



School Lunch Project Proposal Using Log-Frame Approach

The Case of an Agricultural School in Marsella, Colombia

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List of Abbreviations

AF method: Alkire-Foster method

OPHI: Oxford Poverty and Human Development Initiative

MPI: Multidimensional Poverty Index

CMPI: Colombian Multidimensional Poverty Index

DNP: National Planning Department (Colombia)

MEN: National Ministry of Education (Colombia)

SFP: School Feeding Program

WFP: World Food Program

IFPRI: International Food Policy Research Institute

FGSF: Home-Grown School Feeding

PNAE: National Feeding Programme (Brazil)

FNDE: National Fund for Educational Development (Brazil)

ICBF: Colombian Institute for Family Welfare

FAO: Food and Agriculture Organization (of the United Nations)

SDGs: Sustainable Development Goals

LFA: Logical Framework Approach (LFA)

Abstract

My observation in Marsella was an encounter with totally a new culture and society, which gave me a number of fruitful findings for my study and for my life. Most of the students, the teachers, and all the other villagers I met in Marsella were so friendly and generous with me, they seemed to be living their lives peacefully and happily despite the “poor” image of the “developing” country. Nowadays, such concept as a good life, wellbeing, or happiness is seen more in a multidimensional way, and less solely in an economic sense. Nevertheless, it is still true that economic poverty can be one of the fundamental elements that triggers other aspects of (multidimensional) poverty. I have observed such relationship in Marsella in the field of education that chronic economic poverty of the ordinary villagers as well as the lack of the local budget on education largely affect the educational environment and the students’ academic performance of the village, especially in terms of high repetition and dropout rates. In this kind of situation, it may be more common in a general sense to implement a monetary intervention, however, such solution often results in creating a relationship with unilateral dependency. Therefore, instead, an alternative project that focuses on the agricultural aspect of the school will be suggested with a self-sustainable point of view, using log-frame approach as well as some literatures and previous studies relevant to the identified issues.

Chapter I: Introduction

1.1 Motivation

Over the summer 2015, I had stayed in Marsella, a small municipality in one of the major coffee regions in Colombia called Risaralda, in order to be engaged in an intercultural education project carried out by a NGO called Nukanti Foundation, working at a local secondary school –

Institute Agrícola Marsella. As how it is named, *Instituto Agrícola Marsella* is an agricultural school, where students ranged from 6th to 11th grade study general subjects as well as practical agricultural knowledge and skills in the farms, fields, and poultries located on campus. When I arrived at the school on the first day of the project, their eyes with full of curiosity and excitement welcomed me, which already gave me a conviction that my stay in Marsella was going to be fruitful. All the local teachers at the school were also very friendly and supportive that I could feel belonged from the day one. Thus, my participation in the project started with a positive culture shock supported by great hospitality and warm smiles of the people in the community — which was, perhaps, even warmer than the Colombian weather.

According to the local teachers, however, most students at the school come from relatively poor families, many of who need to commute in a long distance every day in a “Jeep”. At the school, the first class usually starts at 7:20 in the morning and it finishes at around 2:00pm. For most students, it is common to have lunch at home after school, yet some students especially those who live far from the school are allowed to leave in the middle of the class around the lunch time to go have lunch at the school cafeteria. Such instructional time setting for lunch in the middle of the class was very distractive to the educational activity conducted during the period, not only for the students who need to leave but also for the entire class. The price of the school lunch is kept very low with some financial assistance from the teachers’ pocket money. Also, there is a small concession stand located on campus where both teachers and students can buy some snacks, such as candies, chocolates, chips, yogurts, juices, milk, and arepas (a kind of tortilla made of corn flour), but of course, those are available only among those who can afford to pay. This implies that most students need to take six or seven classes (each class lasts for 55 minutes) without having a proper lunch, seemingly resulting in the decline in academic

performance, efficiency, and productivity. In accordance with that, one of the most remarkable issues observed in the school are high repetition, and high drop-out rates. I found such situation very ironic that the most students do not receive school lunch despite the fact that it is an agricultural school in which they learn about agriculture, work on their fields, and produce foods every day.

1.2 Statement of Problem

In my observation, high repetition and drop-out rates is identified as the most critical issue which should be treated at *Instituto Agrícola Marsella*, hence it is set to be the focal problem of the context as well as for the project that will be developed later. This focal problem makes it difficult for the students to find proper jobs when their academic career ends, which implies the repetitive negative cycle of poverty and unsatisfied overall wellbeing. Also, there are a number of possible causes of the focal problem, such as commuting difficulties, insufficient understandings from parents, lack of lunch supply, and students' bad health conditions. Based on such cause and effect relationships surrounding the focal problem, therefore, the main purpose of the project which could most contribute to improving repetition and drop-out rates should be selected as a basis for the project in later chapters.

1.3 Objectives

(i) to identify the current issues and possible strategies to improve students' academic performance in the Colombian context, especially in terms of repetition and dropout rates.

(ii) to design a project that could be implemented at *Instituto Agrícola Marsella* in order to lower the repetition and dropout rates and contribute to improving their overall wellbeing, based on the possible tools identified in (i).

1.4 Significance of the Study

Although a previous study revealed that full-day schooling has positive impacts on lowering repetition and dropout rates in Colombia and also that the Colombian government is attempting to implement the full-day schooling project in some public schools, the emphasis on the necessity of providing proper lunch is missing in the country's full-day schooling framework (Garcia et. al 2013; MEN, 2016). On the other hand, the positive impacts of school feeding on students' academic performance, including school attendance, grade repetition, and drop-out rates, have been revealed in many studies such as the one that evaluates the impact of the school feeding program implemented in Bangladesh and another which presents the positive impact of a school breakfast program in rural Peru (Ahmed, 2004; Cueto et. al, 2008). Nevertheless, in the ongoing full-day schooling project led by the government, the priority is on increasing the number of schools and students fit in the full-day schooling system in the horary sense, meaning present schools with full-day schooling system in the horary sense but without school lunch would not be the objects of the project. In fact, *Insitituto Agrícola Marsella* practices the full-day schooling system, yet lunch is not provided for all the students. Therefore, it would be efficient in terms of improving students' academic performance if the importance of school feeding is included in the current full-day schooling framework in Colombia. Furthermore, focusing on the agricultural characteristics of the school, designing a school lunch project using some ingredients available from the school's resources, including school farms, fields, and poultries, could suggest a more efficient and self-sustainable model for the students to benefit from the full-day schooling system in fullest, with a potentiality to be implementable to other agricultural schools in Colombia.

Chapter II: Methodology

Based on the findings from my observation at *Agricola Instituto Marsella*, firstly, the direction and the major elements of the project will be identified, fundamentally using two texts, including *The Logical Framework Approach – Handbook for objectives-oriented planning* (1999) published by Norwegian Agency for Development Cooperation (Norad) and *The Logframe Handbook –A LOGICAL FRAMEWORK APPROACH TO PROJECT CYCLE MANAGEMENT* (2005) published by the World Bank, introducing analytical methods of the Logical Framework Approach (LFA) which was originally “created in 1969 for the U.S. Agency for International Development (WB)”. Subsequently, some relevant studies and literatures to the identified major elements will be used in order to come up with appropriate, effective, and sustainable activities for the project. Finally, by applying the project designing, monitoring, and evaluation methods of the LFA, the project will be further developed.

Chapter III: Analysis

With the focal problem— high repetition and dropout rates and with a point of view set as an individual activist, participation analysis, problem analysis, objective analysis, and alternative analysis will be done here in order to identify potentially involved actors, cause and effect relationship of the problems, and major outcomes.

3.1 Participation Analysis

In this section, both primary and secondary potential actors, each of their interests and potentials, and linkages between the actors will be identified and summarized. (In the column of Impacts, +, -, = indicate positive impact, negative impact, and no impact, respectively.)

Actors		Interests	Potential (Strengths and weaknesses)	Impacts	Linkages
Primary					
Children	Students Agricola	<ul style="list-style-type: none"> - Improved environment and quality of education - Higher standard of living 	<ul style="list-style-type: none"> - Agricultural knowledge and skills - Ability to quickly learn and adjust - Vulnerability / dependency - Less knowledge in general subjects 	+	<ul style="list-style-type: none"> - Parents and teachers (direct source of influence)
	Students other Agricultural schools	Same as above	Same as above	+	Same as above
	Students general school	Same as above	<ul style="list-style-type: none"> - Ability to quickly learn and adjust - Vulnerability / dependency 	=/+	Same as above
	Non students	<ul style="list-style-type: none"> - Emerged opportunity to learn (at a school) - Higher standard of living 	<ul style="list-style-type: none"> - Ability to quickly learn and adjust - Vulnerability / dependency - Less academic knowledge 	=/+	<ul style="list-style-type: none"> - Family members (direct influence)
Parents	Agricola	<ul style="list-style-type: none"> - Improved environment and opportunity of 	<ul style="list-style-type: none"> - Weak economic 	+	<ul style="list-style-type: none"> - Teachers, local

		education for their children - Higher standard of living (income, health condition, housing, clothing, food)	condition - Traditional values		businesses, churches, (local hospital, local government)
	Other agricultural school	Same as above	Same as above	+	Same as above
	General school	Same as above	Same as above	=/+	Same as above
	Non students	- Emerged opportunity for their children to learn (at a school) - Higher standard of living/ survival - More workforce for family business	- Economic problem/ prejudice against education	=/+	- Local businesses, churches, (local hospital, local government)
Teachers	Agricola	- Improved working environment and salary - Improved environment and opportunity for education for their students	- Stable income and schedule (working hours, vacations) - Access to the school's field, farm, and poultry - Academic specialized knowledge and skills - Traditional role and responsibility - Less freedom	+	- Local government and NGOs (cooperation) - Students and their parents - Local restaurants, shops, distributors, and traders (partners)
	Other agricultur	Same as above	Same as above	+	Same as above

	al school				
	General school	Same as above	<ul style="list-style-type: none"> - Stable income and schedule (working hours, vacations) - Academic specialized knowledge and skills - Traditional role and responsibility - Less freedom 	=/+	<ul style="list-style-type: none"> - Local government and NGOs (cooperation) - Students and their parents
Local businesses	Farmers	<ul style="list-style-type: none"> - Increased sales - Cheaper cost (labor) 	<ul style="list-style-type: none"> - Agricultural knowledge, skills, equipment, and property - Flexible attitude toward time management - Severe physical condition - Yearly/ Seasonally irregular income 	+/-	<ul style="list-style-type: none"> - Local and non-local population (customers) - Manufacturers, distributors, and traders (partners)
	Manufacturers	Same as above	<ul style="list-style-type: none"> - Manufactural knowledge, skills, and equipment - Severe working condition 	=/+	<ul style="list-style-type: none"> - Local farmers, distributors, and traders (partner) - Local and non-local population (consumers)
	Distributors /Traders	Same as above	<ul style="list-style-type: none"> - Product/ sales knowledge and skills - Relatively higher 	=/+	<ul style="list-style-type: none"> - Local producers (partner)

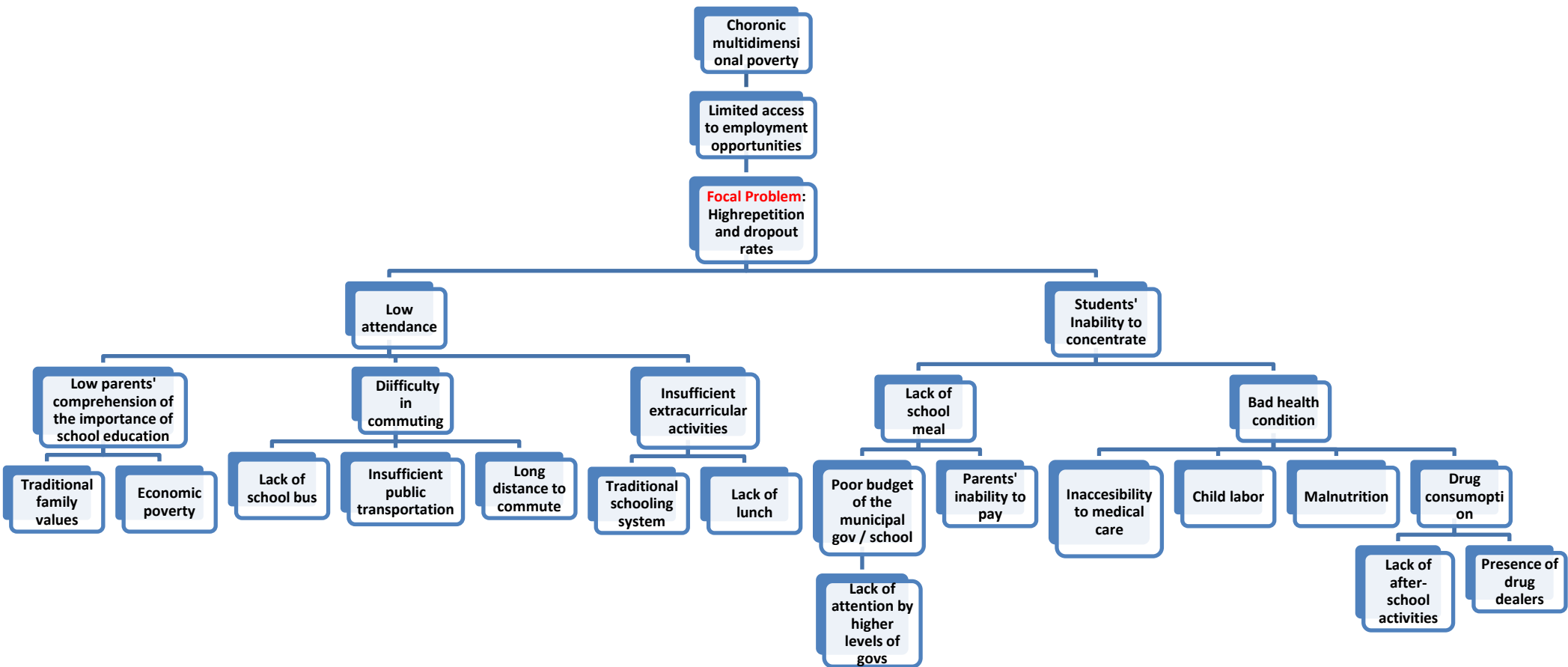
			<p>income</p> <ul style="list-style-type: none"> - Yearly/ Seasonally irregular income 		<ul style="list-style-type: none"> - Local and non-local population (customers)
	Cafés/Bars/ Restaurants	Same as above	<ul style="list-style-type: none"> - Less income irregularity throughout a year - Flexibility in business process, management, and decision making - Competition - Limited resources 	=/+	<ul style="list-style-type: none"> - Local and non-local populations (customers) - Local producers (partner)
	Supermarkets	Same as above	<ul style="list-style-type: none"> - Stable sales - 	=	<ul style="list-style-type: none"> - Local population (consumers)
	Small shops	Same as above	<ul style="list-style-type: none"> - Flexibility in business process, management, and decision making - Relatively lower income 	=	<ul style="list-style-type: none"> - Local population (consumers) - Local producers (partner)
	Hotels/ Hostels	Same as above	<ul style="list-style-type: none"> - Flexibility in business process, management, and decision making - Seasonally irregular income - Sales largely affected by external factors 	=	<ul style="list-style-type: none"> - Mainly non-local population (clients)
	Technicians	Same as above	<ul style="list-style-type: none"> - Technical knowledge, skills, and equipment - Relatively stable 	=	<ul style="list-style-type: none"> - Local population (clients)

			demand and income - Limited resource		
	Artisans	- Increased sales - Cheaper cost (labor) - Cultural preservation	- Use of locally available resources - Preservation of local culture - Relatively low income	=	- Local and non-local population (clients) - Distributors and Traders (partners)
	Local Hospital	- Improved health condition of the local population/ Increased profit - Improved working condition and medical equipment/ resources	- No competition - insufficient medical equipment/ resources	+	- Municipal and departmental government (cooperation) - Local population (patients)
Secondary					
	NGO (Nukanti)	- Improved quality of education	- Rich experience and knowledge in implementing relevant projects - Independency and Flexibility in project process, management, and decision making	+	- Municipal and departmental governments, schools (cooperation)
	Catholic Church	- Further diffusion of Catholicism - Increased authority in the municipality	- Strong influence - Stable demand and income	=	- Schools, teachers (cooperation) - Local population (market)

Other Religious Groups	<ul style="list-style-type: none"> - Diffusion of their religions - Increased income - Increased authority in the municipality 	<ul style="list-style-type: none"> - Newly Cultivable market - Low cost - Competition 	=	<ul style="list-style-type: none"> - Catholic church (competitor) - Local population (market)
Municipal Government (Marsella)	<ul style="list-style-type: none"> - Local economic growth and political power - Improved quality of life, standard of living, and overall wellbeing of the population 	<ul style="list-style-type: none"> - Political authority within the community - Budgetary control and decision-making - Limited resources - Largely influenced by higher institutions' policies - Corruption/intransparency? 	+	<ul style="list-style-type: none"> - Departmental, national governments, and NGOs (cooperation)
Departmental Government (Risaralda)	Same as above	<ul style="list-style-type: none"> - Authority to plan and implement programs, allocate budget to each municipality - Largely influenced by higher institutions' policies - Corruption/intransparency? 	+	<ul style="list-style-type: none"> National government, Municipal governments, and NGOs (cooperation)

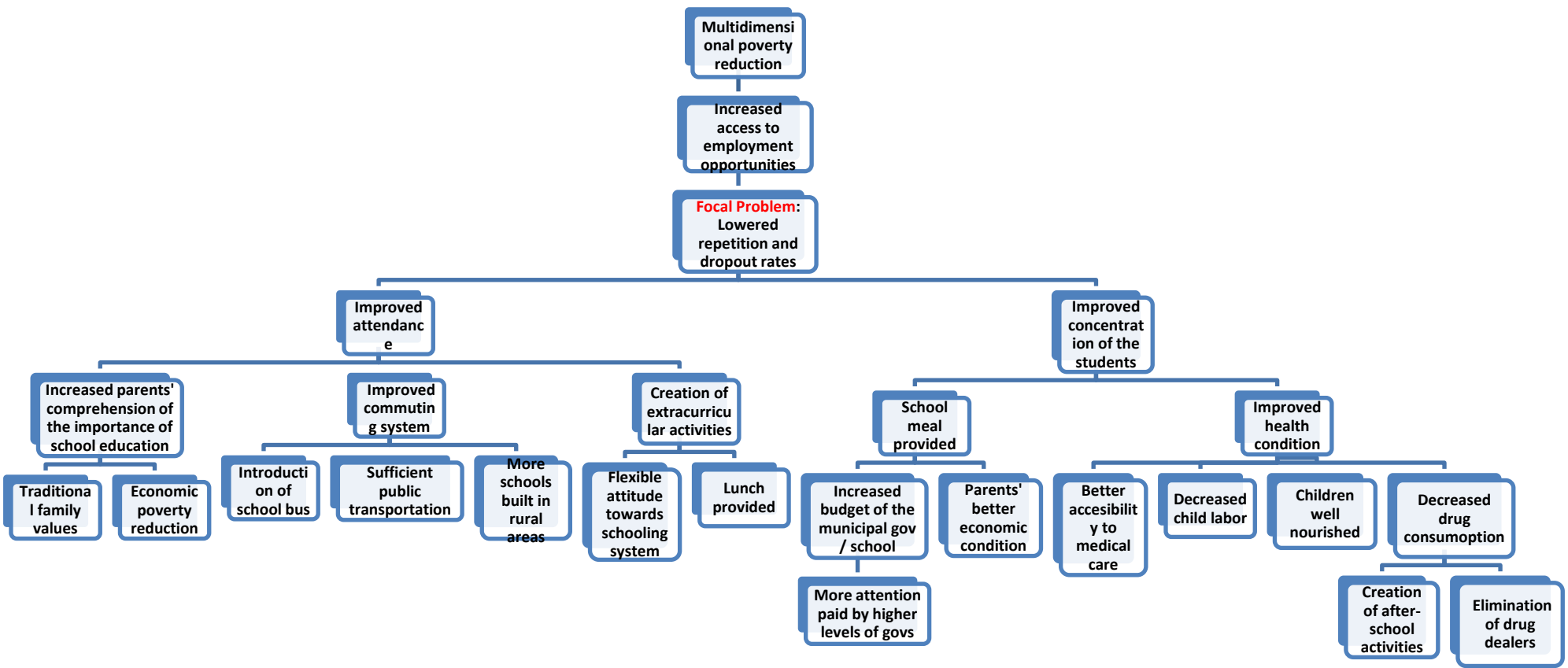
3.2 Problem Analysis

Setting the core issue identified at the school during my observation, “high repetition and dropout rates,” as its focal problem, a problem tree will be developed to clarify the cause and effect relationships among other issues relevant to the focal problem.



3.3 Objective Analysis

Based on the problems identified in the former section, appropriate objectives to positively convert the situation will be shown here.



3.4 Alternative analysis

In this analysis, the five major alternatives, including:

- (1) Increased parents' comprehension of the importance of education (value approach),
- (2) Improved commuting (transportation approach),
- (3) Creation of extracurricular activity (Motivation approach),
- (4) School meal provided (School feeding approach),
- (5) Improved health condition (Health approach)

will be compared with nine criteria both in quantitative and qualitative ways, in order to identify the best alternative for the project.

Criteria	Co-efficiency	Alternatives and results														
		(1)			(2)			(3)			(4)			(5)		
Cost	4	M/L	4	<u>16</u>	M/H	2	<u>8</u>	M	3	<u>12</u>	L	5	<u>20</u>	H	1	<u>4</u>
Risk	3	H	1	<u>3</u>	M/L	4	<u>12</u>	M/L	4	<u>12</u>	M	3	<u>9</u>	M/L	4	<u>12</u>
Time	2	Long	1	<u>2</u>	Short	5	<u>10</u>	Short	5	<u>10</u>	M	3	<u>6</u>	Long	1	<u>2</u>
Benefits to priority group	5	M	3	<u>15</u>	H	5	<u>25</u>	M/H	4	<u>20</u>	H	5	<u>25</u>	H	5	<u>25</u>
Institutional viability	5	M/L	2	<u>10</u>	M/H	4	<u>20</u>	M/H	4	<u>20</u>	M	3	<u>15</u>	M	3	<u>15</u>
Harnessing local resources	4	M	3	<u>12</u>	M	3	<u>12</u>	M/H	4	<u>16</u>	H	5	<u>20</u>	H	5	<u>20</u>

Self-sustainability	5	M/H	4	<u>20</u>	M	3	<u>15</u>	H	5	<u>25</u>	M/H	4	<u>20</u>	M/L	2	<u>10</u>
Gender impact	2	H	5	<u>10</u>	L	1	<u>2</u>	M/L	2	<u>4</u>	M	3	<u>6</u>	M/H	4	<u>8</u>
Local motivation & involvement	4	L	1	<u>4</u>	M/H	4	<u>16</u>	M/L	2	<u>8</u>	M	3	<u>12</u>	H	5	<u>20</u>
Total		92			110			127			133			116		

*Co-efficiency: 1-2-3-4-5

*Qualitative evaluation: Low (L), Medium to Low (M/L), Medium (M), Medium to High (M/H), High (H)

*Quantitative evaluation: L=1, M/L=2, M=3, M/H=4, H=5 or L=5, M/L=4, M=3, M/H=2, H=1

As a result of this alternative analysis, (3) school feeding approach is selected as the most effective alternative for the project, thus, it will be set as the purpose of the project.

Chapter IV: Theoretical Framework

In this chapter, previous studies and literatures relevant to school feeding as well as some ongoing projects in Colombia will be shown in order to select/come up with the most effective, logical, and sustainable outputs and activities for the project in the following chapter.

4.1 Education as a Measure

The quality of Education is a critical aspect to transform a country to a “better” one. Although the conceptual definitions of transformations of this kind may be referred differently as poverty reduction/eradication, development, wellbeing, happiness, peace, and so on depending on the motives and purposes, education is often an important factor in a multidimensional

approach to measure the levels of such abstract concepts. For example, The AF method was developed by Sabina Alkire and James Foster at Oxford Poverty and Human Development Initiative (OPHI), for the purpose to measure the intensity of poverty or well-being in a transparent way, by using different dimensions and indicators flexibly and specifically designed for a particular context (OPHI, 2015). By using the AF method, different entities including NGOs, governments, agencies, and the private sector can create measures and collect data at individual or household level, which in turn are used to calculate the results at local, national, regional, and international levels (OPHI, 2015). This method has been applied to create Multidimensional Poverty Index, Bhutan's Gross National Happiness Index, Women's Empowerment in Agricultural Index, and some other national multidimensional poverty measures such as China's multidimensional measure in the Wu Ling Mountain Region which incorporates environmental data (OPHI, 2015). For many of the listed Indexes, education is set as one of the important dimensions.

Despite that the definitions and dimensions of each concept are different depending on the global trends, the authority's intentions, the social and cultural aspects of country or region, and so on, why is education almost always selected as an important aspect? The answer is clear. It is because education forms people's minds and behaviors. "Since schooling/education fills increasingly large parts of people's lives that structural message will dominate people in their social behavior –and among others things will have spill-over effect that could lead to a much higher quality of life if the education paradigm is made more dominant" (Galtung, 1981, p.282). As Galtung says, education is not something one just receives for him/herself but also to share among each other, and this function multiplies its significance and impact of education on

people's lives. Thus, education is a fundamental aspect that forms an individual's quality of life and the social wellbeing as a whole.

Colombia is one of a few countries including Mexico, Philippines, Bhutan, the South Africa, and the states of Minas Gerais and Sao Paulo in Brazil whose governments have adopted national multidimensional poverty measures using Multidimensional Poverty Index (MPI) based on the AF method (OPHI, 2016). MPI, which includes global and national levels, was designed to measure "acute multidimensional poverty in developing countries," by the OPHI and UNDP's Human Development Report Office in 2010 (OPHI, 2016). The global MPI, which covers more than a hundred developing countries and 5.4 billion people in 2014, identifies deprivations of 3 dimensions of poverty — health, education, and living standard, while the CMPI uses 5 dimensions including education, childhood and youth conditions, labor, health, public utilities and housing conditions (OPHI, 2016). Thus, although "the Colombia-MPI uses an innovative adaptation of the AF method, customizing the dimensions and indicators to the country's specific needs and public policy priorities" (Nawar, 2014, p.29), education is set as one of the critical dimensions both in the global and the Colombian MPI.

In Colombia, the national Ministry of Planning (MoP) officially introduced the CMPI with 5 dimensions and 15 indicators as "the very first poverty reduction plan that uses the AF method for measuring Multidimensional poverty in August 2011" (Nawar, 2014, p.29). In CMPI, only 2 indicators — educational achievement and literacy — are under the dimension of education, both of which measures 15 and older only (Nawar, 2014). However, interestingly enough, the two indicators under the dimension of childhood and youth conditions, including school attendance and no school lag, which focuses on the age group of between 6 to 17, coincide with the main issues observed in Marsella. This fact ascertains that the issues observed

in Marsella are not merely identified at a local level but are rather common chronic problems in child and youth education in Colombia nationwide. Therefore, treating such issues towards positive shifts in Marsella would contribute to the country's poverty reduction and to a better wellbeing for the children and youths in a multidimensional sense.

Moreover, in Colombia, one of the three fundamental pillars for the National Development Plan 2014-2018: All for a new country, presently carried out by the state government and the National Planning Department (DNP), is also education (DNP, 2014). With the three pillars, including peace, equity, and education, the country focuses on building a society in which peace promotes equity and education, equity fosters peace and education, and education creates conditions of peace and equity (DNP, 2014). More precisely for education, the DNP states that an educated society could provide skilled workforce without big income gaps and be able to resolve conflicts without resorting to violence (DNP, 2014). Regardless to say, education is often regarded as an effective tool for development from an economic perspective, as “there are both partial direct effects and indirect structural effects from education on economic growth, which are quite significant both individually and when combined into the total effects (McMahon, 1999, p.157)”. However, the possible impact of education is not merely on a country's economic development. In fact, education and development have been considered as fundamental rights since 1945 in the Universal Declaration of Human Rights; therefore, most governments have “rationalized this imperative into fairly standardized national development goals, development plans, and frameworks for using education to accelerate socioeconomic development and help distribute its benefits equitably” (Chabbott, 2003, p.1). Over time, education has been universalized through international conferences that try to incorporate the relationships between activities in educational sector and economic and social development

(Chabbott, 2003). Thus, education has been universally considered and treated as a tool for empowering the citizens and contributing to a peaceful and equitable society, and it is a current fundamental focus for the Colombian government in order to steadily and successfully develop towards a new country.

4.2 Full-day Schooling in Colombia

A study having carried out in Colombia on children in public schools (preschool-high school) in 2007 and 2008 shows that “full-day schooling has positive effects both on early dropout and grade repetition” (Garcia et. al 2013, p. 14). The study aimed to “examine the effects of a structural change in the educational system in Colombia”, using two outcome measures including grade repetition and early school dropout (Garcia et. al 2013, p. 7). The study revealed that full-day schooling reduces early school dropout and grade repetition by 2.3 percentage points and 1.7 percentage points, respectively (Garcia et. al 2013, p. 12)

One thing to be noted here is that this study follows the definition of the full-day schooling based on the school hours set by the Ministry of Education (MEN 1994), which are 20 hours per week for the preschool level, 25 hours per week for the basic primary level, and 30 hours per week of sixty minutes for the level of basic secondary and middle levels (MEN 1994). In short, the study does not focus on whether school lunch is provided in the full-day schooling system. According to this legal definition, *Instituto Agrícola Marsella* falls under the system of the full-day schooling because it meets the required minimum hours for their level (30 hours per week).

Also, according to the result of the study, the school practices more “effective” instructional time strategy in comparison with the double-shift schooling— “a strategy designed

in the late 1960s in Colombia as a strategy to increase education enrollment” (Garcia et. al 2013, p. 4). Although it is unknown how many schools with full-day schooling system in the study do not provide students with school lunch, on one hand, it has been proven that full-day schooling in a horary context solely could still have a positive impact on some of the students’ academic performativity. On the other hand, in my observation, the full-day schooling at Agricola did not seem to be as effective as it should be, due to, among others, the lack of school lunch service for all the students. Even though the legal definition of the full-day schooling may not be bothered by the presence of school lunch, in Marsella, it was quite obvious that the students lose their concentration as the day goes on and many of them often mentioned to me that they were hungry especially during the afternoon. This implies that if the full-day schooling system is recognized as the combination of the horary definition and the school lunch service, its impacts on students’ academic performativity may become more significant. In order to support this idea, some school feeding programs (SFPs) and its impacts on students’ academic performativity should be shown in the following section.

4.3 School Feeding

A number of school feeding programs (SFPs) have shown its positive impacts on school children’s academic achievements (Ahmed, 2004; Cueto et. al, 2008). The SFP introduced by the Government of Bangladesh (GOB) and the World Food Program (WFP) in July 2002 provided a mid-morning snack (300 kilocalories of biscuits with 75 percent of the recommended vitamin and mineral intake per day) to approximately one million students mostly from very poor households in around 6,000 primary schools (Ahmed, 2004, p.44). This SFP was evaluated by International Food Policy Research Institute (IFPRI) in 2003 as follows; “The SFP raises gross school enrollment by 14.2 percent; The SFP reduces the probability of dropping out of school by

7.5 percent; The program increases school attendance of participating students by 1.34 days a month, which is 6 percent of total school days a month” (Ahmed, 2004, p.44). Considering the fact that this evaluation was done only a year after the implementation of the SFP, the outcomes especially in school enrollment and the probability of dropping out are very significant. Thus, the GOB’s SFP proved that providing school meals can result in children’s better academic achievements at least at a primary school level. Also, a study carried out in the Weweso circuit of the Asokwa Sub-Metro education district in Ghana from the 2001/2002 to the 2008/2009 academic year on randomly selected 20 primary schools in the district showed; “a 100% increase in School Feeding Programme will increase enrollment by about 4% point”, “attendance by about 98%”, and “retention by about 99%” (Osei-Fosu, 2011, p.60 & p.62).

There seems to be more numbers of studies including the fore-mentioned ones of rural Peru (Cueto et. al, 2008) and Ghana (Osei-Fosu, 2011) that revealed SFP’s positive impacts on students’ attendance, repetition, and dropout rates in primary schools, than the ones conducted in secondary schools, especially in recent years. This general trend is reasonable because secondary education can only exist on top of primary education; in other words, primary education should be the most priority for a program like SFP. In addition, seeing from another perspective, the trend might be largely affected by the First and the Second Millennium Development Goals which focused to “eradicate extreme poverty and hunger” and “achieve universal primary education” , respectively (UN 2016). Many SFPs are planned, implemented, supported, and/or guided by the UN-related institutions; that may be another reason why there were a lot of studies conducted and evaluated during the period (from 2000 to 2015) about SFPs and its positive impacts on primary school children’s academic performance, especially in developing countries.

Although the prioritization of primary education is understandable, those problems in academic performance exist in different levels. According to the statistical information of Risaralda region carried out by *Corporación Humanas-Centro Regional de Derechos Humanos y Justicia de Género*, total number of the primary/elementary level school (grade 1-5, age 6-11) enrolment in Risaralda has been decreased from 92.288 in 2011 to 81.053 in 2014 (*Corporación Humanas*, 2015). Also, the secondary/basic level school (grade 6-9, 12-15) and the mid-secondary level school (grade 10 & 11, age 16-17) enrolments have dropped from 78.094 to 71.124, and from 32.561 to 27.703, respectively, during the same period (*Corporación Humanas*, 2015). Even considering the slight decline in the population of children and youths during the same period in Risaralda, still, the net coverage rate has also been declined in the primary and mid-secondary levels in the period of 2011–2014 (primary: 93.3%–84.1%, mid-secondary: 42.8%–41.1%) hence it is reasonable to conclude that the deprivation of educational opportunity for children and youths has not been properly treated so far in the region (*Corporación Humanas*, 2015). Additionally, the dropout rate from 2013 to 2014 has increased in the secondary/basic and the mid-secondary levels, from 3.9% to 4.6%, and from 2.7% to 3.0%, respectively (*Corporación Humanas*, 2015). Thus, in the region, academic performance in primary, mid-secondary, and secondary levels has not been showing positive shifts in recent years.

As one of the global leaders who promote the importance of school feeding, the United Nations World Food Programme (WFP) develops and supports a number of school feeding programs worldwide, some of which focus on local food procurement. WFP is known as the largest humanitarian organisation which implements school feeding programmes across 63 countries feeding 20 to 25 million children every year for the past 50 years (WFP 2016). The WFP aims at “providing safety nets for food-insecure households, supporting children’s

education by enhancing learning ability and increasing access to education systems, reducing micronutrient deficiencies, strengthening national capacity for school feeding, and linking school feeding programmes to local agriculture” (WFP, 2016). As included in the objectives, one kind of the WFP’s school feeding programs, known as “home-grown school feeding (HGSF)” links school feeding programs to local agriculture (WFP, 2016).

As an example of the HGSF, the National Feeding Programme (PNAE) in Brazil, which was created in 1981 as part of the Ministry of Education, decentralized in 1994 and is currently administrated by the National Fund for Educational Development (FNDE), allows the local governments to make decisions about the procurement process as well as the menu for the local schools, mainly using the local commerce and agriculture, at a municipal level at lowermost (Otsuki&Arce, 2007). The institutional arrangements for PNAE operation at a local level include municipality-oriented, state-oriented, school-oriented, a mixture, and private companies, and “some municipalities have created school or community gardens (*horta comunitária*) to produce basic vegetables on their own” (Otsuki&Arcep, 2007, p.9). The PNAE does not only permit locals to decide about the school feeding framework but also promote local agricultural development by linking education to the local commerce and agriculture. The localization of school feeding, especially the school-oriented operation using school gardens, can be an ideal model for Instituto Agrícola due to the fact that the school already owns a farm, poultries, and gardens (fields), where the students cultivate/raise a number of different vegetables and livestock.

In Colombia, school feeding has been valued for a long time. According to the Colombian Institute for Family Welfare (ICBF), State-run school feeding strategy was first introduced in 1941(Decree No. 319) by regulation of the MEN, having created the *Restaurantes*

Escolares nationwide and established the general guidelines for school feeding (Londono, 2004). In 1968, the ICBF was established by then-president Carlos Lleras Restrepo; since then, the ICBF has been responsible for alimentary education, nutritional protection, and the SFP's orientation and financing of the country, serving school meals such as breakfast, mid-morning meal, or lunch (Londono, 2004). In 1974, the ICBS began to provide Bienestarina, "a vegetable mixture flour containing a high nutritional value at a low cost," which is still in use these days (Londono, 2004, p.1). While Colombia's SFPs had traditionally required parents to pay on average USD 0.10 of a daily fee, the system was abolished in 2004 to guarantee the poorest to receive the service (Londono, 2004). Since 2006, the country's SFPs began to focus more on their impact on contributing to increasing enrolment, increasing attendance, and improving the cognitive function of school children; since around that time, some of the ICBF's roles in the country's SFPs started shifting to the MEN, including the roles of implementation, monitoring, and surveillance in the National Development Plan 2010-2014: Prosperity For All (FAO, 2014). Despite the long history of efforts on the SFPs by the central government, the MEN, the ICBF, and various international organizations such as WFP and USAID since 1941, still, the country's school feeding covers around 4 million children which reaches only 48% of the total school children of the country in 2012 (FAO, 2014). The recent shift in the responsible institutions for the SFPs in Colombia might be a good sign since it shows that school feeding began to be seen as an effective strategy for improving students' academic performativity especially by the MEN. Also, as explained in the next section, the MEN is presently on the process to disseminate full-day schooling, therefore, it would be reasonable to incorporate school feeding into the full-day schooling context. Considering the fact that the country's school feeding still does not cover

even a half of the school children despite its past 70 years of efforts, efficiency and self-sustainability would be the keys to success.

4.4 Current Effort — Colombia's National Development Plan 2014-2018

Full-day schooling (*jornada unica/completa*) is included in the Colombia's National Development Plan 2014-2018 "All for New Country," based on the article 53 (2002) which is the amendment of the article 85 of the General Education Law 115 (1994) stating about scheduling in educational institutions (*Macro Legal*, 2016). The article 53 says that the educational public service will provide a full-day schooling in which students develop activities that are part of the study plan of the educational institution for at least seven hours a day (at least six hours a day for preschool curriculum) (*Macro Legal*, 2016). In this regard, the president Juan Manuel Santos launched a full-day schooling (*jornada unica*) program for Colombia in February 2015 and the MEN is committed to 2.3 million children and youths in the public sector to receive a full-day education by 2018, which corresponds with one of the biggest goals of the National Government in 2018, achieving 30% of students in the public sector to benefit from the full-day schooling (MEN, 2016). The MEN explains that the strategy of full-day schooling seeks two of the three pillars for the National Development Plan 2014-2018, equity and education, by offering more opportunities and better quality of education to students in public schools as well as by protecting children within a school environment and keeping them away from outside risk factors such as teenage pregnancy, youth crime and vandalism, among others (MEN, 2016). While there are numerous schools to which the program could bring educational and social benefits, for the most recent Third Call for the program by the ministry (due on 30 October, 2015) for example, schools needed to meet one of the following criteria in order for them to be nominated for this program; (1) Schools already nominated for the first and / or second call and

seeking to expand the full-day schooling into more levels, (2) Schools in each certified territorial entity listed by the Ministry based on criteria such as availability of infrastructure, enrollment offices dispersion, quality, among others, or (3) Expansion of the enrollment to the ETC level, meaning territorial entities that currently have an enrollment rate equal to or greater than 20% in full-day schooling and that expand have special recognition level to reach 50% of enrollment in one day” (MEN, 2016). Despite the potential impact of the program, thus, it is not planned to cover all the existing public schools in Colombia but is aiming at specific schools that meet certain criteria set by the ministry. On the contrary to the legal definition of full-day schooling, here the Ministry mentions that the strategy of full-day schooling includes two separate hours of educational activities and time for lunch (MEN, 2016). This point is very important because providing a lunch between morning and afternoon activities is absolutely necessary for students to maintain their consistent academic performance throughout a day, yet it is not stated in the article 85 and also because it was one of the major issues having observed in *Instituto Agrícola Marsella*. The school, in terms of its educational activity hours, practices the full-day schooling following the article 85, since students have seven classes each day. However, as mentioned before, most students do not receive school lunch at the school. In such condition, although the legal definition regarding study hours is met, the productivity and efficiency of education would not be the same as in the case if lunch is provided. Nevertheless, according to the three criteria for a school to be nominated for the full-day schooling program, the selection process only focuses on increasing the number of students involved in the system of full-day schooling in a legal sense, and it does not include those schools which meet the requirement of full-day schooling but miss providing school lunch.

On the other spectrum, the MEN and the WFP recently signed the three-year strategic cooperation agreement on strengthening the country's SFP, aiming to improve attendance, dietary habits, and cognitive capacity of the students (WFP, 2016). This partnership helps achieve the goals set in the National Education Plan, National Development Plan, the National Food and Nutrition Security Policy Plan, and the fourth Sustainable Development Goals (SDGs) that focuses on primary school children's full-course enrollments, by providing school meals based on different local characteristics and needs (WFP, 2016). Also, it is stated that "WFP assistance will include the testing of innovative models based on local food procurement", which evokes the WFP's HGSF program introduced earlier (WFP, 2016). This agreement is based on the importance of school feeding on students' academic performance and wellbeing, and also, it pays a great attention to localization, which sounds applicable in the case of Marsella. However, here again, the strategy is on primary school children, leaving secondary schools' feeding behind.

Thus, considering the positive impacts of full-day schooling with school lunch as well as the lack of SFPs focusing on secondary education in Colombia, a school feeding project specifically for agricultural schools using available resources grown and cultivated on campus will be proposed as an efficient and self-sustainable way to potentially feed students and to contribute to lowering grade repetition and drop-out rates of the school.

Chapter V: Project Development

In this chapter, firstly, outputs and activities of the projects will be identified by applying some findings from the former chapter. Later, the project will be further developed to complete a log-frame matrix with more details such as indicators, monitoring and evaluation sources, and assumptions.

5.1 Identification of the major elements and performance Indicators (the first and the second columns in the matrix)

Here, the major elements of the project including a goal, a purpose, outputs, and activities as well as each performance indicators will be identified and summarized.

Goal

The main goal of the project is to lower the repetition and dropout rates of *Instituto Agrícola Marsella*. The indicators are set as 6.9 % and 5.1% decrease in dropout and repetition rates, respectively, by the end of the project with three years of duration. The rationality is based on the study which revealed that full-day schooling reduces early school dropout and grade repetition by 2.3 percentage points and 1.7 percentage points, respectively, within one year of duration (Garcia et. al 2013, p. 12). Since the significance of full-day schooling on students' academic performance is currently recognized and disseminated by the national government through its *jornada unica* program, showing the equivalent impact of school feeding on the same issue would support the idea that the program should not solely focus on the schools which do not practice full-day schooling system but also those schools which practice it in a legal sense yet without providing lunch.

Purpose

As a result of the alternative analysis, the main purpose of the project is to provide a school lunch at *Instituto Agrícola Marsella*. The indicator is set to provide a daily nutritious lunch for all the students at the school by the end of the project.

Outputs

Considering the findings from the former chapter, the three main outputs and the indicators are identified as listed below.

Output 1: to develop a sustainable school feeding supply system using agricultural characteristics of the school

indicator→ a sustainable school feeding supply system prepared by the beginning of the 7th month and maintained/improved until the end of the project

Output 2: to reorganize the institutional system of the school

Indicator→ institutional system of the school reorganized by the beginning of the 7th month and maintained/improved until the end of the project

Output 3: to cultivate understandings and supports from students, teachers, and parents

Indicator→ understandings and acceptance of the project among students, teachers, and parents earned within the first month, and continuous supports gained until the end of the project

Activities

In order to deliver the identified outputs, more concrete elements are stated here as activities with each indicator.

Activities (A) for output 1:

[A1-1] to create and provide with nutritious school lunch menus

Indicator→ 20 days of nutritious lunch meals using local ingredients developed by the end of the second month and beginning to be provided to all students from the seventh month

[A1-2] to hire a school lunch worker(s) to prepare the meal

Indicator→ appropriate number of competent school lunch worker(s) hired by the end of the

second month

[A1-3] to identify and later to track the output of major ingredients, approximate quantity, and necessary space and time duration of the cultivable products on campus.

Indicator→ the major ingredients, approximate quantity, and necessary space and time duration of the cultivable products on campus are identified within the first month, and the total output recorded every month

[A1-4] to identify and later to track the output of cultivable products on campus which could be sold for the purpose to use its profits as a part of the financial source to purchase necessary ingredients that are uncultivable at the school.

Indicator→ cultivable products on campus for sales and the expected amount of profits are identified within the first month, and the total output recorded every month

[A1-5] to build a relationship with appropriate local suppliers who provide with uncultivable ingredients on campus as well as with buyers of the cultivated products on campus.

Indicator→ local suppliers for the uncultivable ingredients as well as buyers for the cultivated products are found by the end of the three month and the expenditure and the revenue recorded every month

Activities for output 2:

[A2-1] to adjust the institutional time of the school in order to introduce a lunch time

Indicator→ the institutional time of the school is adjusted by the end of the six month

[A2-2] to organize the fields/areas and implement cultivation

Indicator→ all the necessary fields/areas for on-campus cultivation is prepared by the end of the first month, and cultivation process starts from the second month till the end of the project

[A2-3] to create a daily/weekly shift for cultivation among students and teachers

Indicator→ vertical groups of students with their responsible dates and a supervisor (teacher) are created by the end of the first month

[A2-4] to develop rules and shifts regarding lunch preparation and cleanup among students (carrying lunch pots to classrooms, serving, cleaning, and taking them back to school kitchen)

Indicator→ Lunch carrying, serving, and cleaning shifts as well as rules regarding lunch preparation, eating, and cleanup are developed by the end of the sixth month

Activities for output 3:

[A3-1] to hold a briefing session with students to explain the project and select two representatives from each classroom and also from each grade in order to form the student members of the project committee

Indicator→ A briefing session with all the students held by the end of the first month, two representatives from each class as well as from each grade are selected by the end of the first month

[A3-2] to hold a meeting with teachers to explain the project structure and potential impacts and receive opinions and suggestions from their point of view

Indicator→ A meeting with teachers held by the end of the first month

[A3-3] to hold a briefing session with those parents who are interested in the project as well as to hand out a printed explanation of the project to all the parents through students

Indicator→ A briefing session with parents held and a printed overview of the project handed out to parents by the end of the first month

[A3-4] to hold periodic meetings of the project committee with school authority, teachers, and student representatives for evaluation

Indicator→ evaluation meeting with teachers and student representatives held every month until

the end of the project

[A3-5] to provide teachers with necessary trainings for school feeding cultivation and food hygiene

Indicator → trainings for school feeding cultivation and food hygiene among teachers completed by the end of the second month

5.2 Monitoring and Evaluation (the third column in the matrix)

This section will include a monitoring plan, means of verification chart, and a chronological timeline in order to follow and control the progress and the impacts of the projects.

Monitoring plan

In this monitoring plan, responsible actors, actions, and required time for each intervention logic (activity) will be summarized.

Intervention logic	Responsible actors	Actions	Required time
A1-1	Project team	- Assessment of the lunch menus (ingredients, nutrition)	In the first 2 months (development of lunch menus) and once a month (menus, nutrients) once lunch project begins - from the 7 th month
A1-2	Project team	- Inspection of the worker(s)' competency	In the first 2 months (identification of workers) and once a month (working attitude and result) once lunch project begins - from the 7 th month
A1-3	Project team & school authority	- assessment of the field & output - taking photos	In the 1 st month (identification of cultivable ingredients) and once a

			month (tracking) once recollection process begins - from the 4 th month
A1-4	Project team & school authority	- assessment of the field & output/sales -taking photos	In the 1 st month (identification of cultivable ingredients) and once a month (tracking) for once recollection process begins - from the 4 th month
A1-5	Project team & school authority	- investigation and inspection of the local suppliers - assessment of cost	In the first 6 months (building initial relationships) and continuous monitoring and development of the relationships till the end of the project
A2-1	Project team & school authority	- comparison between the old and the new schedule - observation of the regarding changes	In the first 6 months (development of new schedule) and the following 3 months (monitoring of the functioning)
A2-2	Project team & school authority	- assessment of the field - taking photos	In the 1 st month (field assessment and preparation) and the rest of the project period (monitoring the fields)
A2-3	Students & teachers project coordinator	- assessment of the shifts - observation and inspection of the students' & teachers behaviors	In the 1 st month (development of the rules) and once a month (tracking) once cultivation process begins – from the 2 nd month
A2-4	Project coordinator & teachers	- assessment of the rules - observation and inspection of the students' behaviors	In the first 6 month (development of the rules) and once a month (tracking) once lunch program begins – from the 7 th month
A3-1	Project team, teachers, & students	- observation of the students' comprehension - check the representatives'	In the 1 st month (monitoring of briefing session) and once a month (follow-up,

		competency	evaluation) once cultivation process begins – from the 2 nd month
A3-2	Project team & teachers	- observation of the teachers' comprehension - reflection of the teachers' opinions	In the 1 st month (monitoring of briefing session) and once a month (follow-up, evaluation) once cultivation process begins – from the 2 nd month
A3-3	Project team & parents	- observation of the parents' comprehension - reflection of the parents' opinions	In the 1 st month (monitoring of briefing session) and once in 3 month (follow-up, evaluation) once cultivation process begins – from the 2 nd month
A3-4	Project team, students, & teachers	- periodic meetings - observation and assessment of the project progress	every month till the end of the project
A3-5	Project team, teachers of agriculture (trainers), school lunch worker(s), teachers	- assessment of the teachers' level of understanding - observation and inspection of the training contents	First 2 months

Means of verification

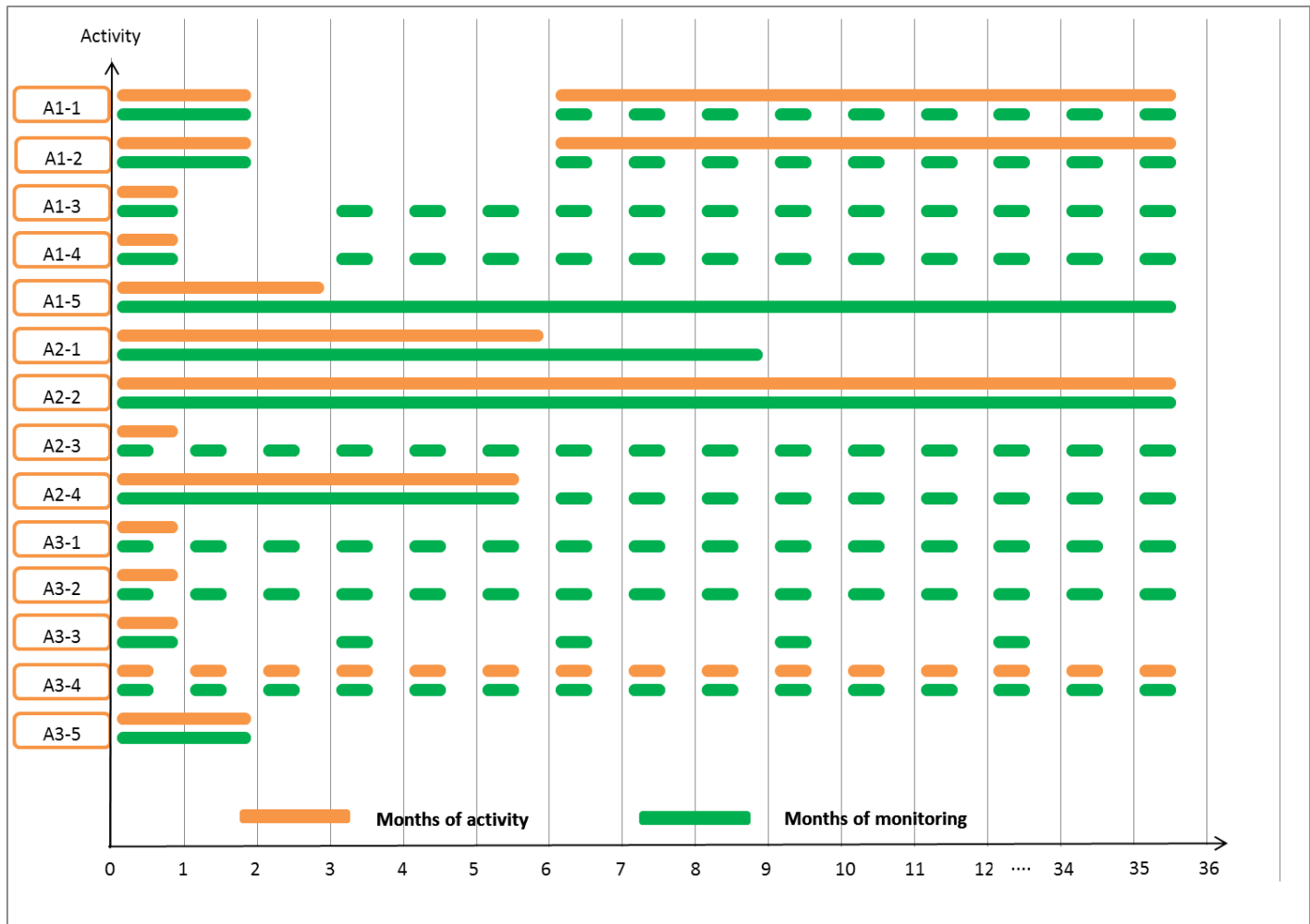
The following chart will show the means of verification, including sources of information, method for data collection, agent responsible for data collection, method for analysis, frequency, application, reporting format, and circulation, of each element (goal, purpose, outcomes, and activities).

Element	Means of verification							
	Sources of information	Method for data collection	Agent responsible for data collection	Method for analysis	Frequency	Application	Reporting format	Circulation
Goal	Repetition and dropout documents	Documentary consultation	School staff & project staff	Documentary comparison	The end of every semester	Assessment of the project progress and effectiveness	Written evaluation report	Public document
Purpose	Lunch attendance	Documentary consultation and observation	Teachers & project staff	Documentary and observational comparison	Every month	Assessment of the project progress and effectiveness	Written evaluation report & photos/videos	Public document
Output1	<ul style="list-style-type: none"> - lunch menus - evaluation document of lunch worker(s) - Students and teachers' voice - primary field's condition & document of expected products' total output - document of expected sales and costs - document of actual output, sales, and costs 	<ul style="list-style-type: none"> - observation/ inspection (photos & videos) - interview and survey - documentary consultation (evaluation document, field tracking document, receipts, contracts, balance sheet) - local market research 	Students, teachers, school authority, & project staff	<ul style="list-style-type: none"> - Documentary and observational comparison - analysis of interview data 	<ul style="list-style-type: none"> - Every month (A1-3, A1-4, & A1-5) - Every month in the first year and once in 3 months in the second and third months (A1-1 & A1-2) 	<ul style="list-style-type: none"> - Evaluation of lunch menus and instructions, - Monitoring and evaluation of cultivation progress, - Evaluation of sustainability of lunch supply 	Written evaluative report & photos/videos	public document, community press, school report
Output2	<ul style="list-style-type: none"> - school scheduling document - field report - document of rules regarding cultivation and lunch instruction 	<ul style="list-style-type: none"> - observation/ inspection of field and cultivation process (photos & videos) 	Teachers, school authority, & project staff	<ul style="list-style-type: none"> - Documentary and observational comparison - analysis 	<ul style="list-style-type: none"> Once by the end of the first month (A2-2 & A2-3), - once by the end of the sixth month (A2-1 & A2-4) 	<ul style="list-style-type: none"> - evaluation of new schedule functioning - evaluation of field tracking of cultivation work 	Written evaluative report & photos/videos	public document, community press, school report

	- Students & teachers' voice	- document ary consultation (cultivation and output records) - Interview / survey		of interview data		Assessment of rules		
Output3	- meeting record - voice of students, teachers, & parents - Training instruction document and record	- document ary consultation -	Students, teachers, school authority, & project staff	- Document ary and observational comparison - analysis of interview data	- once by the end of the first month (A3-1, A3-2, & A3-3) - once by the end of the second month (A3-5) - every two weeks in the first six months and once a month for the following period (A3-4)	- evaluation of comprehensiveness of students, teachers, and parents - Assessment of the project progress and effectiveness - evaluation of trainings for teachers	Written evaluative report & photos/videos	public document, community press, school report

Chronological timeline

In this part, activity and monitoring schedule throughout the project period (from month 1 to month 36) will be summarized in a chronological timeline.



5.3 Identification of assumptions (the fourth column in the matrix)

Assumptions of each project element which are out of the project management range will be described in the following chart as conditions for the project to make a successful progress.

Element	Assumptions
Goal	<ul style="list-style-type: none"> - School authorities' agreement on the project - School authorities, teachers, students' participation - Absence of political/economic situation which could largely influence on grade repetition and dropout rates - Agreement and support from the government
Purpose	<ul style="list-style-type: none"> - Teachers and students' daily support

	<ul style="list-style-type: none"> - Sufficient output and sales to continue with the project - Absence of big climate change or natural disaster that would largely affect on cultivation process
A1-1	<ul style="list-style-type: none"> - 20 nutritious menus available only using locally cultivable ingredients
A1-2	<ul style="list-style-type: none"> - Presence of competent and motivated workers and their good attitude and work result once lunch program begins
A1-3	<ul style="list-style-type: none"> - Absence of a big climate change, a disaster, or a disease - Teachers and students' cooperation
A1-4	<ul style="list-style-type: none"> - Absence of a big climate change, a disaster, or a disease - Teachers and students' cooperation
A1-5	<ul style="list-style-type: none"> - Presence of local suppliers and buyers to work with the project
A2-1	<ul style="list-style-type: none"> - School authorities, teachers, and parents' agreement on new schedule
A2-2	<ul style="list-style-type: none"> - Sufficient on-campus cultivation space for the project - Teachers and students' cooperation
A2-3	<ul style="list-style-type: none"> - Teachers and students' willingness and responsibility to follow the rules of cultivation
A2-4	<ul style="list-style-type: none"> - Teachers and students' willingness and responsibility to follow the rules of lunch time
A3-1	<ul style="list-style-type: none"> - Students' understanding and acceptance of the project
A3-2	<ul style="list-style-type: none"> - Teachers' understanding and acceptance of the project
A3-3	<ul style="list-style-type: none"> - Parents' understanding and acceptance of the project
A3-4	<ul style="list-style-type: none"> - School authorities, teachers, and students' active participation in meeting
A3-5	<ul style="list-style-type: none"> - Teachers' positive attitude towards the trainings

5.4 Log-frame Matrix

The following chart, referred as log-frame matrix, with four columns including major elements of the project, performance indicators, sources of monitoring and evaluation, and assumptions will summarize the project.

Major elements	Performance Indicators	Source of Monitoring & Evaluation	Assumptions
<p><u>Goal</u> to lower the repetition and dropout rates of <i>Instituto Agrícola Marsella</i></p>	<p>6.9 % and 5.1% decrease in dropout and repetition rates, respectively, by the end of the project</p>	<p>Repetition and dropout documents</p>	<ul style="list-style-type: none"> - School authorities' agreement on the project - School authorities, teachers, students' participation - Absence of political/economic situation which could largely influence on grade repetition and dropout rates - Agreement and support from the government
<p><u>Purpose</u> to provide a school lunch at <i>Instituto Agrícola Marsella</i></p>	<p>to provide a daily nutritious lunch for all students from the 7th month until the end of the project</p>	<p>Lunch attendance</p>	<ul style="list-style-type: none"> - Teachers and students' daily support - Sufficient output and sales to continue with the project - Absence of big climate change or natural disaster that would largely affect on cultivation process
<p><u>Outputs1</u> to develop a sustainable school feeding supply system (using agricultural</p>	<p>sustainable school feeding supply system prepared by the beginning of the 7th month and</p>	<ul style="list-style-type: none"> - record of school lunch supply - information of suppliers & buyers 	<ul style="list-style-type: none"> - school authorities, teachers, students, school lunch workers, & local suppliers'

characteristics of the school)	maintained/improved until the end of the project	<ul style="list-style-type: none"> - record of outputs, sales, & costs - students & teachers' voice 	<ul style="list-style-type: none"> cooperation - absence of a big climate change, natural disaster, or disease
<u>Output2</u> to reorganize the institutional system of the school	institutional system of the school reorganized by the beginning of the 7 th month and maintained/improved until the end of the project	<ul style="list-style-type: none"> - document regarding new schedule and rules - field report - Students & teachers' voice 	<ul style="list-style-type: none"> - acceptance and support from school authorities, teachers, & students - presence of sufficient on-campus field for the project
<u>Output3</u> to cultivate understandings and supports from students, teachers, and parents	understandings and acceptance of the project among students, teachers, and parents earned within the first month, and continuous supports gained until the end of the project	<ul style="list-style-type: none"> - briefing session/ meeting record - voice of students, teachers, & parents - Training instruction document and record 	<ul style="list-style-type: none"> - students, teachers, & parents' positive attitudes towards the project
<u>A1-1</u> to create and provide with nutritious school lunch menus	20 days of nutritious lunch meals using local ingredients developed by the end of the second month and beginning to be provided to all students from the seventh month	<ul style="list-style-type: none"> - lunch menu records - Students and teachers' voice 	<ul style="list-style-type: none"> - 20 nutritious menus available only using locally cultivable ingredients
<u>A1-2</u> to hire a school lunch worker(s) to prepare the meal	appropriate number of competent school lunch worker(s) hired by the end of the second month	<ul style="list-style-type: none"> - evaluation document of lunch worker(s) - students and teachers' voice 	<ul style="list-style-type: none"> - Presence of competent and motivated workers and their good attitude and work result once lunch program begins
<u>A1-3</u> to identify and later to track the output of major ingredients, approximate quantity, and necessary space and time duration of the cultivable products on campus	major ingredients, approximate quantity, and necessary space and time duration of the cultivable products on campus are identified within the first month, and the total output recorded every month	<ul style="list-style-type: none"> - primary field's condition & document of expected products' total output - photos & videos 	<ul style="list-style-type: none"> - Absence of a big climate change, a disaster, or a disease - Teachers and students' cooperation

<p><u>A1-4</u> to identify and later to track the output of cultivable products on campus which could be sold for the purpose to use its profits as a part of the financial source to purchase necessary ingredients that are uncultivable at the school</p>	<p>cultivable products on campus for sales and the expected amount of profits are identified within the first month, and the total output recorded every month</p>	<ul style="list-style-type: none"> - document of expected sales - record of actual sales 	<ul style="list-style-type: none"> - Absence of a big climate change, a disaster, or a disease - Teachers and students' cooperation
<p><u>A1-5</u> to build a relationship with appropriate local suppliers who provide with uncultivable ingredients on campus as well as with buyers of the cultivated products on campus</p>	<p>local suppliers for the uncultivable ingredients as well as buyers for the cultivated products are found by the end of the three month and the expenditure and the revenue recorded every month</p>	<ul style="list-style-type: none"> - document of expected outputs, sales, and costs - record of actual outputs, sales, and costs - 	<ul style="list-style-type: none"> - Presence of local suppliers and buyers to work with the project
<p><u>A2-1</u> to adjust the institutional time of the school in order to introduce a lunch time</p>	<p>institutional time of the school is adjusted by the end of the six month</p>	<ul style="list-style-type: none"> - school scheduling document 	<ul style="list-style-type: none"> - School authorities, teachers, and parents' agreement on new schedule
<p><u>A2-2</u> to organize the fields/areas and implement cultivation</p>	<p>all the necessary fields/areas for on-campus cultivation is prepared by the end of the first month, and cultivation process starts from the second month till the end of the project</p>	<ul style="list-style-type: none"> - field report - photos & videos 	<ul style="list-style-type: none"> - Sufficient on-campus cultivation space for the project - Teachers and students' cooperation
<p><u>A2-3</u> to create a daily/weekly shift for cultivation among students and teachers</p>	<p>vertical groups of students with their responsible dates and a supervisor (teacher) are created by the end of the first month</p>	<ul style="list-style-type: none"> - document of rules regarding cultivation - shift check sheet - students and teachers' voice 	<ul style="list-style-type: none"> - Teachers and students' willingness and responsibility to follow the rules of cultivation
<p><u>A2-4</u> to develop rules and shifts regarding lunch preparation and cleanup among students (carrying lunch pots to classrooms, serving, cleaning, and</p>	<p>Lunch carrying, serving, and cleaning shifts as well as rules regarding lunch preparation, eating, and cleanup are developed by the end of the sixth month</p>	<ul style="list-style-type: none"> - document of rules regarding lunch instruction - shift check sheet - students and teachers' voice 	<ul style="list-style-type: none"> - Teachers and students' willingness and responsibility to follow the rules of lunch time

taking them back to school kitchen)			
<u>A3-1</u> to hold a briefing session with students to explain the project and select two representatives from each classroom and also from each grade in order to form the student members of the project committee	A briefing session with all the students held by the end of the first month, two representatives from each class as well as from each grade are selected by the end of the first month	- briefing session record - students' voice - photos & videos	- Students' understanding and acceptance of the project
<u>A3-2</u> to hold a meeting with teachers to explain the project structure and potential impacts and receive opinions and suggestions from their point of view	A meeting with teachers held by the end of the first month	- meeting record - teachers' voice - photos & videos	- Teachers' understanding and acceptance of the project
<u>A3-3</u> to hold a briefing session with those parents who are interested in the project as well as to hand out a printed explanation of the project to all the parents through students	A briefing session with parents held and a printed overview of the project handed out to parents by the end of the first month	- briefing session record - parents' voice - photos & videos	- Parents' understanding and acceptance of the project
<u>A3-4</u> to hold periodic meetings of the project committee with school authority, teachers, and student representatives for evaluation	evaluation meeting with teachers and student representatives held every month until the end of the project	- meeting record - photos & videos	- School authorities, teachers, and students' active participation in meeting
<u>A3-5</u> to provide teachers with necessary trainings for school feeding cultivation and food hygiene	trainings for school feeding cultivation and food hygiene among teachers completed by the end of the second month	- Training instruction document and record - Teachers' voice - photos & videos	- Teachers' positive attitude towards the trainings

Chapter VI: Summary

By using a useful analytical techniques of log-frame approach, the focal problem, high repetition and dropout rates, was identified in the context of my observation in *Marsella*. In order to verify the purpose as well as to find reliable ways to tackle with the identified problem, some related literatures and the features of the current efforts of the Colombian government were reviewed and later used to develop the project. Although the project needs to be further developed with more details in order to be implemented, this proposal addresses an effective, logical, and sustainable way to improve the observed condition in *Marsella*, with a potentiality to be applied to some other schools in a similar condition.

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