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INFLUENCE OF PROJECT MANAGEMENT PRACTICES ON SUSTAINABILITY OF SCHOOL FEEDING PROGRAMMES. A CASE OF PUBLIC SCHOOL 12YBE IN GASABO DISTRICT, RWANDA

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ABSTRACT

The study entitled influence of project management practices on sustainability of school feeding programmes: a case of public school 12YBE in Gasabo District, Rwanda. The study is guided by four specific objectives: To examine the influence of project planning on sustainability of school feeding programme in public 12 YBE schools in Gasabo District ; to assess the influence of risk management on sustainability of school feeding programme in public 12 YBE schools in Gasabo District ; to examine the influence of monitoring and evaluation on sustainability of school feeding programme in public 12 YBE schools in Gasabo District and to establish the influence of project Scope management on sustainability of school feeding programme in public 12 YBE schools in Gasabo District. The study used both descriptive research design and correlational research. The study population was 619 Teachers, students and school management leaders include 445 teachers, 80 students committees, 94 school management leaders while sample size is 243 stakeholders of SFP composed by 69 teachers, 80 pupils commute's and 94 school management from sixteen public 12YBE schools in Gasabo District. The researcher used questionnaire as data collection instrument while descriptive statistics and inferential statistics such as correlation analysis and multiple linear regression analysis was used as method of data analysis. For the first objective, the results revealed that project planning has significance positive influence on sustainability of SFP in Gasabo District as indicated by β_1= 0.087, p-value=0.017<0.05) implies that a unit increase in Project planning would lead to 0.087 increase in the sustainability of SFP in Gasabo District. For the second objective, the results revealed that project risk management has significance positive influence on sustainability of SFP in Gasabo District as indicated by β_2= 0.589, p-value=0.000<0.05) implies that a unit increase in project risk management would lead to 0.589 increase in the sustainability of SFP in Gasabo District. For the third objective, the results revealed that project monitoring and evaluation has significance positive influence on sustainability of SFP in Gasabo District as indicated by β_3= 0.263, p-value=0.000<0.05). It implies that a unit increase in project monitoring and evaluation would lead to 0.263 increase in the sustainability of SFP in Gasabo District. For the fourth objective, the results revealed that project scope management have significance positive influence on sustainability of SFP in Gasabo District as indicated by β_4= 0.277, p-value=0.000<0.05) implies that a unit increase in project scope management would lead to 0.277 increase in the sustainability of SFP in Gasabo District. The study concluded that component of project

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management practices such as project planning; project risk management; project monitoring and evaluation and project scope management had significant positive effect on sustainability of SFP in Gasabo District and jointly accounted for 81.4% of sustainability of SFP in Gasabo District as represented by the R^2 at 95% of confidence interval. The study recommended that government should double efforts to address gaps identified in programme implementation to sustain the impressive pupils' enrolment and performance.

Key words: Project management practices, sustainability of programs, school feeding programmes

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1. INTRODUCTION

1.1 Background of the Study

According to Cleland and Ireland (2012), project management has been practiced for thousands of years dating back in the mid-1950s that organisations commenced applying formal project management tools and techniques to complex projects. Modern project management methods had their origins in two parallel but different problems of planning and control in projects in the United States.

In South Africa , Hargovan (2016) reported that the common causes of project failure in the South African Public Sector are lack of clear links between the project and project management strategic priorities, including agreed measures of success; lack of clear senior management and ministerial ownership and leadership; lack of effective engagement with stakeholders; lack of skills and proven approach to project management and risk management and lack of effective project team integration between clients, the supplier team and the supply chain.

In Rwanda, the government of Rwanda started the school feedings program (SFP) in 2016 under a partnership between parents and government to address the problem of food insecure Districts of Rwanda School meals are a lifeline for many families. A daily school meal provides a strong incentive to send children to school and keep them there (especially girls), it helps to increase school enrollment and attendance, decrease drop-out rates, and improve learning. The aim of the school feeding program (SFP) is to raise and maintain school enrolment, attendance, decrease drop-out rates of chronic food insecure and vulnerable children (MINEDUC, 2016).

School feeding programme was launched three years ago where the programme has contributed to an increase in school enrolment and retention in primary schools especially for girls. The programme promotes locally-owned school feeding programmes, benefitting communities through community organizations, providing training, and supporting smallholder famers. One challenge is that there has not been an impact evaluation on the programme, so there is no significant data on its social and economic impacts. The programme relies on donor funding mainly, when this funding is strained, its implementation is affected. Managerial challenges also contribute to failure in the implementation of the program (Kim, Kevin, Beeche, Mukankurunziza & Kamatari, 2013).

The choice and implementation of appropriate project management practices are likely to lead to school feeding project success. For a project to be competitive and successful, the management practices should be designed towards the goals of the project and no those of project managers nor leaders. Project management practices provide the insights to the managers on how the project can be completed in its boundaries in terms of time, budget, specifications, the needs of customer and management objectives (Cooke-Davies, 2002). Therefore, this study seeks to investigate the influence of project management practices on sustainability of school feeding programmes mainly public school 12YBE in Gasabo district, Rwanda

1.2 Statement of the problem

The success of projects depends heavily on their management practices (PMI, 2018). The practices include phases among others planning, execution, monitoring and evaluation and closing that are entrenched within the project management life cycle (Kerzner, 2018). In most cases, the outcomes of projects do not meet the felt needs or if they do, such needs are not sustainable; even in cases where expenditure of billions of shillings is allocated for development projects, (Wysocki, 2011). Since its inception in 2016, school feeding programme in Rwanda in all 12 years basic education in Rwanda was mainly to achieve pupils' enrolment and retention ratio in schools. The programme was anchored on universalization of primary schooling and elimination of gender disparity in education.

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In Rwanda, despite the successes of School Feeding Programs in relation to influencing the policy agenda and making both access to education for nomadic children as well as quality education issues priorities in the sector strategic plan, serious challenges have bedeviled their implementation (UNICEF, 2018). They include Government bureaucratic processes, limited storage facilities, lack of experience and knowledge among school management staff, inadequate donor support funds and monitoring and evaluation. There was therefore a need to investigate and find out the factors that influenced the success of school feeding programs. In some schools, the program has faded away owing to miss management (MINEDUC, 2018).

According to the World Bank, the rate of project's failure in African countries was over 50% by the year 2016, (Kwak, 2017). In most cases World Bank projects fail to achieve the set goals because of problems that are associated with managerial and organizational factors. Managerial and organizational factors can further be broken down into poor stakeholder management, poor coordination and cost overruns, imperfect project design, delays during project implementation and delays between project identification and start-up (Gunawan & Ahsan, 2020). According to REB (2018), school feeding project was subject to inappropriate project management practices being corruption, poor follow up on implementation by local leaders, lack of clear information to beneficiaries, insufficient involvement of beneficiaries in the project running and so on and this created doubt about its success. This study, therefore, intends to explore the contribution of project management practices to project sustainability taking school feeding programmes mainly public school 12ybe in Gasabo district, Rwanda.

1.3 Objective of the study

The general objective of this study was to investigate the influence of project management practices on sustainability of school feeding programme mainly public school 12YBE in Gasabo District, Rwanda

The study was based on the following objectives.

i. To examine the influence of project planning on sustainability of school feeding programme in public 12 YBE schools in Gasabo District.
ii. To assess the influence of risk management on sustainability of school feeding programme in public 12 YBE schools in Gasabo District.
iii. To examine the influence of monitoring and evaluation on sustainability of school feeding programme in public 12 YBE schools in Gasabo District.
iv. To establish the influence of project Scope management on sustainability of school feeding programme in public 12 YBE schools in Gasabo District.

1.4 Research hypotheses

$H_{0:}$ There is no significant influence of project management practices on sustainability of school feeding programme mainly public school 12YBE in Gasabo District, Rwanda.
H_{01}: There is no statistically significant influence of project planning on sustainability of school feeding programme in public 12 YBE schools in Gasabo District.
H_{02}: There is no statistically significant influence of risk management on sustainability of school feeding programme in public 12 YBE schools in Gasabo District.
H_{03}: There is no statistically significant influence of monitoring and evaluation on sustainability of school feeding programme in public 12 YBE schools in Gasabo District.
H_{04}: There is no statistically significant influence of Project Scope management on sustainability of school feeding programme in public 12 YBE schools in Gasabo District.

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2. LITERATURE REVIEW

This part surveys the different past examinations that has been done in connection to implementation of project management practices on sustainability of school feeding programs. The chapter presents the various literatures existing in the subject in terms of introduction, theoretical reviews and as well as research gap.

2.1.Conceptual review

This section discussed the concepts of project management practices and project sustainability

Project management practices

Referring to Nufei (2014), defined project management (PM) practices as the day-to-day ways of carrying out management and administrative activities in a coherent and good way of directing and coordinating projects resources for the purpose for the achievement project success following the time, cost and quality objectives. a project management is defined as the practice of controlling the realization towards the project goals. This combines the use of the tools as well as the techniques to monitor a quantity and quality of inputs to accomplish the single task with the planned time, budget and quality constrains.

Project planning

According to Kerzner (2003), project planning refers to plan, schedule, control of the various activities related to project in order to meet its objectives. The project planning is the way of setting the guidelines suitable for the accomplishment of predefined objectives of the project. At first, the project extension is characterized and the fitting techniques for finishing the undertaking are resolved. Following this progression, the terms for the different undertakings important to finish the work are recorded and gathered into a work breakdown structure. Task arranging is frequently used to compose distinctive territories of a venture, including venture designs, workloads and the administration of groups and people.

Project risk management practices

Risk management is one of the nine knowledge areas propagated by the Project Management Institute (PMI). Risk management is a difficult aspect of project management. The project manager must be able to recognize and identify the root causes of risks and correlate them to their effects on project performance. Risk management in the construction project management context is a comprehensive and systematic way of identifying, analyzing and responding to risks to achieve the project objectives. Major decisions and influence on the choice of alignment and selection of construction methods are made at the early stages of a project, making risk management at this stage very essential (Assaf& A1-Hejji, 2013).

Monitoring and evaluation

Monitoring and evaluation (M&E) is a good plan for managing projects because it ensures successful planning and implementation which leads to the success of the projects as per set goals and objectives and still encourages effective decision making for better performance of the projects. Research has shown that the performance of this monitored projects is inadequate because the performance bring disappointment to the beneficiaries and so the project in modern form which has grown currently make businesses, institutions and organization to understand the benefits of organizing work for projects in planning and implementing the projects effectively by using participatory monitoring and evaluation plan to make the performance better than before (Abalang, 2016).

Project scope management

Project scope management takes place across the five distinct phases of any business which include the initiation process, scope planning, definition, verification and change control. Management of deliverables and practices is very important since they help the project managers allocate, just the right amount of work needed for completion of the project successfully and determining of the required resources (Kerzner, 2017). Having proper scope management strategies is therefore vital, no

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matter the company goals or the position in regard to size of the launched project across all industries. Since the output is always clearly defined, the use of performance indicators is imperative in the determination of the success of the project.

Sustianability of School Feeding Programme

School feeding programme is a tool, that today successfully enables hundreds of millions of poor children worldwide to go to school in developed and developing countries alike (Ahmed, 2014). One of the rewards of school feeding programme is that besides enabling education, it has positive direct and indirect merits unfolding to a number of other development goals (namely for gender, equity, poverty and hunger reduction) (WFP, 2014).

Project sustainability is the ability of a system of any type to remain in good condition and to continue providing services over the long term. Project sustainability ensures that resources are managed in a way that ensures the current generation enjoys the benefits that accrue from the project without denying future generations the enjoyment of similar benefits (Martin, 2019). The ability of a population to sustain itself will depend on the level of resource extraction, the growth and maintenance or its degradation. Resources exist in different forms and can either be natural or manmade. These may include physical, human, financial, technical and other social systems. For a water supply system to be sustainable, it must continuously maintain and deliver the desired amount of water as per the design of the project during its lifespan (Ndung'u, 2014).

2.2.Theoretical review

The theoretical framework introduces and describes the theory that explains why the research problem under study exists and the relevance of each theory to this study. The study was anchored on the following three theories; Theory of Change; Prospect Theory and Program Theory

Theory of Change

The theory of change popularized by Carol Weiss in 1995 provides a basis of defining how and why a programme or intervention will work. Theory of change is a theory-based approach to planning, implementing or evaluating change at an individual, organizational or community level (Ruesga, 2010). The model explains how an intervention is expected to lead to intended or observed impacts and utility. Policy makers often make policies without being clear about the impact and the assumptions which underpin the activities required achieving the policy. Without careful consideration and planning, activities can be performed without bringing about the intended change.

The theory of change can reinforce the broader goals of a policy, programme or project in terms of promoting collaboration and engagement among key stakeholders. When applied during the design phase, it sharpens the planning and implementation of an initiative. This is because stakeholders have the opportunity to specify the expected outcomes of the project. Furthermore, it identifies the implementation of activities intended to achieve these outcomes-and helps to guide choices about when and how to measure those elements (Ntoyanto, 2017). This theory, therefore, forms a basis on the influence of project planning on sustainability of school feeding programs

Prospect Theory

This theory was posited by Tversky and Kahneman (1979). It assists in making choices in uncertain situations. Decisions also include domestic disputes over value trade. This theory is designed to enhance comprehension, describing, and prediction for organizations and individuals in a world of uncertainty. The theory explains the development and assessment of these options in the process of making decisions. The theory of prospect is both descriptive and empirical. This focuses on two areas: the structure process and the evaluation phase (Bernheim& Sprenger, 2019).

Prospect theory is utilized for making decisions in which the maker of decisions multiplies by the decision weight the value of every finding (Pachur, Schulte-Mecklenbeck, Murphy & Hertwig, 2018). Risk is the explanation from the ambiguity associated with taking certain action to the risk for financial or economic loss or gain or delay. Risk management is therefore, essential in the management of risk-

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exposed projects to ensure that the project goals are fulfilled within the limits of the project. This theory underpins the risk management on sustainability of school feeding programme mainly public school 12YBE in Gasabo District, Rwanda

Program Theory

Program theory was developed by Bickman. (1987) which comprises of a lot of proclamations that portray a specific program, clarify why, how, and under what conditions the program impacts happen, anticipate the results of the program, and determine the prerequisites important to achieve the ideal program impacts. The program hypothesis has been utilized to manage assessment for a long time; it demonstrates the ability of the program to fix an issue by tending to the requirements in the need appraisal. It additionally offers instruments to decide territories of effect in assessment (Pawson, 2017).

This theory thus is relevant to the study in relation to how monitoring and evaluation influences on sustainability of school feeding programme mainly public school 12YBE in Gasabo District, Rwanda

2.3. Empirical review

Ndavi (2019), conducted the study on the relationship between Project planning practices and performance of construction projects in Nairobi City County, Kenya. The study sought to examine the effects of project planning practices on performance of construction projects in Nairobi City County, Kenya. The results indicated that project completion was being done without much struggle and that the budgeted funds were enough to complete the project. The study further established that all material resources allocated were in use and that project output had been well defined. The study also found that quality projects planning was being carried out effectively. It was also clear that that activity duration had been well estimated, time schedules were well developed, and that project scope had been well specified during planning phase. The study concluded that human resource planning, time management, material resource planning and financial resource planning positively and significantly contributes to performance of the construction projects.

Gitau (2015) examined the effect of the risk project planning phase on the performance of Rwandese construction projects. The data collection used was both qualitative and quantitative. The study found that consulting engineers and architects were often chosen before the project's development stage. The consultants were selected before project planning for only 14.3% of the projects. The study was limited to the management of risk effects at the planning phase of the project alone. The current study sought to assess the influence of risk management on Performance of the Women and Girls Economic Empowerment projects in Kiambu and Nairobi city counties in its entirety.

Murigia (2019), did the study on the Participatory monitoring and evaluation and successful implementation of school feeding programme in Baringo Central Sub County schools. The findings of this study indicated that capacity building, stakeholders' participation and collective accountability played a vital role on the successful implementation of School Feeding Programme and it recommended that conscious efforts needed to be made in regards to sensitization and inclusivity of the communities and the stakeholders, hence further trainings on the implementation of the school feeding programme to the community were considered as well.

Ngure (2018), conducted the study on the effect of project scope management practices on performance of liquefied petroleum gas firms in Kenya. Project scope management is part of the process groups set out in the practice of project management. The study adopted a descriptive research methodology. Questionnaires were used to collect quantitative data from licensed (LPG) importers and wholesalers in Kenya. Census was carried out as the target population was sizeable and reachable. From the regression equation, project budgets, project quality and environmental factors had a significant positive effect on operational performance. The overall p-value was significant (0.03397, $p<0.05$), indicating that project scope management practices had a significant association with project performance. The overall coefficient of determination R^2 was 0.1437 which means there

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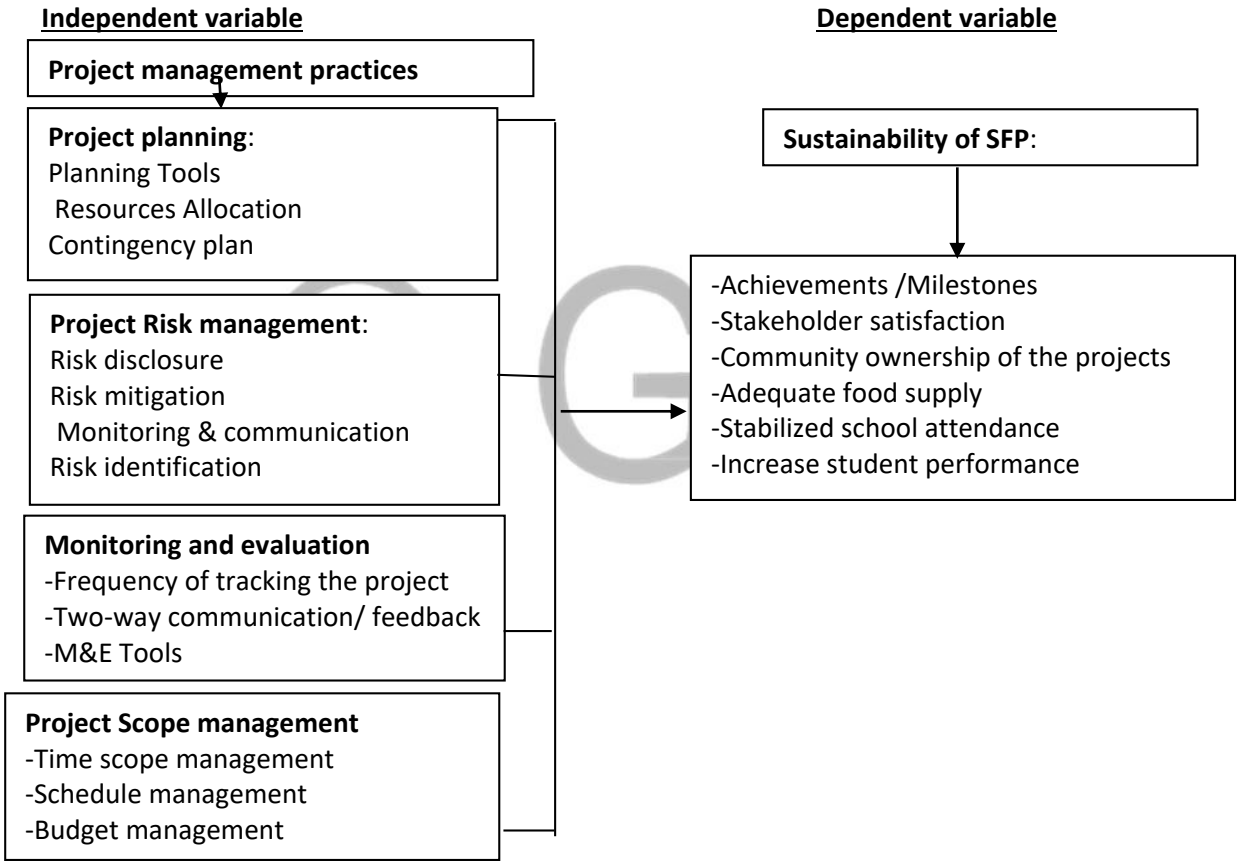
was 14.37% positive variation in project performance index due to changes in project scope management practices and 85.67% is variation of the dependent variable due to other factors not in the model. The p-value of the correlation test between project budget and product & service quality is significant.

2.4.Conceptual framework

The purpose of this study is to determine to what levels the dependent variable relies on the independent variables. The conceptual framework is usually to illustrate how the system of concepts, expectations, beliefs, assumptions and theories informs and support the research and forms a key part of the research design. In this study, the dependent variable is sustainability of school feeding programme in public 12 YBE schools in Gasabo District while the independent variable project management practices such as project planning; risk management; monitoring and evaluation and project Scope management. The conceptual framework illustrates diagrammatically how these variables relate to each other.

Figure 1: Conceptual framework



Source: Researcher, (2022)

2.5. Research gap

Several studies have focused on the issue of the place of project team management in the project performance under public institutions. A few have gone a step further to explore the relationship of project management practices on sustainability of school feeding programme in public 12 YBE schools in Gasabo District in question. However, the aspect of how project team management has led to better performance did not come out well in the reviewed studies. Moreover, there is little literature to show

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how project management has affected sustainability of school feeding programme in public 12 YBE schools in Gasabo District.

3. RESEARCH METHODOLOGY

This part describes the methods used to gather information on the area of the study. The section guided the research methodology to be used in carrying out the study. It presents details of the research design, target population, sampling procedures, methods of data collection, validity and reliability of instruments, data collection process, methods of data analysis and ethical considerations while conducting the study.

3.1 Research Design

Kothari (2011) defines research design as the arrangement of the conditions for the collections and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. The study adopted a descriptive survey research design and correlational research design.

Hence, the study used descriptive research design to describe independent variable which project management practices such as project planning ; community participation ; risk management ; monitoring and evaluation and project Scope management on sustainability of school feeding programme in public 12 YBE schools in Gasabo District and also the study described the level of sustainability of school feeding program by using both qualitative and quantitative approaches; the qualitative was used to generate the non-numerical data while quantitative was used to generate numerical data that explains the relationship between project management practices and sustainability of school feeding programs.

Correlational research design was used to to find out the relationship between management practices such as project planning ; risk management ; monitoring and evaluation and project Scope management as independent variable and sustainability of school feeding programme in public 12 YBE schools in Gasabo District by using inferential approach such correlation analysis and multiple regression analysis.

3.2 Target Population

The target population in study was 619 Teachers, students and school management leaders include 445 teachers, 80 students committees, 94 school management leaders(1 Head teacher,1 Director of study (DOS), 1 Sector education of officer (SEDO) and 3 PTA) from GS Jabana in Jabana sector, GS Kinyinya in Kinyinya sector, GS GisoziI in Gisozi Sector; GS Gikomero in Gikomero sector ; GS Kacyiru II in Kacyiru sector, GS Bumbogo in Bumbogo sector, GS Rubingo in Jali sector ; GS Kabuga and GS Ruhanga in Rusororo sector; GS Kimironko I and GS Kimironko II in Kimironko sector ; GS Nduba in NDUBA sector ; GS Rutunga in Rutunga sector ; GS Rugando in Kimihurura; GS Gihogwe Catholic in Gatsata sector ; GS Ndera in Ndera sector.

3.3 Sample Size and sampling technique

The study used Slovin's Formula to determine the sample size that was used in data collection because 619 teachers and school management leaders from 16 public 12YBE schools in Gasabo District is large which is great than 100, therefore the sample size is calculated as follows:

$$n = \frac{N}{1 + N(e)^2}$$

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Where: n= the sample size,

N= Population size and

e= the margin of error (5%).

$$\boldsymbol{n} = \frac{619}{1 + 619\,\boldsymbol{(0.05)^2}} = \frac{619}{2.547} = 242.98 \approx 243$$

The study collected data on 243 composed by 69 teachers, 80 pupils' committees and 94 school management from sixteen public 12YBE schools in Gasabo District.

Table 1: Sample size

	Population size	**Sample size**			
Category		**Teachers**	**Students commute**	**School management**	**Total sample size**
GS Jabana	39	4	5	6	15
GS Kinyinya	29	3	5	6	10
GS Gisozil	43	5	5	6	16
GS Gikomero	45	5	5	6	17
GS Kacyiru II	29	3	5	6	10
GS Bumbogo	34	4	5	6	12
GS Rubingo	45	5	5	6	17
GS Kabuga	39	4	5	6	15
GS Ruhanga	40	5	5	5	15
GS Kimironko I	36	4	5	6	13
GS Kimironko II	41	5	5	5	15
GS Nduba	37	4	5	6	14
GS Rutunga	36	4	5	6	13
GS Rugando	39	4	5	6	15
GS Gihogwe Catholic	45	5	5	6	17
GS Ndera	42	5	5	6	16
Total	619	69	80	**94**	243

Source: Kayonza District report, 2022

The study used stratified sampling technique to select 69 teachers, from sixteen public 12YBE schools in Gasabo District and also the study used universal sampling techniques to select all 80 pupils' committees and 94 school management leaders in Gasabo District.

3.4 Data Collection instruments

This study used questionnaires as a data collection instruments which were organized in such a way that further analysis and interpretation of data was made easier. The study aimed at simplifying and making good analysis of the data collected. Through the use of tables and figures, the data was presented. The type of presentation adopted was efficient in that it was easier to depict data more accurately hence it provided better understanding of human development and allowed data categorization by witnessing the experience in its natural setting hence using critical judgement to arrive at a conclusion which this study seeks to establish.

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In conducting this study, the interview guide was also used. An interview guide was drafted with a set of questions that the researcher asked respondents during an interview, and this was open ended in nature. The researcher personally was recorded the provided responses as per study respondents during the process of carrying out an interview. This tool was used to collect information from 1 school feeding management at district level which is district education officer of Gasabo District to get additionally information regarding on how project management practices influencing sustainability of school feeding project.

3.5 Data Analysis

After the researcher obtaining the necessary data from the field, the researcher analyzed it and interprets it in relation to the objectives of the study. The analysis of the data commenced with editing and inspection of the pieces of data in order to identify simple mistakes, items that were wrongly responded to and any blank space left unfilled by the respondents. The computer statistical package for social scientists (SPSS) was used to process all the quantitative responses from the questionnaire. The study used descriptive statistics and inferential statistics such as correlation analysis and inferential statistics.

A multiple regression model was used to test the significance of the effect of independent variables on the dependent variables. Based on this, these models was used to test the effects of each predicators such as project planning ; risk management ; monitoring and evaluation and project Scope management as independent variable on sustainability of school feeding programme in public 12 YBE schools in Gasabo District as dependent variables.

The regression model was adopted as the analytical model for research.

$Y= \beta 0+\beta_1 X_1+\beta_2 X_2+\beta_3 X_3+\beta_4 X_4+\beta_5 X_5 + e$

Where

Where Y= Sustainability of SFP in public 12 YBE schools in Gasabo District

$\beta i; i=1,2,3,4$ and 5 = Regression Standardized Co-efficient of independent variables

B_0= the Y interrupt

Xi; i=1,2,3,4 and 5 } = Values of the various independent (Covariates) variables

e = the error term which is assumed to be normally distributed with mean zero and constant variance

X1= Project planning;

X_2= Project risk management;

X_3=Project monitoring and evaluation;

X_4=Project Scope management.

4. DATA PRESENTATION, ANALYSIS AND INTERPRETATION OF FINDINGS

This study investigated the effect of project management practices on sustainability of school feeding programmes in public school 12 YBE in Gasabo District. This chapter presents the findings of this study and the interpretations thereof. The research objectives which guided the analysis were to examine the influence of project planning; risk management; monitoring and evaluation and project Scope management on sustainability of school feeding programme in public 12 YBE schools in Gasabo District. Since the variables determining each independent variable were in ordinary scale an overall index for dependent and independent variables using SPSS compute command were used for inferential analysis such as correlation analysis and multiple regression analysis. The researcher distributed 243 questionnaires and all 100% questionnaires were returned, therefore respondent's rate was 100%. The research assistants emphasized to the respondents the need to fill the questionnaire as instructed, as well as assisting some in completing the questionnaire in cases of either commitment or other forms of incapacities.

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4.1. Inferential statistics

The study sought to investigate the influence of project management practices such as project planning; risk management; monitoring and evaluation; project scope management on sustainability of school feeding programme in public 12 YBE schools in Gasabo District, Rwanda by using inferential statistics. The correlation and regression analyses were performed and conducted to show the existing relationships between dependent and independent variables of the study. Since the analyses were specific to each and every variable in the data set; they were first preceded by model fitness test to indicate the overall contribution of the independent variables on the dependent variable.

4.1.1.Correlations analysis

Pearson's correlation, a test statistic that quantifies the statistical link or association between two continuous variables, was utilized in the study the range of coefficient values is +1 to -1, with +1 indicating a perfect positive association, -1 indicating a perfect negative relationship, and 0 indicating no relationship. The following table gives details on the correlation between independent and dependent variable result indicates the relationship between project management practices such as project planning; risk management; monitoring and evaluation; project scope management as independent variable and sustainability of school feeding programs. According to Pearson correlation, it is used when one wants to find a linear relationship between two variables.

Table 2: Correlations analysis

		X_1	X_2	X_3	X_4	Y
X1= Project planning	Pearson Correlation	1				
X2= Project risk management	Pearson Correlation	.390**	1			
X3=Project monitoring and evaluation	Pearson Correlation	.283**	.372**	1		
X4=Project Scope management	Pearson Correlation	.262**	.888**	.363**	1	
Sustainability of SFP in Gasabo District	Pearson Correlation	.394**	.893**	.387**	.846**	1
	Sig. (2-tailed)	.000	.000	.000	.000	

**. Correlation is significant at the 0.01 level (2-tailed).

The finding in table 2, indicates that the there is significant weak positive correlation between project planning and sustainability of SFP in Gasabo District at r= 0.394** with a corresponding p-value of 0.000 <0.01 level of significant. This implies that an increase of project planning would lead to an increase of sustainability of SFP indicators in Gasabo District

The finding in table 2, indicates that the there is significant high positive correlation between project risk management and sustainability of SFP in Gasabo District at r= 0.893** with a corresponding p-value of 0.000 < 0.01 level of significant. This implies that an increase of project risk management would lead to an increase of sustainability of SFP indicators in Gasabo District.

The finding in table 2, indicates that the there is significant weak positive correlation between project monitoring and evaluation and sustainability of SFP in Gasabo District at r= 0.387** with a corresponding p-value of 0.000 < 0.01 level of significant. This implies that an increase of project monitoring and evaluation would lead to an increase of sustainability of SFP indicators in Gasabo District

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The finding in table 2, indicates that the there is significant high positive correlation between project scope management and sustainability of SFP in Gasabo District at r= 0.893** with a corresponding p-value of 0.000 < 0.01 level of significant. This implies that an increase of project scope management would lead to an increase of sustainability of SFP indicators in Gasabo District. The study findings agree with those of Fageha and Aibinu (2017) that a well-defined project scope facilitates successful completion of projects within the scheduled time, cost estimates and quality measures and that scope definition is conducted during the pre-planning stage. Morris (2015) also explained that the planning period needs the allocation of a significant amount of time, funds and human resources. This effort is confirmed to be a suitable way of improving project success and notably reducing risks that might come up during project implementation.

4.1.2. Multiple linear regression analysis model

The study further applied general Linear Model to determine the predictive power on the influence of project management practices on implementation of donor funded education projects. This included regression analysis, the Model, Analysis of Variance and coefficient of determination. In addition, the researcher conducted a multiple regression analysis so as to test relationship among variables (independent) on the influence of project management practices on implementation of donor funded education projects. The researcher applied the statistical package for social sciences (SPSS V 17.0) to code, enter and compute the measurements of the multiple regressions for the study. Coefficient of determination explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable (sustainability of SFP in Gasabo District) that is explained by all the four independent variables (project management practices such as project planning; project risk management; project monitoring and evaluation and project scope management). The results of regression analysis were interpreted based on the following; β = A measure of how strongly each independent variable influences the dependent variable. t= statistic is the coefficient divided by its standard error and; p = determined by t statistic, is the probability of getting a result as extreme as the one you are getting in a collection of random data in which the variable have no effect

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.904[a]	.817	.814	.21910

a. Predictors: (Constant), X4=Project Scope management, X1= Project planning, X3=Project monitoring and evaluation, X2= Project risk management

From the study findings, it is notable that correlation determination of by adjusted R^2 value (0.814). The study results imply that component of project management practices such as project planning; project risk management; project monitoring and evaluation and project scope management jointly accounted for 81.4% of sustainability of SFP in Gasabo District as represented by the R^2. This therefore means that other factors not studied in this research contribute 18.6% of the project management practices on sustainability of SFP in Gasabo District. Therefore, further research should be conducted to investigate the other factors (18.6%) that affect sustainability of SFP in Gasabo District.

Table 4: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	51.091	4	12.773	266.060	.000[b]
	Residual	11.426	238	.048		
	Total	62.516	242			

a. Dependent Variable: Sustainability of SFP in Gasabo District

b. Predictors: (Constant), X4=Project Scope management, X1= Project planning, X3=Project monitoring and evaluation, X2= Project risk management

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Table 4, shows the analysis of variance (ANOVA) output. The F-ratio in the ANOVA table tests whether the overall regression model is a good fit for the data. That is, the ANOVA shows whether the model, overall, results in a significantly good degree of prediction of the outcome variable. The F-critical (4, 238) was 2.41 while the F-calculated was 266.060 as shown in Table 4. This shows that F-Calculated was greater than the F-critical and hence there is significant linear relationship between the project management practices and sustainability of SFP in Gasabo District. In addition, the p-value was 0.000, which was less than the significance level (0.05). Therefore, the model can be considered to be a good fit for the data and hence it is appropriate in predicting the influence of the four independent variables (project management practices such as project planning; project risk management; project monitoring and evaluation and project scope management) on the dependent variable (sustainability of SFP in Gasabo District).

Table 5: Regression coefficients

	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	t	Sig.
(Constant)	.807	.215		3.753	.001
X1= Project planning	.087	.036	.075	2.410	.017
X2= Project risk management	.589	.063	.604	9.393	.000
X3=Monitoring and evaluation	.263	.046	.042	5.717	.000
X4=Project scope management	.277	.062	.274	4.440	.000

a. **Dependent Variable**: Sustainability of SFP in Gasabo District

The regression model capturing the hypothesized relationship was given as: $Y= \beta 0+ \beta 1X1+ \beta 2X2+ \beta 3X3 + \beta 4X4 + \varepsilon$ and where Y = Sustainability of SFP in Gasabo District, X_1= Project planning; X_2= Project risk management; X_3=Project monitoring and evaluation and X_4=Project Scope management while **ε** is the error term. Assuming the error term ε to be zero and substituting the unstandardized coefficients β values, the estimated multiple regression equation becomes:

$Y = 0.807+ 0.087X_1+ 0.589X_2+ 0.263X_3 + 0.277X_4$.

The regression equation above has established that taking all factors into account (project planning; project risk management; project monitoring and evaluation and project scope management) constant at zero, the sustainability of SFP in Gasabo District was 0.807.

The regression results revealed that project planning has significance positive influence on sustainability of SFP in Gasabo District as indicated by β_1= 0.087, p-value=0.017<0.05, t=2.410. This implies that taking all other independent variables at zero, a unit increase in Project planning would lead to 0.087 increase in the sustainability of SFP in Gasabo District. Project planning is important because it demonstrates leadership and direction of the project. The strategic goals are delivered in a right way against the business opportunities According to Brown and Hyer (2010), Project planning explains the aspects of forecasting techniques which help in to predict costs and cash flows. The author also found that project planning is key information of organization structure and relate it with functions of project implementation. Proper expectations of quality and timelines are set ensuring all the risks are well managed and mitigated to avoid them becoming an obstacle in the implementation. Project planning gives the right people to be involved on the right activity and processes and the processes follow the project lifecycle. It ensures a project's progress is tracked and reported properly. Project planning is important because everybody needs to understand if everyone is doing what is supposed to do and learns from experiences (successes or failures) of the past.

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The regression results revealed that project risk management has significance positive influence on sustainability of SFP in Gasabo District as indicated by β_2= 0.589, p-value=0.000<0.05, t=9.393. This implies that taking all other independent variables at zero, a unit increase in project risk management would lead to 0.589 increase in the sustainability of SFP in Gasabo District. Therefore, the study rejected the null hypotheses that stated that there is no significant influence of project risk management on sustainability of SFP in Gasabo District. The variable coefficients indicate that the relationship between risk management practices identified and project performance was positive and significant. These findings are similar to those by Aimable, Shukla and Oduor (2015) who on their study on effects of risk management methods on project performance in Rwandan Construction industry. The researchers indicated that detailed that risk management practices have a significant and positive effect on project performance. This is supported Ubani, Amade, Benefidct, Aku, Agwu and Okogbuo (2015) who in their study on project risk management issues and project performance concluded that project management practices are critical for peak project performance. The study indicated that organizations adjust plans and scope of work in order to counter risk effects, monitoring risks making timely decisions and keeping project managers informed about possible risk contributes to positive project performance.

The regression results revealed that project monitoring and evaluation has significance positive influence on sustainability of SFP in Gasabo District as indicated by β_3= 0.263, p-value=0.000<0.05, t=5.717. This implies that taking all other independent variables at zero, a unit increase in project monitoring and evaluation would lead to 0.263 increase in the sustainability of SFP in Gasabo District. Therefore, the study rejected the null hypotheses that stated that there is no significant influence of project monitoring and evaluation on sustainability of SFP in Gasabo District. Monitoring the progress and activities of any project work are some of the key management styles used to manage the work by organizations (Georgieva & Allan, 2008). Good monitoring team has good stakeholders' representation. The author also indicates that an M&E team which embraces teamwork demonstrate strength, understanding and an ingredient for better project performance. Well done project monitoring and evaluation where the right tools are employed then the project success is assured. The team is able to identify and correct any mistakes. There is always a good flow of processes since the communication and feedback is facilitated by monitoring and evaluation.

The regression results revealed that project scope management have significance positive influence on sustainability of SFP in Gasabo District as indicated by β_4= 0.277, p-value=0.000<0.05, t=4.440. This implies that taking all other independent variables at zero, a unit increase in project scope management would lead to 0.277 increase in the sustainability of SFP in Gasabo District. Therefore, the study rejected the null hypotheses that stated that there is no significant influence of project scope management on sustainability of SFP in Gasabo District.

4.2. Hypothesis testing

In order to test the study's four formulated hypotheses, the t statistic that tests whether a B value is significantly different from zero (H0: β =o) was considered (refer to Table 5).

H_{O1}: Project planning has no statistically significant influence on sustainability of SFP in Gasabo District. As evident in Table 5, the unstandardized beta value for project planning was significantly greater than zero (β = 0.087, t = 2.410, p=0.017< 0.05). Subsequently, the null hypothesis was rejected, hence, project planning had a statistically significant influence on sustainability of SFP in Gasabo District.

H_{O2}: Project risk management has no statistically significant influence on sustainability of SFP in Gasabo District. In reference to Table 5, the unstandardized beta value for project risk management was found to be significantly greater than zero (β_2 = 0.589, t = 9.393, p-value=0.000 < 0.05).

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Subsequently, the null hypothesis was rejected. Hence, the project risk management had a statistically significant influence on sustainability of SFP in Gasabo District. This implied that sustainability of SFP in Gasabo District would be successful with sound project risk management.

H_{O3}: Monitoring and evaluation has no statistically significant influence on sustainability of SFP in Gasabo District. As evident from Table 5, the unstandardized beta value for monitoring and evaluation was significantly greater than zero (β_3 = 0.263, t = 5.717, p =0.000< 0.05). Subsequently, the null hypothesis was rejected. Hence, monitoring and evaluation had statistically significant influence on sustainability of SFP in Gasabo District. This implied that, monitoring and evaluation were more likely to have functional sustainable SFP.

HO4: Project scope management has no statistically significant influence on sustainability of SFP in Gasabo District. As evident from Table 5, shows that the unstandardized beta value for funding was significantly greater than zero (β_4= 0.277, t= 4.440, p=0.000< 0.005). Subsequently, the null hypothesis was rejected. Hence, project scope management had a statistically significant influence on sustainability of SFP in Gasabo District. This implied that, project scope management were more likely to accomplish sustainability of SFP in Gasabo District.

5. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

Based on the analysis and findings from the study; the components of project management practices such as project planning; project risk management; project monitoring and evaluation and project scope management had significant positive effect on sustainability of SFP in Gasabo District as jointly accounted for 81.4% of sustainability of SFP in Gasabo District as represented by the R^2 at 95% of confidence interval.

In addition, the project plan is the tool which is majorly used while planning for the organization and furtherly, the findings demonstrated that the project goal relates to the overall organizational goal and that the project team is well coordinated. This also be concluded that the strategic planning ensures employees and other stakeholders are working toward common goals, establishes agreement around intended outcomes/results, and assesses and adjust the organization's direction in response to a changing environment. Finally, the study proves that strategic planning for project management put into consideration the best practices in an organizational culture are paramount important to value and nurture concomitant best practices.

In regard to project risk management in management of school feeding programme was found to be highly significant about influence it has on sustainability of school feeding programmes. Hence it can be concluded in this study that project risk management influence positively the sustainability of school feeding program in Gasabo District.

In regard to monitoring and evaluation, the study concludes that monitoring and evaluation was practiced in the county projects and project managers should apply monitoring and evaluation tools. From the findings, it can be concluded that the organization/ project had a monitoring plan and monitoring tools. Also, the study concluded that respondents followed the monitoring plan in most cases. The study goes further to conclude that M&E Officer monitors the project and that they provided feedback to the beneficiaries after monitoring. Finally, the study concludes that written reports were mostly used to give feedback to the beneficiaries.

In regard to project scope management in management of school feeding program was found to be highly significant on the influence it has towards sustainability of school feeding programs. Hence it can be concluded in this study that project scope management influence positively the sustainability of school feeding programme in Gasabo District.

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5.2. Recommendations

Government should be aware that risk management methods are the dynamic project tool especially in school feeding programs. It should be very careful to avail the supervisor in preparation of meals of pupils at school to ensure that risk management methods are being conducted to prevent post completion defects and excessive costs. It will ease work and also monitor and emphasize on tender process to offer such tenders of construction projects basing on assessed risk management methods as it might lead to the poor quality when the winner does not have required competitiveness.

Since, the findings revealed that project monitoring and evaluation has significance positive influence on sustainability of SFP in public 12 YBE schools in Gasabo District; the study recommend that the program manager should carry out project monitoring and evaluation a least twice a month with involvement of all key players in the project and by use of monitoring and evaluation tool. The team should promote, enable and facilitate communication, reporting and feedback on monitoring and evaluation processes to the stakeholders.

Since, the findings revealed that project scope management has significance positive influence on sustainability of SFP in public 12 YBE schools in Gasabo District; the study recommend that the project managers define a clear scope before they start project implementation. They need to have a clear work breakdown structure, identify all project stakeholders and define all the needed requirements before they start implementing projects.

5.3. Suggestion for further research

Therefore, further research should be conducted to investigate the other factors. Also the researcher suggested the following studies for further research.

- The role of leadership skills on sustainability of school feeding programme in public 12 YBE schools in Gasabo District.
- The effect of community participation on sustainability of school feeding programme in public 12 YBE schools in Gasabo District.

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