



Follow-Up Plans

To ensure the continuous guidance of the school canteen and to meet the healthy school canteen standards, in the future, our school intends to increase collaboration with the State Health Polytechnic of Malang and the local Public Health Center in maintaining regular guidance and supervision over our school canteen.

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Appendix

Appendix 1

Guidelines and Books Relevant to the Healthy School Canteen

The download links should be specific to the PDF file of the book concerned. It is necessary to include the RECFON module book, either the Elementary School or the Teenager one.

No	Title	Agency	Year
1	The Book " <i>Gizi dan Kesehatan untuk Remaja</i> "	SEAMEO RECFON & Ministry of Education and Culture	2016
2	The Book " <i>Gizi dan Kesehatan Anak Usia Sekolah Dasar</i> "	SEAMEO RECFON & Ministry of Education and Culture	2016
3	Guidelines for the Operation of Healthy Canteen at Elementary School	Direktorat of Elementary School Guidance, Directorate General of Elementary and Secondary Education, Ministry of Education and Culture of the Republic of Indonesia.	2016
4	The Book " <i>Panduan Higiene Sanitasi Pangan di Sekolah dengan Metode Partisipator</i> "	Direktorat General of Public Health of the Directorate of Environmental Health	2016
5	Training Modules for Facilitators of Increased Food Hygiene and Sanitation at School	Direktorat General of Public Health of the Directorate of Environmental Health	2016

No	Title	Agency	Year
6	The Book "Pedoman Pangan Jajanan Anak Sekolah untuk Pencapaian Gizi Seimbang (Orang Tua, Guru, Pengelola Kantin)"	National Agency of Drug and Food Control of the Republic of Indonesia	2013
7	The Book "Keamanan Pangan di Kantin Sekolah"	National Agency for Drug and Food Control of the Republic of Indonesia	2012
8	The Book "Pedoman Pangan Jajanan Anak Sekolah tentang Cemaran"	National Agency for Drug and Food Control of the Republic of Indonesia	2012
9	The Book "Pedoman Pangan Jajanan Anak Sekolah untuk Penggunaan Bahan Tambahan Pangan"	National Agency for Drug and Food Control of the Republic of Indonesia	2012
10	The book "Menuju Kantin Sehat Sekolah"	Directorate General of Elementary Education, Ministry of National Education	2011
11	Guidelines for Food Safety at Elementary School	Directorate of Mother and Child Nutrition and Health Guidance, Ministry of Health of the Republic of Indonesia	2011

Appendix 2

Procedures for Simple Testing of Food Samples

Some additives prohibited from use in food are boric acid and sodium tetraborate decahydrate (borax), formalin, and benzoic acid. Procedures to perform simple tests for borax, formalin, and benzoic acid, are as follows:

Tools and Materials

Tools

- | | |
|-----------------------|----------------------|
| 1. Mortar | 6. Drop Plate |
| 2. Test Tube | 7. Beaker |
| 3. Graduated Cylinder | 8. Pipette |
| 4. Clamp | 9. Filter paper |
| 5. Stirring Rod | 10. Erlenmeyer Flask |

Materials

- | | |
|-------------------|--|
| 1. Aquades | 10. Cracker |
| 2. Meatball | 11. Turmeric extract |
| 3. Sausage | 12. Formalin |
| 4. Instant Noodle | 13. Borax |
| 5. Salty Fish | 14. Glacial acetic acid (CH_3COOH) |
| 6. Tofu | 15. KMnO_7 |
| 7. Sauce | 16. FeCl_3 |
| 8. Canteen noodle | 17. NaOH |
| 9. Packed tea | 18. NH_3 |

Work Method

Borax Test

1. Take a sample from the food ingredient for testing.
2. Put each food in two points on the drop plate.
3. Add 5 drops of turmeric extract to the first food.
4. Add 5 drops of the borax solution to the second food.
5. Observe the color change in the food.
6. If the food which the borax solution is dropped changes color to red or deep red, it means the food contains borax.

Formalin Test

1. Boil a sample from the food ingredient for testing.
2. Split the boiled water from the food ingredients into 2 test tubes.
3. Insert 2 ml of each solution into the test tube.
4. Heat the first solution for 1 - 2 minutes while adding 5 drops of acetic acid glacial (CH_3COOH) and 5 drops of KMnO_4 , respectively.
5. Add 5 drops of formalin into the second solution.
6. Observe the changes occurring in each solution.
7. If there is any dark deposit in the solution to which the formalin is dropped, it means the food contains formalin.

Benzoic Test

1. Insert 5 ml of beverage into the test tube.
2. Add 5 drops of NaOH and 5 drops of NH_3 to the beverage.
3. Boil the solution above the erlenmeyer flask and hold it using the test tube clamp.
4. Filter the solution using the filter paper.
5. Add 5 drops of FeCl_3 into the filtered solution.
6. Observe the changes occurring in each solution.
7. If there is a salmon deposit formed on the solution, it means the beverage contains benzoic.

Source: Chrismawati, 2014

Appendix 3

Table of Indonesia's Recommended Dietary Allowances for School-Aged Children and Adolescents

Age Group	Weight (kg)	Height (cm)	Energy (kcal)	Protein (g)	Fat (g)			Carbohydrate (g)	Fiber (g)	Water (mL)	Vitamin A (mcg)	Vitamin D (mcg)
					Total	n-6	n-3					
Children												
7-9 years	27	130	1.850	49	72	100	9	254	26	1.900	500	15
Boys												
10-12 years	34	142	2.100	56	70	120	12	289	30	1.800	600	15
13-15 years	46	158	2.475	72	83	160	16	340	35	2.000	600	15
16-18 years	56	165	2.675	66	89	160	16	368	37	2.200	600	15
Girls												
10-12 years	36	145	2.000	60	67	100	10	275	28	1.800	600	15
13-15 years	46	155	2.125	69	71	110	11	292	30	2.000	600	15
16-18 years	50	158	2.125	59	71	110	11	292	30	2.100	600	15

Age Group	Vitamin E (mg)	Vitamin K (mcg)	Vitamin B1 (mg)	Vitamin B2 (mg)	Vitamin B3 (mg)	Vitamin B5 (mg)	Vitamin B6 (mg)	Folic (mcg)	Vitamin B12 (mcg)	Biotin (mcg)	Choline (mg)	Vitamin C (mg)
Children												
7- 9 years	7	25	9	11	10	30	10	300	12	12	375	45
Boys												
10-12 years	11	35	11	13	12	40	13	400	18	20	375	50
13-15 years	12	55	12	15	14	50	13	400	24	25	550	75
16-18 years	15	55	13	16	15	50	13	400	24	30	550	90
Girls												
10-12 years	11	35	10	12	11	40	12	400	18	20	375	50
13-15 years	15	55	11	13	12	50	12	400	24	25	400	65
16-18 years	15	55	11	13	12	50	12	400	24	30	425	75

Age Group	Calcium (mg)	Phosphor (mg)	Magnesium (mg)	Sodium (mg)	Potassium (mg)	Manganese (mg)	Copper (mcg)	Chromium (mcg)	Ferrum (mg)	Iodine (mcg)	Zinc (mg)	Selenium (mcg)	Fluorine (mg)
Children													
7-9 years	1.000	500	120	1.200	4.500	17	570	20	10	120	11	20	1.2
Boys													
10-12 years	1.200	#####	150	1.500	4.500	19	700	25	13	120	14	20	1.7
13-15 years	1.200	#####	200	1.500	4.700	22	800	30	19	150	18	30	2.4
16-18 years	1.200	#####	250	1.500	4.700	23	890	35	15	150	17	30	2.7
Girls													
10-12 years	1.200	#####	155	1.500	4.500	16	700	21	20	120	13	20	1.9
13-15 years	1.200	#####	200	1.500	4.500	16	800	22	26	150	16	30	2.4
16-18 years	1.200	#####	220	1.500	4.700	16	890	24	26	150	14	30	2.5

Source: Ministry of Health of the Republic of Indonesia, 2013

Appendix 4

Fundraising activity ideas or resources for the development of school canteen

The following are several activity ideas or resources that can be performed to raise funds for the school canteen development:

1. Holding a seminar

This is one of the easiest methods to be performed at school. Through seminars or activities related to religious affairs, we may perform the fundraising for canteen development. This activity may also expand the knowledge of the participants. To invite more, we can send invitations, noting that we are doing fundraising, to the community around the school. Meanwhile, to be more appealing, we can invite guest speakers, such as well-known local figures, to attend the seminar

2. Holding an art activity/event

This is an effective method to be implemented for raising funds. We can do art performances in the form of dances, poems, songs, theaters, or film screenings. For this event, we need to pick an appropriate theme. For example, if we plan to raise funds for educational activities, we can apply an educational theme for poems and theaters. At the end of the event, fundraising will become the main event.

3. Holding a bazaar

For this activity, we can ask teachers, school staffs, parents/guardians of the students, and communities around the school to donate their belongings, such as used or old clothes, to the school. These items then can be sold to raise funds. The more items are donated, the more funds are collected.

4. Submitting a fundraising proposal to a particular institution

This is also an alternative way to raise funds. We can start preparing a proposal to be submitted to sponsoring institutions. We can also collaborate with organizations or companies for raising funds. Then, we need to present the proposal to the representation of the organization or company, explaining the details of the activity, including how the event would benefit the target group as well as the sponsoring organization or company. In the proposal, the rights and obligations of each party should be briefly described. The donation mechanism from the organization or the company can be in a form of an immediate aid from the social funds (CSR – *corporate social responsibility*), or from the deduction of each shopping transaction by the company's consumers.

5. Submitting a request directly to potential donors

This technique is performed by sending mails to potential donors. The letter contains a description of the planned activities, information about the school, and the proposed donation payment mechanism. For example, we can give information on our account number and a agreement form for the potential donors to fill in.

6. Telefundraising

This fundraising technique is performed by calling potential donors by phone. The call is generally made as an effort to follow-up on the sent letter or the previous meetings.

7. Direct meeting

This fundraising technique is performed by direct contact with potential donors through a dialog. We can also distribute brochures, leaflets, or other printouts to support fundraising during the meetings.

8. Sales cut

This fundraising activity may be implemented by collaborating with particular product manufacturers in a certain period of time. The donation is in a form of donation compensation for each product purchase. For example, each time a customer buys a product of food A, then IDR2.000 shall be donated for the canteen development.

9. Fundraising event

A fundraising event is an activity commonly performed for social purposes, for example, Leisure Walking for Raising Awareness, 10K Run, Leisure Cycling, etc. This event can be conducted massively, with an affordable registration fee, and the sponsors shall incur the activity implementation costs. The profit generated from this event is to be used for a social program, in this regard, the development of the school canteen.

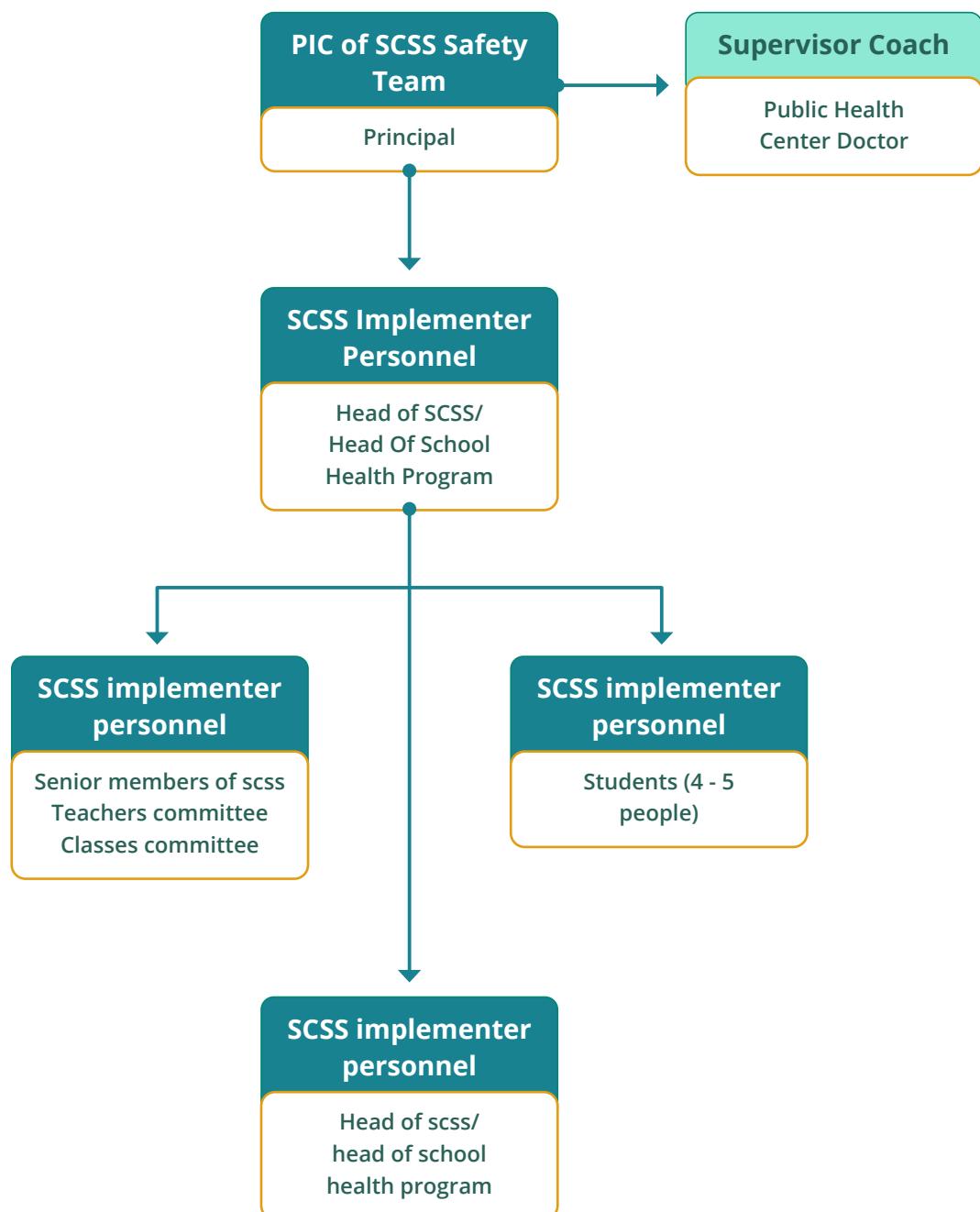
Adapted from: Enno, 2013

Appendix 5

Example of an Organizational Structure of a School Canteen

School : _____

Year : _____



Roles of Head And Members of The School Children Snack Safety (SCSS) Team

Roles of the School Principal As the Person-in-Charge

1. Ensuring that Food Safety is included in the school quality improvement program
2. Providing proper facilities, such as canteens, toilets, handwashing basins, and garbage bins
3. Together with the school, developing policies and procedures to ensure the canteen implements optimal food handling, processing, and serving practices.
4. Coordinating with the relevant agencies in the implementation of food safety at school
5. Developing policies and procedures for documenting symptoms experienced by the students when they are sick
6. Communicating to all school community the importance of complying with the food safety requirements (through the school ceremony or other events)
7. Establishing the food safety management plan formed by the food safety team
8. Procuring/enrolling the food safety team in training programs related to food safety
9. Encouraging the canteen manager to hold a hygiene and sanitation certification from the District Health Office
10. Developing and signing a commitment, for example, HEBOH (Hygienic, Economical, Clean, Home-Made, Halal) Canteen
11. Making a decree of canteen development and safety for the teachers, the canteen vendors, or the students as part of the canteen safety's task force.

Roles of Head of SCSS

The Team Leader should:

1. Lead the team and be accountable to the school principal
2. Establish the targets for activity implementation
3. Responsible for food safety implementation to run properly and according to the defined targets.
4. Evaluate food safety accomplishment.
5. Disseminate information to the parents, the canteen vendors, and the students
6. Invite resourceful speakers to expand the knowledge on canteen and healthy snack for the students' consumption.

SCSS Senior Members (Teachers)

SCSS Senior Members should:

1. Lead the procurement of safe and nutritious food together with the parents and the canteen vendors
2. Advise the students to always pick healthy snacks according to the defined criteria, either the criteria of the vendor or the criteria of snacks offered
3. Actively participate in the development of the school canteen for a more significant improvement regarding the canteen's condition
4. Conduct training for the canteen vendors.
5. Perform an internal audit of the school canteen
6. Become the school canteen supervisor

SCSS Junior Members (Students)

Junior Members (Students) should:

1. Help the SCSS senior members in the activity of procurement of safe and nutritious food together with the parents and the canteen vendors
2. Advise the students to always pick healthy snacks according to the defined criteria, either the criteria of the vendor or the criteria of snacks offered
3. Actively participate in the development of the school canteen for a more significant improvement regarding the canteen's condition
4. Become the school canteen supervisor

Roles of the Parents

1. Applying hygiene and sanitation by washing hands before handling food to the students and other family members
2. Prepare a lunch box for the students in a proper manner.
3. Identify the causes and symptoms of vector-borne diseases
4. Support policies at school

Roles of the Canteen Manager

1. Food vendors with an adequate food safety knowledge may prevent the occurrence of food poisoning from the food sold at the school canteen.
2. By complying with the food safety practices, the school canteen manager may protect the school community from health problems generated from food.

Appendix 6

Frequently Asked Questions (FAQs)

Q **What are the indicators of a healthy canteen?**

A Various relevant agencies have established various indicators to assess a healthy canteen at the school level. The experience of SEAMEO RECFON in organizing various workshops with the school, the canteen manager, and the Public Health concludes key points related to the healthy canteen indicators. This indicator can be adopted by the schools across Indonesia in accordance with the capability of the schools. A table of indicators referring to the health standards is set out on page 13 of this book.

Q **What is the healthy canteen certificate and how to obtain it?**

A A healthy Canteen Certificate is issued by the relevant government or the competent institution in verifying the implementation of a healthy canteen, whether it has been carried out properly according to the health standards. The certificate may be issued after the school evaluation results show that healthy canteen standard indicators have been adequately satisfied.

Q **What are the effects of consuming unhygienic or unsafe food?**

A In the short term, food containing borax and formalin may cause poisoning. It may also cause cancer, damage to the kidney, body circulation system, and nerve system in the long term. Synthetic food additives are also harmful if consumed for a long time and in an exceeding dosage from the standard defined by the Ministry of Health of the Republic of Indonesia and the National Agency for Drug and Food Control.

Q **How to expand the knowledge of the school community regarding nutrition and health?**

A Knowledge on nutrition and health is essential for the students and other school communities to motivate and improve their quality of life. Unfortunately, nutrition topics are not yet included in the school curriculum, causing a lowexposure to related information. Therefore, literatures on nutrition and health should be made available at the school library in various types of media. The availability of these literatures may facilitate the access to obtain relevant information needed. The collaboration between the school, the local public health center, and the academicians in receiving guidance may also be performed to expand the knowledge of the school community regarding nutrition and health.

Q **Is it necessary to provide a cash register at the cashier?**

A Yes, because money may become a source of microorganism contamination. Therefore, a cash register must be located away from the ready-to-eat window display. The person who is on duty to be a cashier should not concurrently serve food as a food handlers and/or waiter to avoid any contamination derived from the money.

Q **What are the characteristic of “unsafe” food?**

A Unsafe food is food that may cause diseases. Packaged food and beverages, particularly those with labels should be registered to the authorized institutions in obtaining the distribution license. Food products with a distribution license usually are easier to control and safe, as long as their packaging remains in good condition and does not exceed the expiry date.

However, not all food and beverage products should be registered and have a distribution license, for example, ready-to-eat food. Only packaged processed food may require the registration license. However, the ready-to-eat products are often found on the school premises and at home, e.g., cakes, cilok, jelly, flavored ice, etc.

Q Why do the school canteen operation need a supervision?

A The supervision of canteen activities at school is necessary. Various parties need to acknowledge the implementation, the challenges, and proposed solutions to address the issues of the school canteen. An effective supervision can generate a collaborative effort to operate the school canteen according to plan.

Q How would the School Canteen supervision be implemented?

A The internal supervision shall be conducted regularly by the teachers or teams appointed by the school principal. Meanwhile, the external supervision may be performed through a collaboration between the school and the local public health center.

Healthy School Canteen

DEVELOPMENT



Jakarta: *Southeast Asian Ministers of Education Organization
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