UNIVERSIDAD PARA LA COOPERACIÓN INTERNACIONAL
(UCI)

A PROJECT MANAGEMENT PLAN TO DEVELOP A LOWER SECONDARY SCHOOL PHYSICAL EDUCATION CURRICULUM AND STRENGTHEN TEACHERS' CAPACITY TO DELIVER AND ASSESS THE LOWER SECONDARY SCHOOL PHYSICAL EDUCATION CURRICULUM IN SAINT LUCIA

ERASMUS WAYNE BENTI

FINAL GRADUATION PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
MASTER IN PROJECT MANAGEMENT (MPM) DEGREE

Castries, Saint Lucia

July 2023

UNIVERSIDAD PARA LA COOPERACIÓN INTERNACIONAL
(UCI)

A PROJECT MANAGEMENT PLAN TO DEVELOP A LOWER SECONDARY SCHOOL PHYSICAL EDUCATION CURRICULUM AND STRENGTHEN TEACHERS' CAPACITY TO DELIVER AND ASSESS THE LOWER SECONDARY SCHOOL PHYSICAL EDUCATION CURRICULUM IN SAINT LUCIA.

ERASMUS WAYNE BENTI

FINAL GRADUATION PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
MASTER IN PROJECT MANAGEMENT (MPM) DEGREE

Castries, Saint Lucia

July 2023

UNIVERSIDAD PARA LA COOPERACIÓN INTERNACIONAL
(UCI)

This Final Graduation Project was approved by the University as partial fulfillment of the requirements to opt for the Master in Project Management (MPM) Degree

_____
Paula Villalta Olivares
TUTOR

_____
Juan Delgado
REVIEWER No.1

_____
Full name must be written
Rubén Alzate

Erasmus Wayne Benti
STUDENT

DEDICATION

To my loving sons: Shaqueal, Amani, Cameron.

You are the lights of my life, the source of my joy and the reason I strive to be a better person every day. May your lives be filled with endless opportunities for growth and fulfilment. May you embrace knowledge, curiosity, and the pursuit of your dreams with unwavering determination.

ACKNOWLEDGMENTS

The successful completion of this project has been made possible through the invaluable input and assistance of numerous individuals who have demonstrated a profound level of interest and commitment. Their contributions have been instrumental in shaping my journey towards achieving the Master's Degree in Project Management.

I would like to express my heartfelt appreciation to the OAS for the scholarship, which has been a gracious gift, enabling me to pursue this endeavor. Additionally, I extend my sincere gratitude to Professor Paula Villalta Olivares for her exceptional stewardship and guidance throughout the project. Her expertise and unwavering support have played a pivotal role in shaping the outcome of my work.

I am also deeply grateful to my UCI colleagues and classmates who have consistently provided unwavering support and willingly shared valuable information. Their camaraderie and collaboration have fostered a conducive environment for learning and growth.

As I reflect upon the completion of this project, I wish to acknowledge the collective efforts and contributions of all these individuals and organizations. Their involvement has enriched my academic journey, and I am truly thankful for their unwavering support.

ABSTRACT

This document focuses on developing a project management plan for the creation of a lower secondary school physical education curriculum and improving teachers' capacity to deliver and assess the curriculum in Saint Lucia. The project seeks to enhance the quality of education in physical education for lower secondary school students in Saint Lucia, and will therefore explore the current state of physical education in lower secondary schools in Saint Lucia in order to identify existing gaps and challenges in the delivery and assessment of the curriculum. It will also review best practices and research on curriculum development, project management, and teacher capacity building to inform the development of the project management plan.

The research methodology will include a combination of quantitative and qualitative approaches. Data will be collected through surveys, interviews, focus groups, and document analysis. The findings of the study will inform the development of the project management plan which will include the project scope, objectives, timeline, budget, resources, and risk management strategies. The plan will also outline the strategies for teacher capacity building, such as training and coaching, to support the successful implementation of the curriculum.

The expected outcome of this project is the development of a high-quality physical education curriculum for lower secondary schools in Saint Lucia that is aligned with national and international standards. Additionally, the project will contribute to strengthening the capacity of physical education teachers in delivering and assessing the curriculum. This project will have a positive impact on the health and well-being of lower secondary school students in Saint Lucia by providing them with a comprehensive and engaging physical education curriculum.

TABLE OF CONTENTS

Contents

INDEX OF FIGURES

INDEX OF CHARTS

ABBREVIATIONS AND ACRONYMS

- **AOP-** Annual Operational Plan
- **CAMDU-** Curriculum and Material Development Unit
- **CEO-** Chief Education Officer
- **CDB-** Caribbean Development Bank
- **CPD-** Continuing Professional Development
- **CSEC-** Caribbean Secondary Education Certificate
- **CXC-** Caribbean Examination Council
- **GOSL-** Government of Saint Lucia
- **PE- Physical** Education
- **PMP-** Project Management Plan
- **SLU-** Saint Lucia

EXECUTIVE SUMMARY

Education is a crucial sector in the development of any country, and the curriculum used to shape students' human resources must be carefully designed. At the secondary school level, curriculum and assessment play a critical role in the overall education journey. Additionally, the capacity of teachers involved in this process is of utmost importance. Therefore, a project aimed at developing the curriculum and enhancing teacher capacity can have a lasting impact on education. To ensure the success and effective management of such a project, a comprehensive project management plan is essential.

The Project Management Institute (PMI) emphasizes meticulous planning and processes for successful projects. Without a project management plan, there is a risk of limited success, project creep, and poor management. Hence, for the national education project, a project management plan was adopted to provide better guidance and monitoring.

The general objective of this project is to create a learner-centred physical education curriculum tailored specifically for lower secondary school students in Saint Lucian classrooms. The curriculum will be based on scientific research, grounded in theoretical underpinnings, and will incorporate global citizenship skills, enabling learners to actively participate in the world. This holistic approach to physical education aims to benefit educators and students in Saint Lucian classrooms. The specific objectives of the project are as follows: Establish a comprehensive curriculum development program to nurture a skilled group of curriculum experts who can take on leadership roles, serve as coaches, and excel in curriculum writing, implementation, and evaluation. Strengthen teacher capabilities through targeted professional development initiatives and training sessions, focusing on equipping them with the necessary skills in curriculum development, implementation, and evaluation. Develop an engaging and interactive E-Book to enrich students' learning experiences, providing a dynamic platform to enhance their understanding and grasp of the subject matter.

The research methodology employed a mixed approach, combining quantitative and qualitative methods for data collection and analysis. The findings were presented both qualitatively and quantitatively.

The project's management was guided by PMI's knowledge areas, including Scope Management, Project Schedule Management, Project Risk Management, Project Cost Management, Project Procurement Management, Project Stakeholder Management, Project Communication Management, Quality Management, and Project Resource Management.

The project charter approved by the project sponsor provided the framework for the overall project, while the scope management plan guided the development of the lower secondary school physical education curriculum. The schedule management ensured the successful completion of the project within budget. The risk management plan identified, assessed, and managed potential risks, ensuring adaptability to dynamic situations. The cost and procurement management plans facilitated financial control and the acquisition of

required services. Stakeholder management was integral, considering both direct and indirect stakeholders with varying levels of interest, power, and influence. Effective and timely communication modes and media were planned through the communication management approach. Finally, the resource management plan ensured proper allocation and utilization of resources, including team development and change management.

Lessons learned from this project are valuable for future curriculum enhancement opportunities within the Ministry of Education. Change management is essential, as it necessitates a shift in stakeholders' mind-sets towards the new curriculum document.

A project management plan is indispensable for any education project undertaken by the Ministry of Education. The successful execution of this project will serve as a stepping stone for curriculum enhancement endeavours, driving positive change in the education system.

1 INTRODUCTION

1.1. Background

There are 23 secondary schools in Saint Lucia serving 13,576 students and 75 primary schools serving 16,764 students. Prior to the 1980's, physical education was not an organized activity in schools in Saint Lucia. While the subject appeared on the schedule of most schools, it was rarely acknowledged as anything other than playtime. Many physical education classes at the infant and primary levels were supervised by the classroom teacher and were usually characterized by a lack of meaningful involvement on the teacher's part, who usually stood or sat around while the students played. For the most part, a similar situation existed at the secondary level. There was little instruction and even less assessment of students in the field/area of physical education. .

Current State of Physical Education in Saint Lucia

Physical education has been offered as a Caribbean Examinations Council (CXC) subject at the regional level since 2005 and there is a CSEC syllabus for the upper secondary school (forms 4-5). Over the years, Saint Lucian students have performed well at CSEC PE, consistently maintaining a pass rate in the range of 90% and above. The Caribbean Community (CARICOM) understands the importance of physical education to the region and developed a Draft Framework for Physical Education. While access to physical education has improved with the deployment of teachers at all public schools, the quality of physical education has not improved significantly, as several problems still exist. To help remedy this situation, a K-6 PE curriculum was developed in 2018. In addition to the K-6 curriculum, a concerted effort has been made to provide professional development activities to teachers at the K-6 level including regular workshops, school visits and an

annual physical education and sport conference. These efforts have led to an improvement in the quality of teaching at that level. However, the improvements at the K-6 level have exposed the need to address various issues at the secondary level of the system. There is no physical education curriculum at the lower secondary level (Forms 1-3). In the absence of a physical education curriculum, teachers have managed by adapting the CSEC syllabus for the upper secondary level to meet the needs of lower secondary school students. While this is a commendable adjustment, it presents some disadvantages. There is little structure in the teaching of physical education at the secondary level. Without a national curriculum, there is little direction for teachers regarding the concepts which should be taught as well as the depth and extent to which they must be taught. Although some teachers are creative in finding resources and appropriate activities, there is great variation in the content and the quality of physical education instruction across the island. In addition, the absence of a physical education curriculum at the secondary level does not allow for a smooth transition from the primary school system, nor for the effortless continuation of skills that students were previously exposed to. There will continue to be very little alignment in the system without a lower secondary curriculum.

1.2. Statement of the Problem

Saint Lucia is a small island nation in the Caribbean with a growing need for a physical education (PE) curriculum at the lower secondary school level. The current education system in Saint Lucia lacks a specific PE curriculum for students in lower secondary school. As a result, there is a gap in the development of fundamental motor skills, physical fitness, and a positive attitude towards physical activity among students. Additionally, this lack of physical education at the lower secondary level has the potential

to negatively impact students' academic performance, physical health, and overall well-being.

Furthermore, Saint Lucia is facing significant health challenges, such as increasing rates of obesity and noncommunicable diseases (NCDs). These health issues can be addressed, in part, through increased physical activity among young people. With the establishment of a PE curriculum, lower secondary school students can develop a better understanding of the importance of physical activity and healthy living.

Therefore, the development of a PE curriculum in lower secondary schools in Saint Lucia is a crucial step towards improving the health, well-being, and overall quality of life for students, as well as addressing the significant health challenges facing the country. This curriculum should be designed to meet the specific needs and cultural context of Saint Lucia, and should focus on developing fundamental motor skills, physical fitness, and positive attitudes towards physical activity among lower secondary school students.

1.3. Purpose

The purpose of developing a project management plan (PMP) is to provide a formal, approved document that defines how the project should be executed, monitored, and controlled.

A well-developed PMP will help the project team to establish best practices to meet many needs, including effective management of project resources, alignment of project to the strategic goals of the organization, improved tracking and reporting on project status, and reduction in the time and money spent on ensuring the project is brought to a successful completion.

To develop a lower secondary school physical education curriculum and strengthen teachers' capacity to deliver and assess the curriculum, a PMP should include specific details such as the scope of the project, the objectives of the project, the roles and responsibilities of team members, a timeline for completing the project, a budget for the project, and risk management plans. In addition, the PMP should outline how the project team plans to break down the project's scope into smaller, more manageable deliverables and groups of related tasks, also known as work packages. This will allow the project team to assign resources to different parts of the project based on the skills needed.

A well-developed PMP will provide a clear roadmap for successfully executing, monitoring, and controlling a project. Developing a PMP for a project such as developing a lower secondary school physical education curriculum and strengthening teachers' capacity to deliver and assess the lower secondary school physical education curriculum in Saint Lucia will ensure that the project is completed on time, within budget, and that the project's objectives are met.

1.4. General Objective

Design a project management plan to enhance the curriculum and assessment of physical education at the lower secondary school level and strengthen teacher capacity in Saint Lucia.

Specific Objectives

- To develop a project charter that will be used in the elaboration of the project deliverables.
- To develop a scope management plan to determine work to be done on the project and that the project is successfully completed.
- To develop a schedule management plan to determine the project life cycle and the successful completion within the time period.
- To develop a risk management plan to mitigate against risk and respond to risk within the project.
- To develop a cost management plan to manage the finances and budget within the finances available.
- To develop a quality management plan to manage and control the project to meet stakeholders' expectations.
- To develop a resource management plan that identifies the resources required, how to acquire them, and how to manage them.
- To develop a communication plan to communicate with stakeholders on the project effectively.
- To develop a procurement plan to procure resources for implementing the project.
- To develop a stakeholder management plan to manage stakeholders within the project.

2 THEORETICAL FRAMEWORK

2.1 Company/Enterprise Framework

The Ministry of Education, in its quest to provide education to the citizens of Saint Lucia, is led by the Minister of Education. The approach of the department is a four-prong approach guided by the balanced scorecard approach.

a) Stakeholder perspective

b) A business/operations perspective

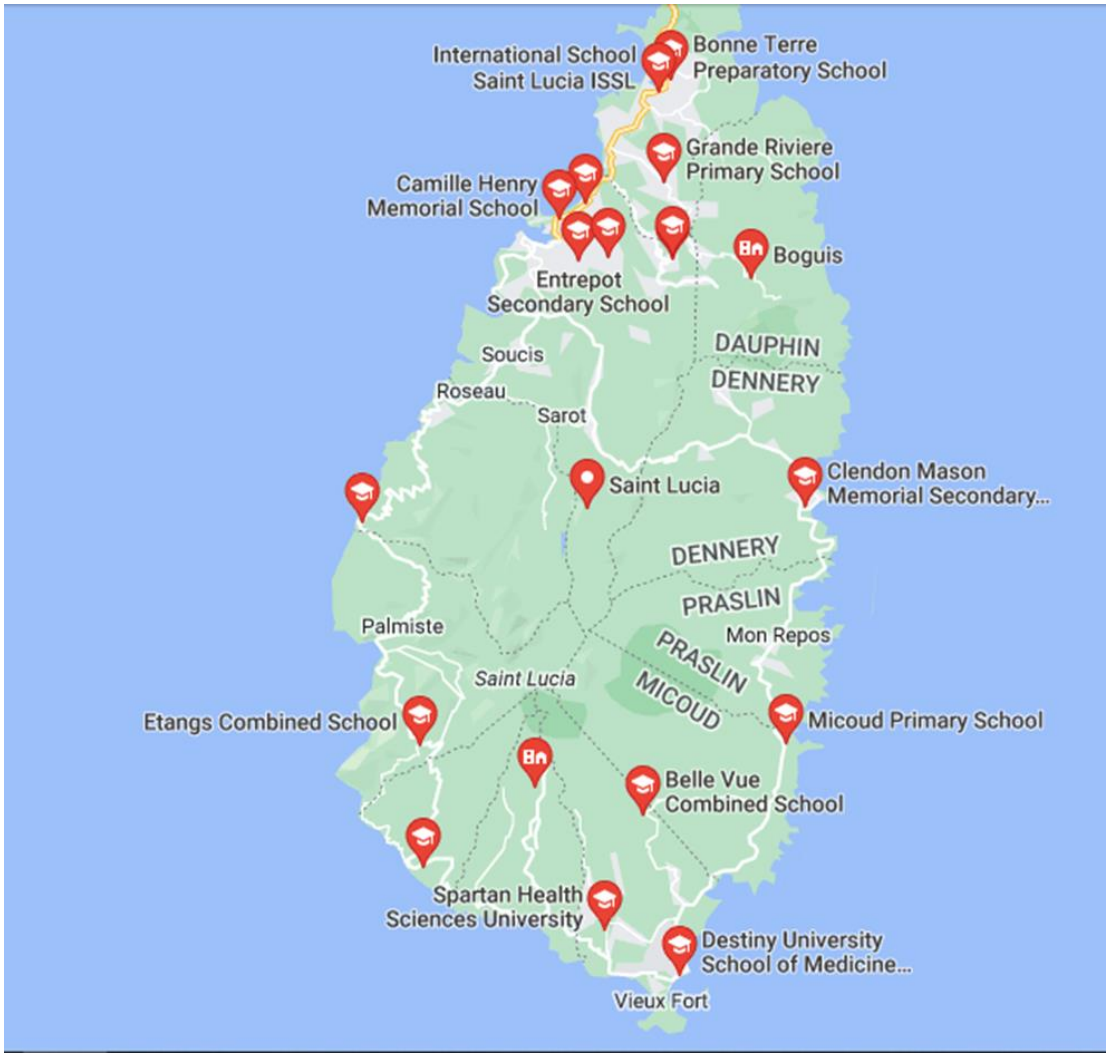
c) An internal capacity perspective

d) A resource perspective

2.1.1 Company/Enterprise Background

The final graduation project is based on the development of a lower secondary school PE curriculum. Saint Lucia is an independent, developing island in the Caribbean. As such, the island, through various sources, receives financial assistance to embark upon the projects through various sponsors. “The GOSL subscribes to the notion that education is a basic human right and as such plays a crucial role in the holistic development of its citizens.” **Figure 1** shows the number of secondary school in Saint Lucia that will be using the newly developed PE curriculum and eBook.

Figure 1 Map of all secondary schools in Saint Lucia



(Government of Saint Lucia, 2020)

2.1.2 Mission and Vision Statements

Vision

"An education system that shapes the development of a literate, numerate, skilled, life-long learner; one who is values-driven, globally adaptable, and contributing meaningfully to the development of self, community, nation, and the region."

(Government of Saint Lucia 2020)

Mission

To enable all learners to realize their full potential in their fields of interest, by facilitating affordable, equitable, quality educational experiences that empower them with the knowledge, skills, and values conducive to achieving successfully in a 21st century environment.

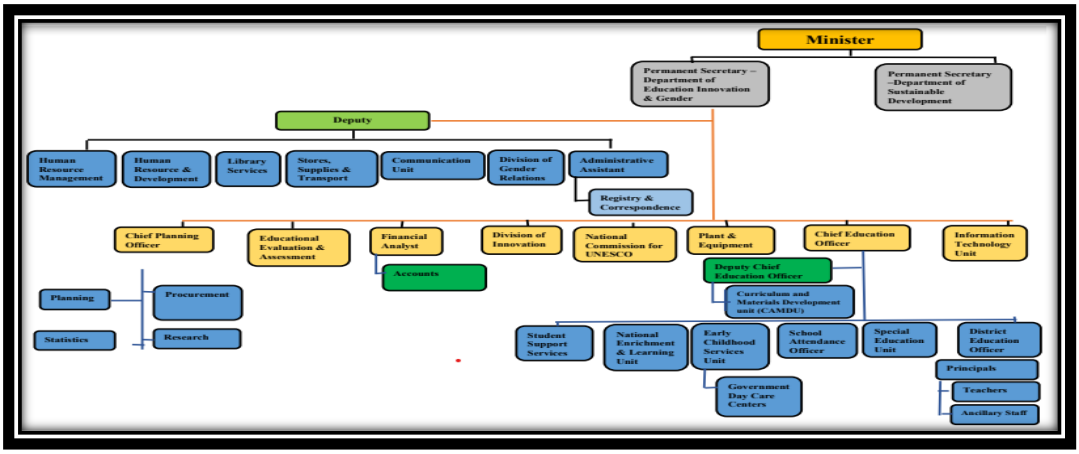
2.1.3 Organizational Structure

The Ministry of Education in Saint Lucia is under the leadership of the Minister of Education, who is appointed to this position by the Prime Minister. The minister's primary role is to provide guidance for the national education policy and establish a constitutional framework to direct the vision and mission of education in the country. Assisting the minister are a Permanent Secretary and a Deputy Permanent Secretary, with the latter having direct administrative control over department functions and policy implementation (Section 69 of the Constitution of Saint Lucia CAP.1.01 of the Revised Laws of Saint Lucia).

The Deputy Permanent Secretary is responsible for managing specific departments, as outlined in Figure 2, while the Permanent Secretary oversees other areas. The Deputy Permanent Secretary's responsibilities include supervision of units such as Human Resource Management, Human Resource Development, Library services, Stores and Supplies, Communication Unit, Department of Gender, and Administrative Assistants. On the other hand, the Permanent Secretary has overall responsibility but specifically oversees the Chief Planning Officer, Educational Assessment and Evaluation Unit, Financial Analyst, Division of Innovation, National Division for UNESCO, Plant and Equipment, and the Chief Education Officer.

The Chief Education Officer is in charge of the school system, guided by the Education Act. Assisting in leadership is the Deputy Education Officer, who oversees the curriculum. Various education officers, curriculum officers, principals, and teachers contribute to the implementation and assessment of the curriculum. Education Officers are assigned to different educational districts, and presently, there are eight educational districts in Saint Lucia. These districts include elementary, primary, and secondary schools, all managed by principals who report to the District Education Officers. Principals collaborate with teachers and ancillary staff to effectively manage the school plant. **Figure 2** below shows the Organizational structure of Ministry of Education (Saint Lucia).

Figure 2 Organizational structure of Ministry of Education (Saint Lucia)



(Source: Government of Saint Lucia 2020**)**

2.1.4 Products Offered

` The ministry of education offers various products to its stakeholders. This project is specific to the Curriculum and Material Development Unit (CAMDU). The ministry provides standards for teaching the curriculum, certification and assessment to determine standard alignment, teacher training and support to personnel in leadership.

Professional development exercises for teachers are usually offered through the provision of workshops, conferences and seminars provided throughout the year. Additionally, the department of education in collaboration with the island's only community college, provides training courses to teachers in the areas of Primary Education. The certification obtained upon completion is bestowed in conjunction with endorsed colleges and universities.

2.2 Project Management Concepts

2.2.1 Project

"A project is a temporary endeavor undertaken to create a unique product, service, or result." (PMI, 2017) The FGP presents the project of the development of a lower secondary school Physical Education (PE) curriculum. Implementing a standardized PE curriculum ensures consistent and high-quality physical education instruction across all lower secondary schools, promoting equal opportunities for student participation and fairness in education. A well-designed PE curriculum offers numerous benefits to teachers, providing clear guidelines, learning objectives, and instructional materials to facilitate effective planning and delivery of engaging PE lessons. This saves teachers time in preparation and enhances their teaching strategies, leading to improved outcomes and job satisfaction. For students, a comprehensive PE curriculum promotes physical fitness, health, coordination, teamwork, and leadership qualities, fostering social interaction, sportsmanship, and positive self-esteem. By ensuring all students receive these benefits, regardless of their school or teacher, a standardized PE curriculum promotes educational equity. Moreover, the development of such a curriculum demonstrates the government's

commitment to holistic education and recognizes the significance of physical activity in students' overall development. It enables effective monitoring and evaluation of PE programs, allowing the Ministry of Education to assess their impact, make necessary improvements, and align with national educational goals. Ultimately, the development of a lower secondary school PE curriculum in Saint Lucia benefits teachers, students, and the Ministry of Education by providing guidance, promoting physical fitness and overall development, and enhancing the quality of education in the country.

2.2.2 Project Management Principles

Project scope: It is essential to define the project scope clearly to determine the boundaries of the curriculum development project. The scope statement should include the goals, objectives, deliverables, and constraints of the project. It should also outline the key stakeholders and their requirements.

Project schedule: A project schedule is a timeline that outlines the project's activities and their start and end dates. The schedule should be created by breaking the project into smaller, manageable tasks and sequencing them in a logical order. This can be done using a Gantt chart or a network diagram.

Identify risks: It is important to identify potential risks that may impact the curriculum development project. These risks could be related to resources, timelines, budget, or even content development. Once the risks are identified, they should be assessed and a mitigation plan should be created to address them.

Resource requirements: Resource planning involves identifying the resources required for the project including human resources, materials, and equipment. It is

important to ensure that resources are available when needed, and that the project budget is sufficient to cover all costs.

Quality criteria: Quality criteria are the standards that the project deliverables must meet. For curriculum development, quality criteria could include adherence to learning objectives, alignment with industry standards, and engagement of students. Defining quality criteria helps ensure that the curriculum meets the needs of stakeholders.

Monitor and control the project: The project manager should monitor and control the project throughout its life cycle to ensure that it stays on track. This involves regular progress reporting, risk monitoring, and change management. Any changes to the project scope, schedule, or budget should be managed through a formal change control process.

To make these principles operational, it is important to create a detailed PMP that outlines how each principle will be applied in the context of the curriculum development project. The PMP should be communicated to all stakeholders and regularly reviewed and updated throughout the project life cycle. The project manager should also ensure that project team members are aware of their roles and responsibilities and that they have the necessary resources to perform their tasks. Finally, regular communication with stakeholders is essential to ensure that the project stays aligned with their needs and expectations.

2.2.3 Project Management Domains

Developing a curriculum for lower secondary school PE can benefit from the above domains as follows:

1. Integration management: This domain can help ensure that the PE curriculum is aligned with the schools' overall objectives and strategic plans.

2. Scope management: This domain can help define the scope of the PE curriculum, including the learning objectives, activities, and assessments.
3. Schedule management: This domain can help develop a timeline for implementing the PE curriculum, including the duration of each lesson and the overall time frame for the course.
4. Cost management: This domain can help budget for the necessary resources needed to deliver the PE curriculum, such as equipment, materials, and instructor salaries.
5. Quality management: This domain can help ensure that the PE curriculum meets the required quality standards, such as the effectiveness of learning outcomes and student satisfaction.
6. Resource management: This domain can help manage the necessary resources needed to deliver the PE curriculum, such as the allocation of instructors, equipment, and materials.

Overall, utilizing the project management performance domains can help ensure that the curriculum development process is well-planned, well-executed, and meets the required standards and expectations.

2.2.4 Predictive, Adaptive and Hybrid Project

It is important to understand the main features of different project management frameworks, including predictive, adaptive, and hybrid projects. According to PMI, projects should deliver business value by developing new products or services, solving problems, or fixing things that were defective or suboptimal.

Predictive projects are also known as waterfall projects, which follow a linear and sequential approach. The project scope, schedule, and budget are established at the

beginning of the project, and the project team follows a plan to execute the project. The project plan is often rigid and fixed, with little room for changes or modifications. The project team releases deliverables at specific points or at the end of the project.

Adaptive projects, also known as agile projects, follow an iterative and incremental approach. The project team works in short cycles, or sprints, to deliver small increments of value to the customer. The project plan is flexible and adaptable, allowing for changes and modifications to the project scope, schedule, and budget. The project team releases deliverables throughout the project life cycle.

Hybrid projects combine elements of both predictive and adaptive approaches, allowing for more flexibility and adaptability while still maintaining a plan and structure. The project team uses a combination of predictive and adaptive project management techniques to deliver business value. Hybrid projects are often used when the project requirements are complex, uncertain, or changing.

Predictive projects are those that are well-defined with clear objectives, requirements, and constraints. The project scope, schedule, and budget are established at the beginning of the project and followed throughout the project's life cycle. Iterative projects are those that are more flexible and adaptable to changes. They are usually used when the project requirements are unclear, or when the customer needs to see a working prototype before the final product is developed. Agile projects are a type of iterative project, but with a specific set of principles and practices that focus on delivering value to the customer through continuous feedback and collaboration.

Since the project requirements are clear, and the project's scope, schedule, and budget can be established at the beginning of the project, developing a PMP for

implementing a lower secondary school curriculum would be classified as a predictive project. The project team can follow the four phases of the project management process: initiating, planning, executing, and closing. During the initiating phase, the project team can identify the project objectives, stakeholders, and requirements. In the planning phase, the project team can define the project scope, create a schedule, and establish a budget. During the executing phase, the project team can implement the PMP by developing the curriculum, delivering the necessary training, and monitoring progress. Finally, during the closing phase, the project team can evaluate the PMP's success and identify lessons learned for future improvement.

Overall, developing a PMP for a lower secondary school PE curriculum is likely a predictive project that can benefit from following the project management process's four phases to ensure its success.

2.2.5 Project Management

According to A Guide to the Project Management Book of Knowledge (PMBOK) sixth edition, “project management is the application of knowledge, skills, tools and techniques to project activities to meet the project requirements.” Project management is accomplished through the application and integration of the project management processes identified for the project (2017).

This FGP will allow me to be the project manager of my project, deliver a project management plan and to work with those who are managing the project to update the radio access network.

2.2.6 Project Management Knowledge Areas

PMBOK (2017) defines “a knowledge area as an identified area of project management defined by its knowledge requirements and described in terms of its component processes, practices, inputs, outputs, tools and techniques.”

Although the knowledge areas are interrelated, they are defined separately from the project management perspective. The ten knowledge areas described in this guide are:

- Project integration management -Includes the processes and activities to identify, define, combine, unify and coordinate the various processes and project management activities within the project management process groups.
- Project scope management - Includes the processes required to ensure that the project includes all the work required, and only the work required, to complete the project successfully.
- Project schedule management - Includes the processes required to manage the timely completion of the project.
- Project cost management - Includes the processes involved in planning, estimating, budgeting, financing, funding, managing, and controlling costs so that the project can be completed within the approved budget.
- Project quality management - Includes the processes for incorporating the organization’s quality policy regarding planning, managing, and controlling project and product quality requirements, in order to meet stakeholders’ expectations.

- Project resource management - Includes the processes to identify, acquire and manage the resources needed for the successful completion of the project.
- Project communications management - Includes the processes required to ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control, monitoring and ultimate disposition of project information.
- Project risk management - Includes the processes of conducting risk management planning, identification, analysis, response planning, response implementation and monitoring risk on a project.
- Project procurement management - Includes the processes necessary to purchase or acquire products, services or results needed from outside the project team.
- Project stakeholder management - Includes the processes required to identify the people, groups or organizations that could impact or be impacted by the project, to analyze stakeholder expectations and their impact on the project and to develop appropriate management strategies for effectively engaging stakeholders in project decisions and execution.

Figure 3 shows the Project Management Process Group and Knowledge Area Mapping.

Figure 3 Project Management Process Group and Knowledge Area Mapping

Knowledge Areas	Project Management Process Groups				
	Initiating Process Group	Planning Process Group	Executing Process Group	Monitoring and Controlling Process Group	Closing Process Group
4. Project Integration Management	4.1 Develop Project Charter	4.2 Develop Project Management Plan	4.3 Direct and Manage Project Work 4.4 Manage Project Knowledge	4.5 Monitor and Control Project Work 4.6 Perform Integrated Change Control	4.7 Close Project or Phase
5. Project Scope Management		5.1 Plan Scope Management 5.2 Collect Requirements 5.3 Define Scope 5.4 Create WBS		5.5 Validate Scope 5.6 Control Scope	
6. Project Schedule Management		6.1 Plan Schedule Management 6.2 Define Activities 6.3 Sequence Activities 6.4 Estimate Activity Durations 6.5 Develop Schedule		6.6 Control Schedule	
7. Project Cost Management		7.1 Plan Cost Management 7.2 Estimate Costs 7.3 Determine Budget		7.4 Control Costs	
8. Project Quality Management		8.1 Plan Quality Management	8.2 Manage Quality	8.3 Control Quality	
9. Project Resource Management		9.1 Plan Resource Management 9.2 Estimate Activity Resources	9.3 Acquire Resources 9.4 Develop Team 9.5 Manage Team	9.6 Control Resources	
10. Project Communications Management		10.1 Plan Communications Management	10.2 Manage Communications	10.3 Monitor Communications	
11. Project Risk Management		11.1 Plan Risk Management 11.2 Identify Risks 11.3 Perform Qualitative Risk Analysis 11.4 Perform Quantitative Risk Analysis 11.5 Plan Risk Responses	11.6 Implement Risk Responses	11.7 Monitor Risks	
12. Project Procurement Management		12.1 Plan Procurement Management	12.2 Conduct Procurements	12.3 Control Procurements	
13. Project Stakeholder Management	13.1 Identify Stakeholders	13.2 Plan Stakeholder Engagement	13.3 Manage Stakeholder Engagement	13.4 Monitor Stakeholder Engagement	

Source: (PMBOK Guide 6th Edition

2.2.7 Project Management Processes

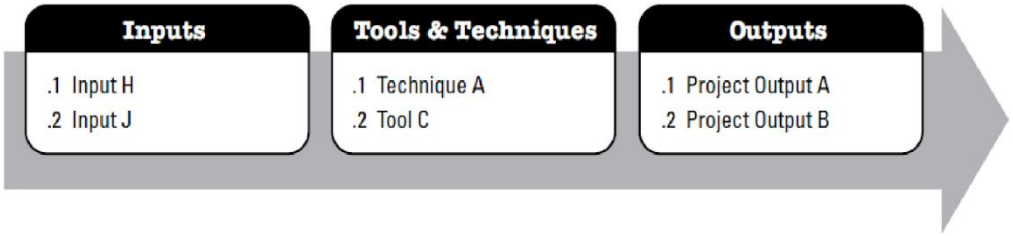
According to the PMBOK (2017), "project management processes are described as a systematic series of activities directed toward causing an end result where one or more inputs will be acted upon to create one or more outputs."

Project management processes are logically linked by the outputs they produce. Processes may contain overlapping activities that occur throughout the project. **Figure 4** below gives an example Process - Inputs, Tools & Techniques, and Outputs.

The output of one process generally results in either:

- An input to another process.
- A deliverable of the project or project phase.

Figure 5 Example Process - Inputs, Tools & Techniques, and Outputs



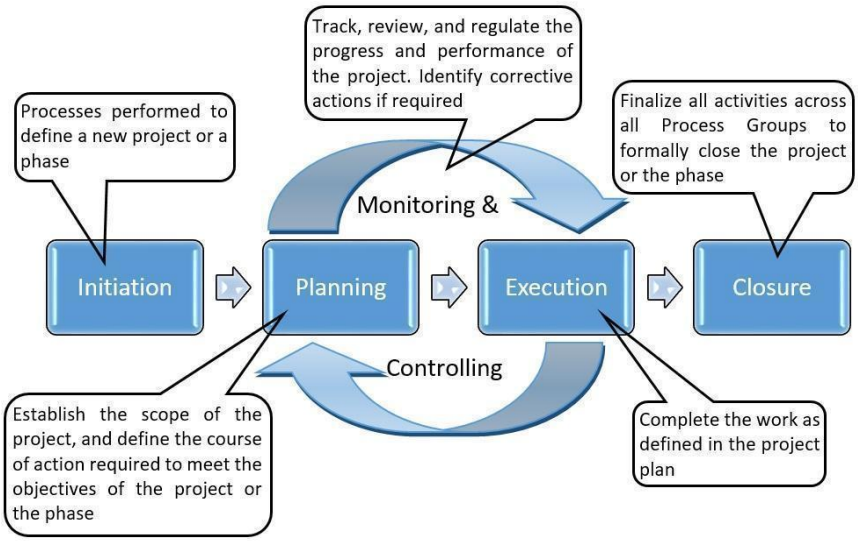
Source. Adopted from A Guide to the Project Management Body of Knowledge, (PMBOK® Guide), Sixth Edition, by the Project Management Institute. (2017, p.134).

Project management process groups are defined as a logical grouping of project management processes to achieve specific project objectives. Process groups are independent of project phases. Figure 5 shows the Project Management Process Groups. Project management processes are grouped into the following five project management process groups:

- Initiating process group: those processes performed to define a new project or a new phase of an existing project by obtaining authorization to start the project or phase.
- Planning process group: Those processes required to establish the scope of the project, refine the objectives, and define the course of action required to attain the objectives that the project was undertaken to achieve.
- Executing process group: Those processes performed to complete the work defined in the project management plan to satisfy the project requirements.

- Monitoring and controlling process group: Those processes required to track, review, and regulate the progress and performance of the project; identify any areas in which changed to the plan are required and initiate the corresponding changes
- Closing process group: Those processes performed to formally complete or close the project, phase, or contract.

Figure 6 Project Management Process Groups

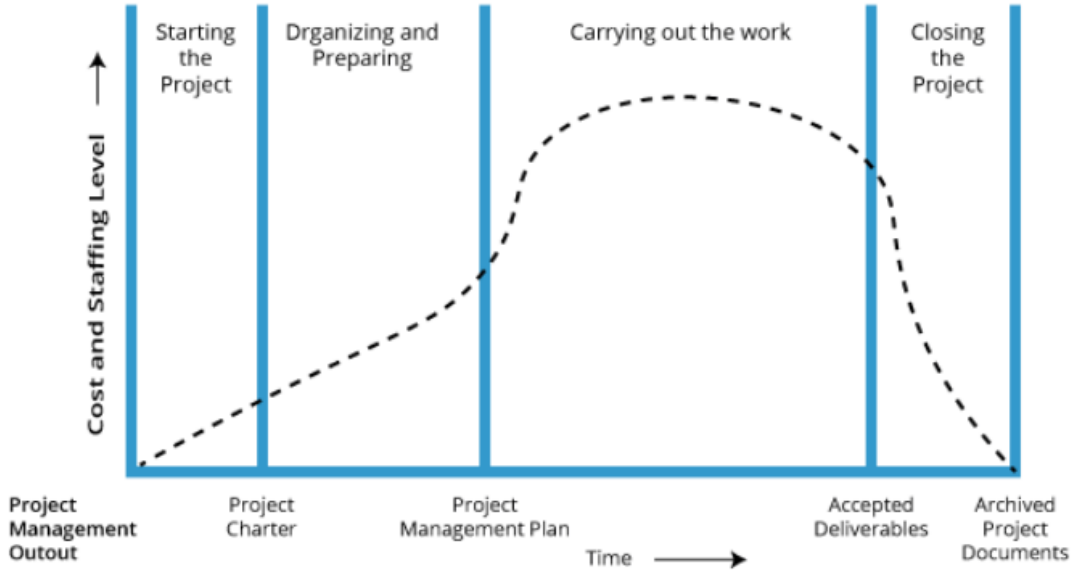


Source: https://www.pmwares.com/blog/project-management-process-groups/

2.2.8 Project Life Cycle

According to the PMBOK (Sixth Edition), a project life's cycle is the series of phases that a project passes through from its start to its completion. (2017). It provides the basic framework for managing the project. The basic framework applies regardless of the specific project work involved. The phases may be sequential, iterative or overlapping. Figure 6 shows the Project Life Cycle and Main Characteristics

Figure 7 Project Life Cycle and Main Characteristics



Source: https://vnnergy.com/what-is-project-life-cycle-and-its-main-characteristics/

2.2.9 Company Strategy, Portfolios, Programs and Projects

Our Core Corporate Principles

The sheer role and responsibility of the education system requires that it be committed to delivering the best education affordable to learners at all levels. As we pursue excellence in education, we will be guided by corporate principles that we believe cut across our education value chain.

Quality

Build a culture of quality across the education system. We must demonstrate an uncompromising commitment to quality: quality of education, quality of facilities and the environment, quality of administrative leadership, quality of instructional leadership,

quality of employees, and the quality of our relationships with our partners and community.

Partnerships

The delivery of education is a complex and expensive undertaking. We will meet our challenges by leveraging partnerships with community, regional and international institutions and our local stakeholders. **Chart 1** below shows the ministry of Education development plan and how it meets the needs of the stakeholders.

Chart 1 Summary of the Strategic Themes and related Priorities

	Strategic Theme	Strategic Priorities
CROSS-CUTTING PRIORITIES (system -wide)	**Alignment of Purpose: National and Regional Alignment, Harmonization & Gender Equity**	1. Democratization of education and training 2. Gender equity and human rights 3. Alignment of education and training outcomes with the national and regional development agendas
	Service Excellence and System Integration	1. Service excellence: efficient, effective and responsive service delivery from the MOE 2. Inter and intra sector Integration and collaboration
	Educational Leadership, Governance and Accountability	1. Enhancing the administrative capacity of the MOE 2. Effective, leadership, governance and system structure 3. Recruitment and retention of quality staff 4. School climate, culture and structure. A system-wide culture of excellence and accountability for performance
	Resource Stewardship and Risk Management	1. Fiscal stewardship and allocation of education financial resources 2. Growth and sustainability of funding for education and training 3. Cost containment: resource efficiency and asset utilization 4. Disaster management and risk mitigation

	Strategic Theme	Strategic Priorities
SUB-SECTOR PRIORITIES	Education as a Human Right	1. Democratization of education and training: Increasing accessibility and affordability of education for all learners across every subsector
	Learner Achievement	1. Learner achievement and effective transitioning throughout the education system
	Quality of the Education System	1. Quality and rigor of education: education that enables holistic development and empowers learners to achieve their best in accordance with their interests and abilities while maintaining global standards for education 2. Effective teaching and learning: educators competent, licenced, resourced, and well-placed to be effective in driving learner achievement 3. Innovative learner support systems: efficient and effective support systems that enable learners to achieve their full potential
	Education Infrastructure and Capacity	1. Technology Integration and Innovation in teaching and learning 2. Strategic partnerships: effective parent/community/industry/school partnerships enabling learners and schools to excel 3. Facilities and Infrastructure conducive to effective learning, and that are safe and

Source: Ministry of Education school development plan

2.2.10 Project Integration Management (PIM)

According to PMI (2017), PIM encompasses a set of processes and activities that aim to identify, define, combine, unify, and coordinate the diverse processes and project management activities within the Project Management Process Groups (PMI, p. 69).

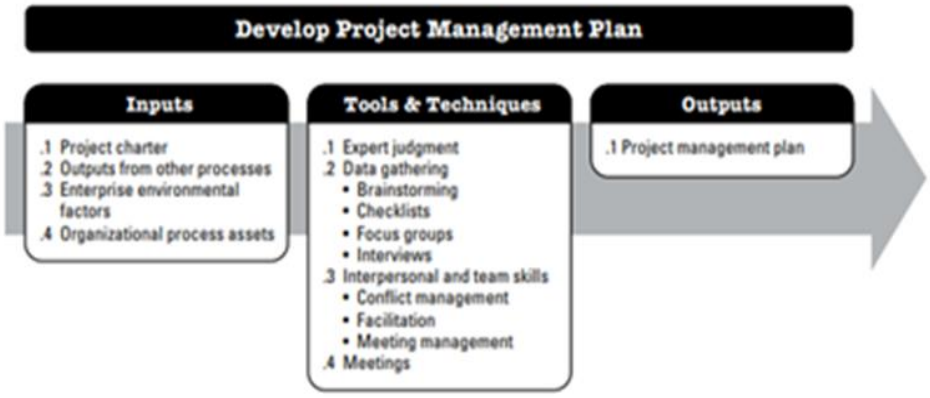
2.2.11 Develop Project Charter

Formally authorizes the project, giving the project manager the authority to engage in the organizational activities within the project.

2.2.12 Develop Project Management Plan

The project team will engage in defining, preparing, and coordinating all the components of the project. The Final Project Guide (FGP) will act as a comprehensive reference to ensure the efficient management of the enhanced curriculum. Figure 7 outlines the tools and techniques to be employed for the successful completion of the project.

Figure 8 Developing Project Management Plan

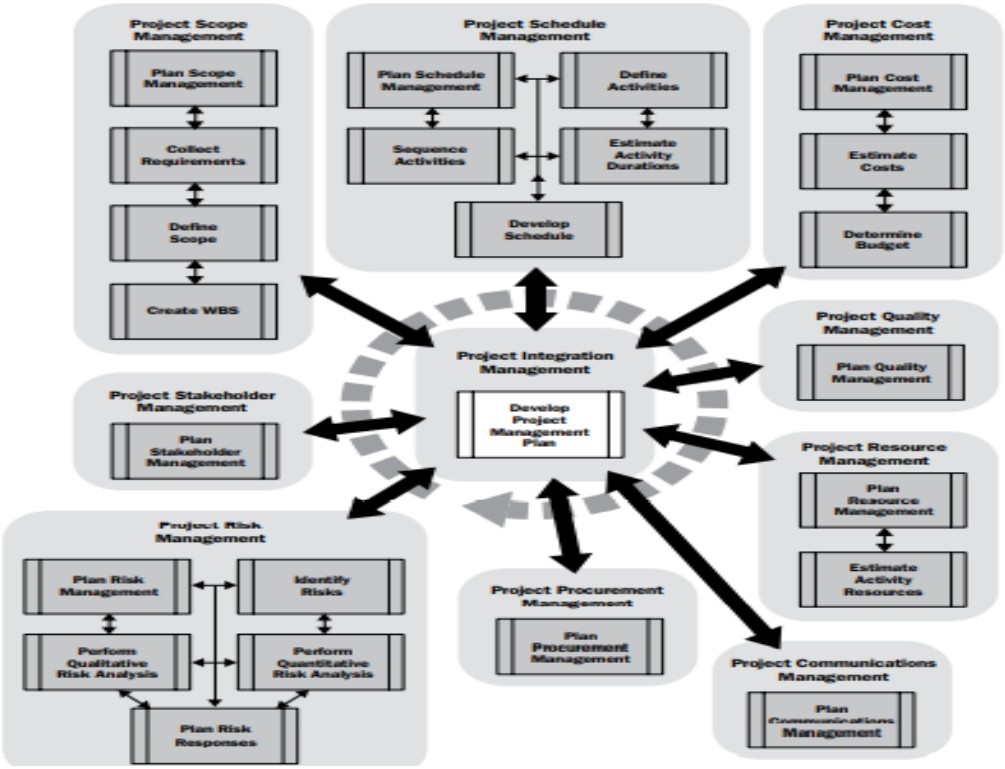


Source. Project Management Institute's (PMI) "A Guide to the Project Management Body of Knowledge" (PMBOK® Guide), Sixth Edition, on page 82, published in 2017.

- **Direct and Manage Project Work-**guided by the objectives of the project directing and managing the project
- **Manage Project Knowledge-**using existing knowledge as well as creating new knowledge to contribute to organizational learning.
- **Monitor and Control Project Work-**tracking, reviewing, and reporting overall progress as defined in the management plan.
- **Perform Integrated Change Control-**reviewing changes as they arise in the project.
- **Close Project or Phase-** finalizing all activities for the project, phase, or contract

Integration Management serves to give overall direction to the project. The inclusion of a Physical Education (PE) curriculum development adds several components and stakeholders to the project. To ensure successful completion, a project integration plan is implemented, which effectively brings together the various components and processes. Figure 8 illustrates how the knowledge areas are interconnected with the management plan. Figure 8 shows the knowledge areas and how they are related to the management plan.

Figure 9 Knowledge Areas



Source. This information is sourced from the Project Management Institute's (PMI) "A Guide to the Project Management Body of Knowledge" (PMBOK® Guide), Sixth Edition, specifically on page 566, published in 2017.

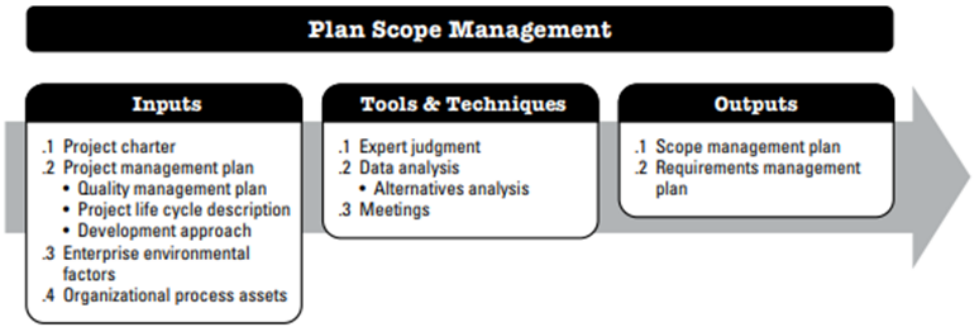
2.2.13 Project Scope Management

Incorporating the development of a PE curriculum, PMI (2017) provides a definition of scope management, which involves encompassing "all the work required, and only the work required, to complete the project successfully." Figure 9 describes the Plan Scope Management.

The Project Scope Management processes consist of:

Plan Scope Management - This process documents how the project and product scope will be defined, validated, and controlled.

Figure 10 Plan Scope Management



Source. This information is sourced from the Project Management Institute's (PMI) "A Guide to the Project Management Body of Knowledge" (PMBOK® Guide), Sixth Edition, specifically on page 134, published in 2017.

Collect Requirements—determining, documenting, and managing stakeholder needs and requirements to meet project objectives.

Define Scope—developing a detailed description of the project and product.

Create WBS— subdividing project deliverables and project work into smaller, more manageable components.

Validate Scope—formalizing acceptance of the completed project deliverables.

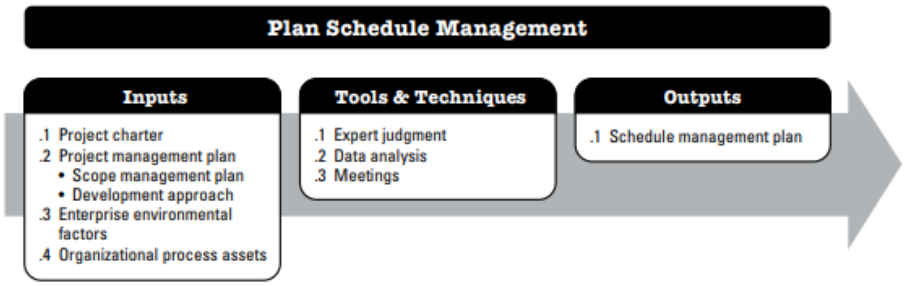
Control Scope—monitoring the status of the project and product scope and managing changes to the scope baseline.

2.2.14 Project Schedule Management

Project Schedule Management includes the processes required to manage the timely completion of the project. Figure 10 explains the steps for a Plan Schedule Management. The Project Schedule Management processes are:

- **Plan Schedule Management**—the process of establishing the policies, procedures, and documentation for planning, developing, managing, executing, and controlling the project schedule.

Figure 11 Plan Schedule Management



Source. Derived from the Project Management Institute's (PMI) "A Guide to the Project Management Body of Knowledge" (PMBOK Guide), Sixth Edition, published in 2017.

- **Define Activities**— identifying and documenting the specific actions to be performed to produce the project deliverables.
- **Sequence Activities**— identifying and documenting relationships among the project activities.
- **Estimate Activity Durations**— estimating the number of work periods needed to complete individual activities with the estimated resources.

- **Develop Schedule**— analyzing activity sequences, durations, resource requirements, and schedule constraints to create the project schedule model for project execution and monitoring and controlling.
- **Control Schedule**—monitoring the status of the project to update the project schedule and manage changes to the schedule baseline.

2.2.15 Project Cost Management

Project Cost Management involves "planning, estimating, budgeting, financing, funding, managing, and controlling costs to ensure the project's completion within the approved budget" (PMI 2017).

To apply this concept to the development of a PE curriculum, you need to carefully plan and estimate the costs associated with curriculum development, teacher training, resource acquisition, and any other related expenses. A well-defined budget should be created, and funding sources must be identified. Throughout the project, diligent cost management and control measures should be implemented to ensure that the project remains within the approved budget. Regular monitoring and adjustments may be necessary to address any cost variances and keep the project financially on track.

The Project Cost Management processes are:

- **Plan Cost Management**—defining how the project costs will be estimated, budgeted, managed, monitored, and controlled.
- **Estimate Costs**—developing an approximation of the monetary resources needed to complete project work.
- **Determine Budget**- aggregating the estimated costs of individual activities or work packages to establish an authorized cost baseline

- .**Control Costs**- monitoring the status of the project to update the project costs and manage changes to the cost baseline.

2.2.16 Project Quality Management

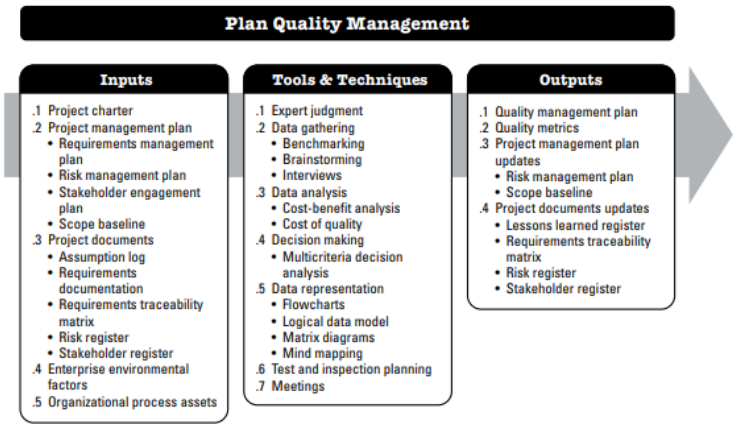
Project Quality Management, as defined by PMI (2017), involves the processes that incorporate the organization's quality policy to address planning, managing, and controlling project and product quality requirements, ensuring they align with stakeholders' expectations.

To apply this to the development of a PE Curriculum, it is essential to establish a clear quality policy that outlines the desired standards and expectations for the curriculum content, delivery, and assessment. The planning phase should focus on setting quality objectives and identifying the necessary resources and processes to achieve them. Throughout the development process, close monitoring and control are vital to ensure that the curriculum meets the predefined quality requirements and fulfills the stakeholders' expectations. Regular reviews and feedback from educators, students, and other relevant parties can help identify areas for improvement and ensure that the PE curriculum meets high-quality standards. **Figure 11** describes what is required for a Plan Quality Management.

- **Plan Quality Management** - Identifying quality requirements and/or standards for the project and its deliverables and documenting how the project will demonstrate compliance with quality requirements and/or standards.
- **Manage Quality** - Translating the quality management plan into executable quality activities that incorporate the organization’s quality policies into the project.

- **Control Quality** - Monitoring and recording the results of executing the quality management activities to assess performance and to ensure that the project outputs are complete, correct, and meet customer expectations.

Figure 12 Plan Quality Management



Source. Modified from the Project Management Institute's (PMI) "A Guide to the Project Management Body of Knowledge" (PMBOK® Guide), Sixth Edition, published in 2017.

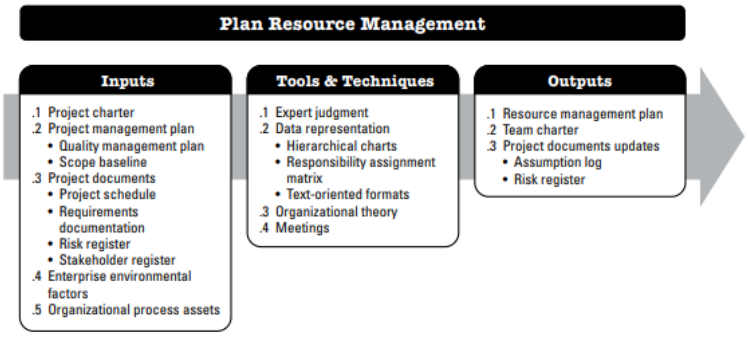
2.2.17 Project Resource Management

Project Resource Management includes the processes to identify, acquire, and manage the resources needed for the successful completion of the project. These processes help ensure that the right resources will be available to the project manager and project team at the right time and place. Figure 12 shows a Plan Resource Management. The Project Resource Management processes are:

- Plan Resource Management—The process of defining how to estimate, acquire, manage, and utilize physical and team resources.
- Estimate Activity Resources—The process of estimating team resources and the type and quantities of material, equipment, and supplies necessary to perform project work.

- Acquire Resources—The process of obtaining team members, facilities, equipment, materials, supplies, and other resources necessary to complete project work.
- Develop Team—The process of improving competencies, team member interaction, and the overall team environment to enhance project performance.
- Manage Team—The process of tracking team member performance, providing feedback, resolving issues, and managing team changes to optimize project performance.
- Control Resources—The process of ensuring that the physical resources assigned and allocated to the project are available as planned, as well as monitoring the planned versus actual use of resources, and performing corrective action if necessary.

Figure 13 Plan Resource Management



Source. Modified from a Guide to the Project Management Body of Knowledge, (PMBOK® Guide), Sixth Edition, by the Project Management Institute. (2017).

2.2.18 Project Communication Management

Project Communications Management. Includes the processes required to ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control, monitoring, and ultimate disposition of project information.

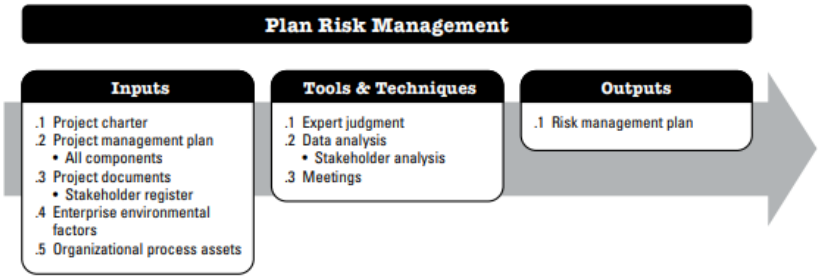
2.2.19 Project Risk Management

Project Risk Management includes the processes of conducting risk management planning, identification, analysis, response planning, response implementation, and monitoring risk on a project. See Figure 13 for a Plan Risk Management. The Project Risk Management processes are:

- Plan Risk Management—The process of defining how to conduct risk management activities for a project.
- Identify Risks—The process of identifying individual project risks as well as sources of overall project risk, and documenting their characteristics.
- Perform Qualitative Risk Analysis—The process of prioritizing individual project risks for further analysis or action by assessing their probability of occurrence and impact as well as other characteristics.
- Perform Quantitative Risk Analysis—The process of numerically analyzing the combined effect of identified individual project risks and other sources of uncertainty on overall project objectives.
- Plan Risk Responses—The process of developing options, selecting strategies, and agreeing on actions to address overall project risk exposure, as well as to treat individual project risks.

- Implement Risk Responses—The process of implementing agreed-upon risk response plans.
- Monitor Risks—The process of monitoring the implementation of agreed-upon risk response plans, tracking identified risks, identifying and analyzing new risks, and evaluating risk process effectiveness throughout the Project.

Figure 14 Plan Risk Management



Source. Adopted from A Guide to the Project Management Body of Knowledge, (PMBOK® Guide), Sixth Edition, by the Project Management Institute. (2017).

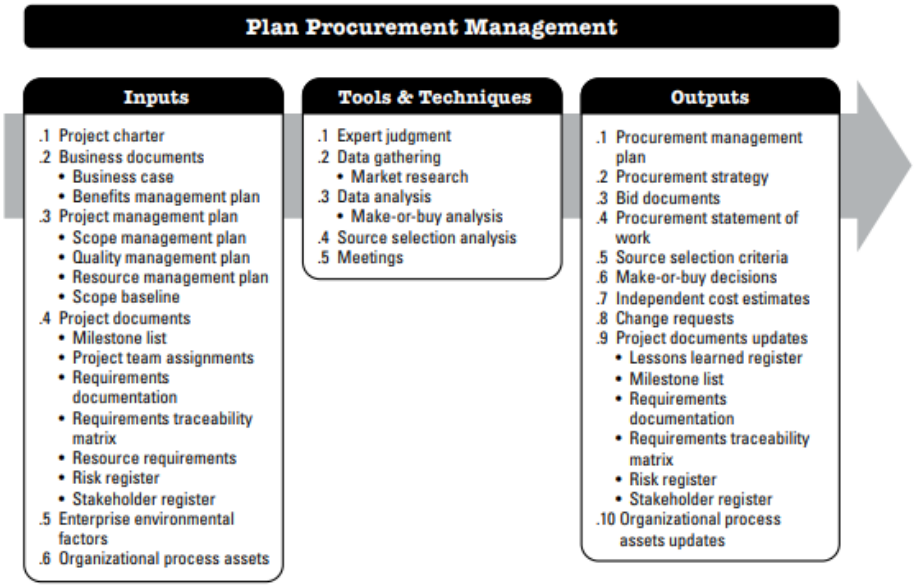
2.2.20 Project Procurement Management

Project Procurement Management includes the processes necessary to purchase or acquire products, services, or results needed from outside the project team. Figure 14 shows important information that is required for Plan Procurement Management

- Plan Procurement Management—The process of documenting project procurement decisions, specifying the approach, and identifying potential sellers.
- Conduct Procurements—The process of obtaining seller responses, selecting a seller, and awarding a contract.

- Control Procurements—The process of managing procurement relationships, monitoring contract performance, making changes and corrections as appropriate, and closing out contracts.

Figure 15 Plan Procurement Management



Management Body of Knowledge,

(PMBOK® Guide), Sixth Edition, by the Project Management Institute. (2017).

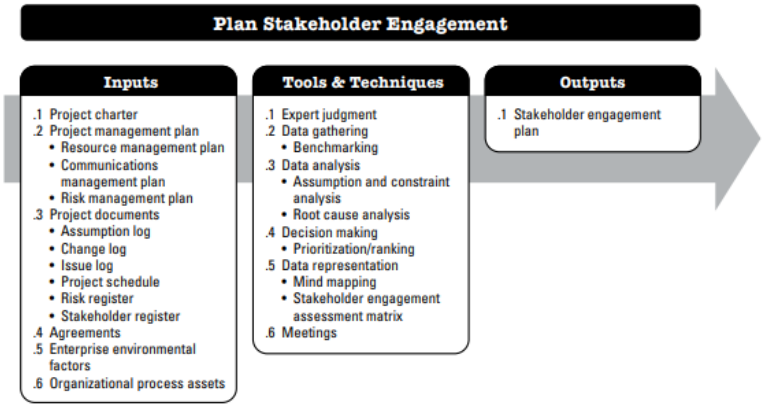
2.2.21 Project Stakeholder Management

Project Stakeholder Management includes the processes required to identify the people, groups, or organizations that could impact or be impacted by the project, to analyze stakeholder expectations and their impact on the project, and to develop appropriate management strategies for effectively engaging stakeholders in project decisions and execution. Figure 15 show the information required for having a Plan Stakeholder Management

The Project Stakeholder Management processes are:

- Identify Stakeholders—The process of identifying project stakeholders regularly and analyzing and documenting relevant information regarding their interests, involvement, interdependencies, influence, and potential impact on project success.
- Plan Stakeholder Engagement—The process of developing approaches to involve project stakeholders based on their needs, expectation, interests, and potential impact on the project.
- Manage Stakeholder Engagement—The process of communicating and working with stakeholders to meet their needs and expectations, address issues, and foster appropriate stakeholder engagement involvement.
- Monitor Stakeholder Engagement—The process of monitoring project stakeholder relationships and tailoring strategies for engaging stakeholders through the modification of engagement strategies and plans.

Figure 16 Plan Stakeholder Management



Source. Adopted from A Guide to the Project Management Body of Knowledge, (PMBOK® Guide), Sixth Edition, by the Project Management Institute. (2017).

2.3 Other Applicable Theory/Concepts Related to the Project Topic and Context

Educators should be highly skilled and motivated. Continuous professional development for educators enables them to keep abreast with changing educational trends.

Teaching and Learning

Learning is a two-way process where teachers can also learn from students. Learning should be relevant.

Technology

Education should produce learners who are technologically savvy and can compete in the current and future technological environment.

2.3.1 Current Situation of the Problem or Opportunity in Study

Education is a key priority for the government of Saint Lucia, and as part of their commitment to providing quality education for all, they have identified the need to develop a comprehensive physical education (PE) program for lower secondary schools.

The rationale for this initiative is multifold. Firstly, regular physical activity is essential for the physical and mental well-being of children as it promotes healthy lifestyle habits early on in life and can have long-lasting benefits. Additionally, physical education has been shown to enhance academic performance and cognitive development, which can ultimately improve educational outcomes. Finally, the program is intended to promote social interaction, teamwork, and leadership skills among students, which are important life skills that can be transferred to other domains.

In designing the program, the government of Saint Lucia recognizes that the unique cultural context and physical environment of the island must be taken into consideration. The program will need to balance traditional sports and games with local and regional

variations that reflect the culture and heritage of the island. Additionally, given the limited resources and facilities available in some areas, the program will need to be adaptable and scalable, with options for both indoor and outdoor activities.

The overall goal of the program is to promote physical literacy among lower secondary students, which will provide them with the foundational skills, knowledge, and attitudes necessary to participate in physical activity throughout their lives. By achieving this goal, the government hopes to contribute to the overall health and well-being of the nation, as well as to the development of a more active and engaged citizenry.

2.3.2 Previous Research Done for the Topic in Study

There have been several studies focused on developing a physical education (PE) curriculum for lower secondary school students that can effectively promote physical activity and healthy lifestyles. Here are some key findings from these studies:

The importance of including a wide variety of physical activities in the curriculum - Research indicates that offering a diverse range of physical activities is crucial to ensuring that students remain engaged and motivated. A study by Yli-Piipari et al. (2016) found that students were more likely to engage in physical activity if they had a choice of activities and felt competent in those activities.

The need for a student-centered approach - A curriculum that is centered around the needs and interests of students is more likely to be effective. A study by Hastie et al. (2017) emphasized the importance of using a student-centered approach in PE, which involves tailoring activities to students' abilities and interests.

The role of technology in promoting physical activity - Technology can be an effective tool for promoting physical activity, as it can provide feedback and motivation to

students. A study by Lonsdale et al. (2016) found that incorporating technology-based physical activity programs can increase students' physical activity levels.

The importance of teacher training and support - Teacher training and ongoing support is essential to implementing an effective PE curriculum. A study by Lonsdale et al. (2017) found that teachers who received training on how to implement a student-centered PE program reported feeling more confident and competent in their teaching.

These findings can be used as inputs for developing a PE curriculum for lower secondary school students in Saint Lucia. The curriculum should include a variety of physical activities, be student-centered, incorporate technology, and provide teachers with adequate training and support.

3 METHODOLOGICAL FRAMEWORK

Using the essential knowledge found in the PMBOK® Guide as well as knowledge acquired while pursuing a master's degree in project management at the University for International Cooperation, the student will systematically gather and analyze quantitative and qualitative data in order to develop a project management plan and its subsidiary plans for the FGP.

3.1.1 Information Sources

Primary sources, contemporaneous records, or original documents that provide records of events or occurrences without retroactive interpretation, appraisal, or analysis will be used by the student to begin the data collecting process (Baxter, 1999).

Primary resources:

- interviews,
- project documentation,
- technical reports, and
- institutional communications
- primary sources include
- surveys,
- questionnaires,
- statistical data

As a result, the student will first seek permission from the Ministry of Education, through CAMDU, to access project materials, technical reports, and institutional correspondence in order to conduct interviews with key stakeholders and obtain their

feedback on the development of the curriculum and its implementation. Some of the primary sources used in the FGP are interviews with students, teachers, principals and curriculum officers.

(https://umb.libguides.com/PrimarySources/secondary)

3.1.2 Secondary Sources

The student will support the methods and processes used to create this strategy with secondary sources. According to Creswell (2009), “secondary sources provide a retroactive perspective that is somewhat distanced from the original event or occurrence.” The PMBOK® Guide®, Sixth and Seventh Editions, as well as publications and articles on regenerative development, are considered secondary sources. Some of the secondary sources used in the FGP are:

- books,
- pages,
- online data,
- articles
- data analysis.

Chart 2 gives the Information Sources used for each objectives.

(https://umb.libguides.com/PrimarySources/secondary)

Chart 2 Information Sources

Objectives	Information sources	
	Primary	**Secondary**
To develop a project charter to create, manage and control the project.	Interviews, CSEC physical education syllabus, examination results, statistical data	A Guide to Project Management Body of Knowledge PMBOK Guide Education Sector Plan OECS Education Strategy
To develop a scope management plan to determine work to be done on a project and ensure that the project is successfully completed.	Interviews MOU Project charter	A Guide to Project Management Body of Knowledge PMBOK Guide Education Sector Plan Lessons learned from other projects.
To develop a schedule management plan to determine the project life cycle and ensure its successful completion within the time period.	Project charter	A Guide to Project Management Body of Knowledge PMBOK Guide Education Sector Plan OECS Education Strategy
To develop a risk management plan to mitigate against risk and respond to risk within the project.	Project charter, project cooperation agreements, focus groups .	A Guide to Project Management Body of Knowledge PMBOK Guide Education Sector Plan
To develop a cost management plan to manage the finances and budget within the finances available.	Project charter Program budget	A Guide to Project Management Body of Knowledge PMBOK
To develop a procurement plan to procure resources for the implementation of the project .	Project charter, project cooperation agreements, standardized guidelines, lessons learned, other government documents or reports, CARICOM agreement, Education Sector Plan	A Guide to Project Management Body of Knowledge PMBOK Guide Education Sector Plan

Objectives	Information sources	
	Primary	**Secondary**
To develop a stakeholder management plan to manage stakeholders within the project.	Project charter, project cooperation agreements, government documents	A Guide to Project Management Body of Knowledge PMBOK Guide Education Sector Plan
To develop a communication plan to effectively communicate with stakeholders on the project.	Project charter Focus groups interviews Document analysis	A Guide to Project Management Body of Knowledge PMBOK Guide Education Sector Plan
To develop a regenerative management plan to use regenerative practices throughout the project life cycle for sustainability purposes.	Project charter	A Guide to Project Management Body of Knowledge PMBOK Guide Mueller's Regenerative Framework Education Sector Plan
To develop a control management plan to monitor and evaluate project outcomes in order to determine if the project is meeting its objectives.	Project charter, project cooperation agreements, standardized guidelines, lessons learned, other	A Guide to Project Management Body of Knowledge PMBOK Guide Education Sector Plan Lessons learned from other projects

Source: Chart elaborated by Erasmus Wayne Benti based on own research.

3.2 Research Methods

"Research methods are the strategies, processes or techniques utilized in the collection of data or evidence for analysis in order to uncover new information or create better understanding of a topic" (Booth, 2018). There are several research methodologies that researchers use. "Qualitative and quantitative research approaches and methods are usually found to be utilized rather frequently in different disciplines of education" (Rahman, 2017). The researcher has decided to use a mixed method approach which integrates the use of both qualitative and quantitative methods.

3.2.1 Qualitative Method

Qualitative research gathers data about lived experiences, emotions or behaviors and the meanings individuals attach to them. It assists in enabling researchers to gain a better understanding of complex concepts, social interactions or cultural phenomena.

3.2.2 Quantitative Method

Quantitative research entails the methodical exploration of phenomena through the accumulation of measurable data, coupled with the application of statistical, mathematical, or computational methodologies. This type of research acquires insights from both prospective and current customers using sampling techniques and deploying tools such as online surveys, polls, and questionnaires.

Chart 3 shows the Research Methods techniques used for Lower secondary School Curriculum Project Management Plan.

Chart 3 Research Methods for Lower secondary School Curriculum Project Management Plan

Objectives	Research Methods	
	Qualitative	**Quantitative**
To develop a project charter to plan to create, manage and control the project.	Interviews Document review	Questionnaires are structured data collection tools that allow project stakeholders to provide quantitative responses regarding project objectives, scope, constraints, and goals. These questionnaires can be administered electronically or in person, ensuring consistent data collection. They can include Likert scale questions for assessing stakeholder agreement or importance levels regarding various charter components

Objectives	Research Methods	
	Qualitative	**Quantitative**
To develop a scope management plan to determine work to be done on the project and to ensure that the project is successfully completed.	Document review Focus group	Polls are quantitative data collection methods that involve posing specific questions to a large group of stakeholders. In the context of scope management, polls can be conducted to prioritize project features or components. These polls might be distributed digitally, enabling stakeholders to rank scope elements according to their perceived importance.
To develop a schedule management plan to determine the project life cycle and the successful completion within the time period.	Document Review Interview with Project steering committee	Surveys can be employed to collect quantitative data from various stakeholders regarding project timeline expectations and preferences. These surveys may include questions about ideal project duration, milestones, and critical deadlines. The survey responses can be analyzed to identify common timelines and ensure alignment with stakeholder expectations.
To develop a risk management plan to mitigate against risk and respond to risk within the project.	Document review	Surveys can gather quantitative data on stakeholders' perceptions of potential risks and their impact. By asking stakeholders to rank risks based on likelihood and consequences, the project team can prioritize risks for further analysis and mitigation planning.
To develop a cost management plan to manage the finances and budget within the finances available.	Document review	Polls can be utilized to understand stakeholders' budgetary expectations and constraints. The project team can distribute polls to assess stakeholders' tolerance for budget overruns or their willingness to allocate additional resources for specific project components.
To develop a quality management plan to manage and control the project to meet stakeholders' expectations.	Interviews	Questionnaires can be structured to collect quantitative data on stakeholders' quality expectations, satisfaction levels, and desired project outcomes. These questionnaires can be designed with rating scales to assess stakeholder agreement with predefined quality criteria.

Objectives	Research Methods	
	Qualitative	**Quantitative**
To develop a resource management plan that identifies the resources required, how to acquire them, and how to manage them.	Document review	Surveys can gather quantitative data on stakeholders' resource requirements and preferences. The survey can include questions about resource availability, skill sets, and potential challenges. This data can inform the resource management plan.
To develop a communication plan to effectively communicate with stakeholders on the project.	Document review Focus group interviews	Surveys can collect quantitative data on stakeholders' communication preferences. These surveys might inquire about preferred communication channels, frequency of updates, and content preferences. This data guides the development of a tailored communication plan.
To develop a procurement plan to procure resources for the implementation of the project.	Document Review Focus Group interviews	Questionnaires can be designed to collect quantitative data on stakeholders' procurement preferences. These can include questions about supplier selection criteria, lead times, and cost considerations. The responses inform the procurement plan.
To develop a stakeholder management plan to manage stakeholders within the project.	Document review Focus group interviews	Questionnaires can gather quantitative data on stakeholders' expectations, interests, and potential influence within the project. These surveys can help categorize stakeholders and prioritize engagement strategies based on their significance to the project's success.

Note: Chart elaborated by Erasmus Wayne Benti based on own research.

3.3 Tools

"The Merriam-Webster Dictionary defines a tool as something (such as an instrument or apparatus) used in performing an operation or necessary in the practice of a vocation or profession" (Merriam-Webster Dictionary, n.d.). Chart 4 highlights both the secondary and primary Research Tools used for the FGP.

The Project Management Institute (2017) defines a tool as "any intricate object used to facilitate an action and generate a product or outcome," examples include templates or software applications. The Final Project Guide (FGP) employs various tools, including expert judgment, data gathering techniques, interpersonal and team skills, and meetings."

Chart 4 Research Tools

Objectives	Information Sources	
	Primary	Secondary
To develop a project charter to create, manage and control the project.	Interviews, CSEC physical education syllabus, examination results, statistical data	A Guide to Project Management Body of Knowledge PMBOK Guide Education Sector Plan OECS Education Strategy
To develop a scope management plan to determine work to be done on a project and ensure that the project is successfully completed.	Interviews MOU Project charter	A Guide to Project Management Body of Knowledge PMBOK Guide Education Sector Plan Lessons learned from other projects
To develop a schedule management plan to determine the project life cycle and ensure its successful completion within the time period.	Project charter	A Guide to Project Management Body of Knowledge PMBOK Guide Education Sector Plan CARICOM Education Strategy
To develop a risk management plan to mitigate against risk and respond to risk within the project.	Project charter, project cooperation agreements, focus groups	A Guide to Project Management Body of Knowledge PMBOK Guide Education Sector Plan

Objectives	Information Sources	
	Primary	**Secondary**
To develop a cost management plan to manage the finances and budget within the finances available.	Project charter Program budget	A Guide to Project Management Body of Knowledge PMBOK
To develop a procurement plan to procure resources for the implementation of the project.	Project charter, project cooperation agreements, standardized guidelines, lessons learned, other government documents or reports, CARICOM agreement, Education Sector Plan	A Guide to Project Management Body of Knowledge PMBOK Guide Education Sector Plan
To develop a stakeholder management plan to manage stakeholders within the project.	Project charter, project cooperation agreements, government documents	A Guide to Project Management Body of Knowledge PMBOK Guide Education Sector Plan
To develop a communication plan to effectively communicate with stakeholders on the project.	Project charter Focus groups interviews Document analysis	A Guide to Project Management Body of Knowledge PMBOK Guide Education Sector Plan
To develop a regenerative management plan to use regenerative practices throughout the project life cycle for sustainability purposes.	Project charter	A Guide to Project Management Body of Knowledge PMBOK Guide Mueller's Regenerative Framework Education Sector Plan
To develop a control management plan to monitor and evaluate project outcomes in order to determine if the project is meeting its objectives.	Project charter, project cooperation agreements, standardized guidelines, lessons learned, other	A Guide to Project Management Body of Knowledge PMBOK Guide Education Sector Plan Lessons learned from other projects

Note: Chart elaborated by Erasmus Wayne Benti based on own research.

3.4 Assumptions and Constraints

According to PMBOK Guide 7th Edition, project assumption is "a factor in the planning process that is considered to be true, real or certain often without any proof or demonstration." PMBOK (2017). An alternative definition is "Project assumptions are events or circumstances that are expected to occur during the project life cycle"

A constraint, in project management, is any restriction that defines a project's limitations.

Chart 5 outlines the assumptions and constraints associated with the development of a lower secondary school curriculum project management plan.

Chart 5 Assumptions and Constraints

Objectives	**Assumptions**	**Constraints**
To develop an integration management plan to create, manage and control the project.	Permission will be granted for access to the relevant document.	Document release not timely.
To develop a scope management plan to determine work to be done on the project and to ensure that the project is successfully completed.	Adequate information to develop the scope of the project will be available.	Agreements and standards restrict scope development.
To develop a schedule management plan to determine the project life cycle and to ensure its successful completion within the time period.	Time frames are accurate. Project does not encounter significant delays.	Project funds are not accessible
To develop a risk management plan to mitigate against risk and respond to risk within the project	Risk strategies are effective.	Changes in school schedule.
To develop a cost management plan to manage the finances and budget within the finances available.	Estimated costs are accurate and sponsor funding is secured.	Taxes and inflationary prices.
To develop a procurement plan to procure resources for the implementation of the project	Consultants are available and proficient.	Timely access not granted and unavailability of resources.

Objectives	**Assumptions**	**Constraints**
To develop a stakeholder management plan to manage stakeholders within the project.	A comprehensive list of stakeholders will be identified using various compilation methods. Stakeholders will have the incentive to contribute to the development of the plan.	The staff at the Ministry of Education has limited experience in managing stakeholders.
To develop a communication plan to effectively communicate with stakeholders on the project.	A communication management plan will be formulated to ensure the dissemination of information to all stakeholders. Communication will be characterized by its clarity, conciseness, and timeliness.	Limited personnel with an understanding of communication and the use of communicative technology tools. Limited availability of communication resources and tools.
To develop a regenerative management plan to use regenerative practices throughout the project life cycle for sustainability purposes.	Standards are in keeping with national standards.	The regenerative management plan must be developed within the allocated project budget while adhering to the project's timeline and scope.
To develop a control management plan to monitor and evaluate project outcomes in order to determine if project is meeting its objectives	Changes will be executed in a timely manner.	Limited availability of resources for implementing changes within tight timeframes.

Note: Chart elaborated by Erasmus Wayne Benti based on own research.

3.5 Deliverables

According to the Project Management Guide, a deliverable is an element of output within the scope of a project (PMBOK, 2017). There can be one or several deliverables within a single project. It may also be described as a tangible or intangible product or service produced as a result of the project that is intended to be delivered to a customer. Chart 6 provides the objectives and deliverables for Lower Secondary School Curriculum Project Management Plan (https://www.arraspeople.co.uk/camel-blog/project-management/project-management-101-objectives-and-deliverables/)

Chart 6 Deliverables for Lower Secondary School Curriculum Project Management Plan

Objectives	**Deliverables**
1. To develop an integration management plan to create, manage and control the project.	Integration management plan Project charter
2. To develop a scope management plan to determine work to be done on the project and to ensure that the project is successfully completed.	Scope management plan- WBS dictionary
4. To develop a risk management plan to mitigate against risk and respond to risk within the project.	Risk management plan Risk register
5. To develop a cost management plan to manage the finances and budget within the finances available.	Cost management plan Budget
6. To develop a procurement plan to procure resources for the implementation of the project.	Procurement management plan
7. To develop a stakeholder management plan to manage stakeholders within the project.	Stakeholder management plan Stakeholder register
8. To develop a communication plan to effectively communicate with stakeholders on the project.	Communication management plan
9. To develop a regenerative management plan to use regenerative practices throughout the project life cycle for sustainability purposes.	Regenerative management plan
10. To develop a control management plan to monitor and evaluate project outcomes to determine if the project is meeting its objectives.	Control management plan Change request forms

Note: Chart elaborated by Erasmus Wayne Benti based on own research.

4 RESULTS

This chapter introduces the project charter, which is collaboratively developed by the project sponsor and the project manager.

4.1. PROJECT CHARTER – LOWER SECONDARY SCHOOL PHYSICAL EDUCATION CURRICULUM

4.1.1 Introduction

The PMBOK® Guide 6th Edition elucidates the concept of "develop project charter" as a methodological procedure entailing the creation of an authoritative document that formally endorses the project's existence. Furthermore, this process bestows upon the project manager the prerogative to harness the organization's resources for the project's implementation. The comprehensive compilation of the project charter encompasses a plethora of pivotal information. Encompassed within this document are vital elements such as the business case, objectives, budgetary framework, underlying assumptions, imposed constraints, potential risks, and the array of stakeholders involved.

Given the project's incipient stage of development and the dearth of historical project management documentation within the purview of the Ministry of Education of Saint Lucia, including the conspicuous absence of a project charter, the erudite author of the present study has undertaken the responsibility of crafting an intricately detailed project charter. This pertains to the specific context of the developmental endeavour concerning the curriculum project aimed at the lower secondary school's physical education (PE) domain.

The multifaceted process of constructing the project charter necessitates the input of various elements, as well as the adroit application of distinct tools and techniques. These integral components, essential to the formulation of a comprehensive project charter, are meticulously outlined below.

 	
PROJECT CHARTER	
Version 1.0	January , 2023
Project Name	Management Plan for the Lower Secondary School Physical Education Curriculum - Saint Lucia.
Application Area/Sector	Education
Knowledge Areas/Processes	**Knowledge areas:** ● Project integration management ● Project scope management ● Project schedule management ● Project cost management ● Project quality management ● Project resource management ● Project communication management ● Project risk management ● Project procurement management ● Project stakeholder management **Process groups:** ● Project initiation ● Project planning

General Objective: To create a learner-centered physical education curriculum specifically designed for lower secondary school students in Saint Lucian classrooms. This comprehensive curriculum will be rooted in scientific research, ensuring that it is based on theoretical underpinnings. By incorporating global citizenship skills, the curriculum aims to equip learners with the necessary knowledge and abilities for active participation in the world. This curriculum is intended for use by educators and students in Saint Lucian classrooms, fostering a holistic approach to physical education."

Specific Objectives:

1. Establish a comprehensive curriculum development program aimed at nurturing a skilled group of curriculum experts, empowering them to take on leadership roles, serve as coaches, and become proficient in curriculum writing, implementation, and evaluation.

2. Strengthen teacher capabilities through targeted professional development initiatives and training sessions, focusing on equipping them with the necessary skills in curriculum development, implementation, and evaluation.

3. Create an engaging and interactive E-Book that will enrich students' learning experiences, providing them with a dynamic platform to enhance their understanding and grasp of the subject matter.

Project Justification:

Curriculum and assessment are the cornerstone of any education system, serving as its vital components. In light of the ever-evolving world, marked by technological advancements and other innovations, it is crucial for learners to keep pace with these changes and develop the necessary skills to succeed in the workforce. As a result, the education sector must adapt and progress accordingly. Within this context, the significance of a physical education curriculum becomes evident.

A well-designed physical education curriculum contributes to equipping teachers with the essential instructional tools. It provides guidance on the scope, sequence, activities, and assessment across various grade levels. By incorporating physical education into the curriculum, educators can help foster holistic development in students.

Preliminary Scope

The project seeks to develop a lower secondary school PE curriculum which involves several key components. A comprehensive curriculum framework is established to outline goals, objectives, and learning outcomes. Specific content areas, such as fitness, health, sports, teamwork, and personal development, are defined. Age-appropriate learning outcomes aligned with national educational standards encompass physical skills, knowledge acquisition, and positive attitudes towards physical activity. A progression model is designed, considering student development, to ensure a logical sequence of learning. Lesson plans and activities are developed to engage students, promote skill development, and accommodate different learning styles. Effective teaching methodologies, inclusive practices, and assessment guidelines are provided to support PE teachers. The curriculum emphasizes inclusivity, adaptability, and collaboration with stakeholders, and resource materials and facilities are identified to facilitate implementation.

Description of Product to be Generated by the Project

Lower secondary school physical education (PE) curriculum - This product will be a comprehensive and tailored educational framework that caters specifically to the needs of students in this age group. This curriculum will be designed to promote physical fitness, skill development, and overall well-being among lower secondary school students. This product

provides a structured and engaging PE curriculum that aligns with international standards and takes into account the unique context and requirements of the target audience. It will cover a wide range of physical activities, sports, and health-related topics, aiming to develop students' physical competence, knowledge, and positive attitudes towards leading an active lifestyle.

The resulting product will consist of a comprehensive curriculum framework that includes detailed lesson plans, learning objectives, assessment methods, and teaching resources. It will provide guidance on instructional strategies, differentiated learning approaches, and the integration of technology to enhance student engagement and learning outcomes.

Additionally, the curriculum will emphasize the development of important life skills such as teamwork, communication, leadership, and problem-solving. It will incorporate opportunities for students to participate in team sports, individual activities, and recreational pursuits, fostering social interaction, personal growth, and a sense of achievement.

Requirements

The following requirements will be considered:

1. Subject matter expertise - Engage a team of experts in physical education and curriculum development who possess in-depth knowledge of PE concepts, instructional strategies, and age-appropriate learning outcomes.
2. Stakeholder involvement - Collaborate with PE teachers, school administrators, students, parents, and education authorities to gather input, feedback, and insights throughout the curriculum development process. Ensure their active involvement and representation to meet their needs and expectations.

3. Research and best practices - Conduct thorough research on current best practices, national educational standards, and guidelines for PE curriculum development. Stay updated on advancements in the field and align the curriculum with relevant research findings.
4. Needs assessment - Conduct a needs assessment to understand the specific requirements, challenges, and aspirations of the target student population. This assessment will inform the development of content areas, learning outcomes, and teaching methodologies that address their needs effectively.
5. Clear goals and objectives - Establish clear goals, objectives, and learning outcomes for the curriculum, ensuring they are aligned with national educational standards and age-appropriate for lower secondary students. These goals should be specific, measurable, attainable, relevant, and time-bound (SMART).
6. Curriculum development framework - Develop a comprehensive curriculum framework that provides a clear structure and guidance for curriculum development. The framework should outline the overarching goals, content areas, learning outcomes, progression model, assessment guidelines, and inclusive practices.
7. Collaborative development process - Adopt a collaborative approach by working closely with the curriculum development team, subject matter experts, and stakeholders to ensure a comprehensive and inclusive curriculum. Regular meetings, feedback sessions, and workshops can facilitate effective collaboration and ensure a well-rounded outcome.
8. Lesson plans and activities - Create a variety of engaging lesson plans and activities that align with the curriculum's goals and learning outcomes. These should be

adaptable to different learning styles and abilities, allowing students to actively participate and apply their knowledge practically.

9. Assessment and feedback mechanisms - Develop clear guidelines and criteria for assessing student progress and learning outcomes in PE. Include both formative and summative assessment methods to provide constructive feedback to students and inform their further development.
10. Resource materials and facilities - Identify and recommend appropriate resource materials, equipment, and facilities required to support the implementation of the PE curriculum. These may include textbooks, reference materials, sports equipment, and suitable spaces for physical activities.
11. Quality assurance and review - Implement a robust quality assurance process, including reviews, revisions, and feedback loops, to ensure the curriculum's effectiveness and alignment with the defined scope and objectives.
12. Implementation plan - Develop a detailed implementation plan that outlines the steps, timeline, and resource allocation required to implement the PE curriculum across lower secondary schools. Consider factors such as teacher training, budget, and coordination with relevant stakeholders.

By addressing these requirements, the scope for developing a lower secondary school PE curriculum can be effectively achieved, resulting in a comprehensive and inclusive curriculum that promotes physical activity, skill development, and holistic well-being among students.

Assumptions	The following assumptions can be made as it relates to the lower secondary school physical education curriculum and the strengthening of teacher capacity in Saint Lucia project management plan: 1. Physical education teachers and other stakeholders will demonstrate a willingness to actively participate in workshops. 2. The curriculum writers will successfully complete the writing and implementation process. 3. Information regarding the project will be readily available. 4. There will be no limitations or restrictions where the use of information pertaining to the enhancement of the lower secondary school curriculum is concerned. 5. A curriculum development course is available for the training of writers. 6. The project schedule will be strictly adhered to and completed on time. 7. Research time for the FGP will be at least 10 hours per week during its development process. 8. The researcher will meet all deadlines.
Constraints	There are several factors which may impact the successful completion of the project. These may include: 1. Competition from Other Projects: The curriculum development process may face challenges as stakeholders involved may have their time and attention divided among various projects, potentially impacting the availability of key resources and input. 2. Timely Procurement of Resources: Ensuring the timely acquisition of necessary resources, such as textbooks, technology, and learning materials, can be a constraint that affects the smooth progress of curriculum writing and implementation.. 3. Stakeholder Coordination: Coordinating the efforts of various stakeholders, including teachers, administrators, and subject matter experts, can prove challenging, particularly when aligning their schedules and ensuring active collaboration.

Constraints	4. Curriculum Approval Process: The curriculum may need to undergo a rigorous approval process involving educational authorities and policymakers, leading to potential delays and revisions. 5. Limited Technical Expertise: The availability of individuals with the necessary technical expertise in curriculum development tools and technology may pose a constraint in leveraging modern educational resources effectively.
Preliminary risks	1. Potential impact of disasters and pandemics on schedule. 2. Stakeholders' limited awareness of project processes. 3. Lack of awareness about the importance and need for curriculum reform. 4. Challenges with teacher training completion. 5. Pace of technological advancements outpacing curriculum implementation. 6. Ensuring relevance with emerging ideas in education.

Budget for Lower Secondary School Curriculum Development

Type of Expense	**Cost - USD**
Training	60, 000.00
Consultants	60, 000.00
Procurement of teaching and learning materials	30, 000.00
Curriculum and eBook Development, Implementation and Evaluation	60, 000.00
Use of Facilities	35, 000.00
Sensitization and Marketing	40, 000.00
Reserve	30,500.00
Total	**315,500.00**

MILESTONES		
Activity	**Start Date**	**End Date**
Project initiation	January 9th, 2023	
Needs assessment and research	January	March 2023
Curriculum design and framework	April	June 2023
Training of curriculum writers	June 5th	June 30th, 2023
Content development	July	December 2023
Printing copies of new curriculum	January 2024	February 2024
Pilot testing and evaluation	January 2024	March 2024
Finalization and documentation	April 2024	May 2024
Teacher training and capacity building	June 2024	August 2024
Curriculum rollout and implementation	September 2024	December 2024
Continuous improvement and review		
Stakeholders	**Direct stakeholders:** ● Project Manager Erasmus Wayne Benti ● Ministry of Education, curriculum officer physical education	

Stakeholders	**Direct stakeholders:** ● Saint Lucia Physical Education Teachers' Association ● Curriculum writers ● Principals ● Teachers ● Government of Saint Lucia.
	Indirect stakeholders: ● Media, community members, coaches, sporting associations
Project Manager Erasmus Wayne Benti	Signature
Authorized by:	Signature

4.1.1 Change Management Process

In project management, any alterations to the project charter must be done through the change management process, which is a systematic approach to managing changes within a project. Any project stakeholder can initiate a request for change by submitting a change request. The project manager will then evaluate the request, beginning with the justification provided and conducting additional background checks, if necessary, to ensure that the change aligns with the project's objectives and does not adversely affect the project's scope, budget, or timeline. Based on this analysis, the project manager will either accept or deny the request. If the project manager is unable to make a decision, the request may be escalated to the sponsor for input or a final decision. The project team will

document the acceptance or denial of the change. If the change is approved, the project team will implement the change, and the project documents will be subsequently updated to reflect that change.

According to the Project Management Body of Knowledge (PMBOK®) Guide, “change management is a critical process that helps ensure that project changes are managed in a controlled and systematic manner, thereby reducing the risk of scope creep and project failure” (Project Management Institute [PMI], 2017). By following the change management process, project managers can ensure that all changes are evaluated thoroughly, only allowing for the implementation of those that are beneficial and meet the project's objectives.

4.2. SCOPE MANAGEMENT PLAN

4.2.1 Introduction

According to PMI (2017), the scope management plan is defined as "the project management plan that outlines the process for defining, developing, monitoring, controlling, and validating the project scope." Therefore, this tool delineates objectives, work breakdown structure, project baseline, and deliverables.

4.2.2 Scope Management Approach

The management of scope will be a collaborative effort led by the Project manager, project sponsor, project management team, and the project steering committee. **Figure 16** shows the steps required for the development of the Scope Management Plan. The project manager will oversee the execution of the scope management plan, while the project management team will operate under their guidance. The project sponsor will work closely with the project manager, and any potential events impacting the project's scope will be promptly discussed with the sponsor. The project steering committee will play a pivotal role in guiding the overall project direction and decision-making process.

Figure 17 Development of the Scope Management Plan

Note. Adapted from the Project Management Body of Knowledge, 2017, p. 134

4.2.3 Scope Definition

According to the Project Management Body of Knowledge (PMBOK) (2017), scope refers to the process of developing a detailed project and product description. The lower secondary school curriculum aims to equip teachers with the necessary support to engage their students in the theoretical aspects of physical education by providing content knowledge development and resources. The project deliverables were established through a collaborative approach involving input from various stakeholders. Developing robust documents to drive the different aspects of the project management plan would provide an opportunity for the effective development and implementation of the Lower Secondary

School Physical Education Curriculum. This approach aligns with the best practices recommended by the PMBOK (2017) for scope management.

4.2.4 Project Scope Statement

To develop a lower secondary school PE curriculum and strengthen teachers' capacity to deliver and assess the lower secondary school PE curriculum in Saint Lucia. The Project will deliver a comprehensive curriculum development program aimed at nurturing a skilled group of curriculum experts, empowering them to take on leadership roles, serve as coaches, and become proficient in curriculum writing, implementation, and evaluation. The project will also strengthen teacher capabilities through targeted professional development initiatives and training sessions, focusing on equipping them with the necessary skills in curriculum development, implementation, and evaluation. In addition, it will create an engaging and interactive E-Book that will enrich students' learning experiences, providing them with a dynamic platform to enhance their understanding and grasp of the subject matter.

4.2.4. Project Scope Description

The project management plan includes the plan for scope, schedule, cost, resource, communication, risk, procurement quality and stakeholder management.

4.2.5 Project Benefits

The project will equip teachers with a well-defined scope and sequence for seamless implementation of the curriculum. It will also engender:

- Empower a Skilled Group of Curriculum Experts: The establishment of a comprehensive curriculum development program will nurture a proficient group of curriculum experts, equipping them with leadership skills and coaching abilities. These empowered experts will play a pivotal role in enhancing curriculum writing, implementation, and evaluation processes.

- Enhance Teacher Capabilities: Through targeted professional development initiatives and training sessions, teachers will gain essential skills in curriculum development, implementation, and evaluation. This enhancement will result in more effective teaching methods and improved delivery of educational content.

- Enrich Students' Learning Experiences: The creation of an engaging and interactive E-Book will significantly enrich students' learning experiences. By providing a dynamic platform, students will have enhanced opportunities to understand and grasp subject matter concepts, fostering a more engaging and effective learning environment.

4.2.6 Project Acceptance Criteria

The project will be accepted when:

- All of the outlined components of the project management plan are completed which include the plan for scope, schedule, cost, resource, communication, risk, procurement and stakeholder management.
- The document has been signed as approved by the project sponsor.

The project will adhere to the guidelines set forth by the CARICOM Education Unit and the Education Act of Saint Lucia and will be informed by current education research in physical education and curriculum development. To achieve success, the project must adhere to the scheduled timeline, ensuring completion within 15 months, and remain within the allocated budget of **US$315,500.00.**

4.2.7 Project Requirements and Acceptance Criteria

The requirements for the project are listed below and reflect the major aspects of the project. The corresponding acceptance criteria is also shared in **chart 7**.

Chart 7 Project Requirements and Acceptance Criteria

Project Requirements	Acceptance Criteria
Project Management Plan	
All plans should be completed,	Completed plans for: ● Project integration management ● Project scope management ● Project time management ● Project cost management ● Project resource management ● Project communication management ● Project risk management ● Project procurement management ● Project stakeholder management
Terms of Reference	
The TOR document should be comprehensive, clear, and effective in outlining the project's requirements. This will help to minimize ambiguity, ensure stakeholder alignment, and facilitate successful project outcomes.	1. **Background:** This section should provide a brief description of the project, its context, and the purpose of the project. 2. **Objectives:** This section should clearly state the project's objectives and goals, including measurable outcomes. 3. **Scope of services:** This section should provide an overview of the services required to complete the

	project, including any specific deliverables, timelines, and required resources. 4. **Expected outputs**: This section should clearly define the expected outputs and outcomes of the project, including deliverables, reports, and any other relevant documentation. 5. **Experience:** This section should clearly define the qualifications and experience required of the service provider, including any technical or specialized skills. 6. **Deliverables:** This section should provide a detailed breakdown of the deliverables required, including any timelines, milestones, and quality standards. 7. **Time Frames:** This section should define the project timeline, including start and end dates, key milestones, and any other relevant deadlines. 8. **Reporting:** This section should define the reporting requirements for the project, including any progress reports, status updates, and communication protocols. 9. **Application Process:** This section should provide clear instructions on the process for submitting

	proposals, including any deadlines, instructions, and evaluation criteria. By following these guidelines, we can ensure that the TOR document is comprehensive, clear, and effective in outlining the project's requirements. This will help to minimize ambiguity, ensure stakeholder alignment, and facilitate successful project outcomes.
Contracts	
Ensure that the contract is comprehensive, clear, and effective in outlining the terms and conditions of the project. This will help to minimize ambiguity, ensure stakeholder alignment, and facilitate successful project outcomes.	The contract includes the following accepted criteria: 1. Document is approved by the Legal Department of the Ministry of Education of Saint Lucia: This ensures that the contract is legally binding and complies with all relevant laws and regulations. 2. Description of services: This section should provide a detailed description of the services to be provided, including the scope of work,

The approval of the Legal Department of the Ministry of Education of Saint Lucia ensures that the contract is legally sound and compliant with all relevant laws and regulations.	deliverables, timelines, and any other relevant information. 3. Payment terms: This section should clearly define the payment terms, including the total contract amount, payment schedule, and any other financial terms. 4. Term of agreement: This section should define the term of the agreement, including the start and end dates of the contract, and any relevant dates and deadlines. 5. Termination clause: This section should outline the conditions under which the contract can be terminated by either party, including any notice periods or penalties. 6. Intellectual property rights: This section should define the ownership and use of any intellectual property rights associated with the project. 7. Confidentiality clause: This section should outline the confidentiality obligations of all parties involved in the project, including any restrictions on the use and disclosure of confidential information.

	8. Indemnification clause: This section should outline the indemnification obligations of the parties, including any liabilities or damages that may arise from the project.

Note: Chart elaborated by Erasmus Wayne Benti based on own research, 2023

4.2.8 Project Deliverables

Objectives	Deliverables
1. Establish a comprehensive curriculum development program aimed at nurturing a skilled group of curriculum experts, empowering them to take on leadership roles, serve as coaches, and become proficient in curriculum writing, implementation, and evaluation.	**Curriculum Development Programme:** ● Comprehensive curriculum framework for different subjects or disciplines. ● Curriculum expert training materials and resources. ● Leadership and coaching guidelines for curriculum experts. ● Curriculum writing guidelines and templates. ● Implementation plan for integrating the new curriculum into schools. ● Evaluation tools and methods to assess the effectiveness of the curriculum.

2. Strengthen teacher capabilities through targeted professional development initiatives and training sessions, focusing on equipping them with the necessary skills in curriculum development, implementation, and evaluation.	**Teacher Capability Strengthening:** ● Professional development program modules tailored for teachers. ● Training sessions and workshops schedule and materials. ● Curriculum development skill-building resources for teachers. ● Implementation guidelines to support teachers in integrating the new curriculum. ● Evaluation mechanisms to measure the impact of teacher training on curriculum implementation.

3. Create an engaging and interactive E-Book that will enrich students' learning experiences, providing them with a dynamic platform to enhance their understanding and grasp of the subject matter.	**Engaging and Interactive E-Book:** ● Developed and designed interactive E-Book for various subjects or topics. ● Multimedia elements, such as videos, images, and audio, to enhance learning experiences. ● User-friendly navigation and interface design for easy access and comprehension. ● Compatibility and accessibility across multiple devices and platforms. ● Assessment tools or quizzes to gauge students' understanding and progress. ● Feedback mechanisms to gather insights from students for continuous improvement.

4.2.9 Roles and Responsibilities

There are key stakeholders who contribute to the scope management plan and executing scope management throughout this project. The roles and responsibilities of these stakeholders are outlined in this section. **Chart 8** provides the information on the Roles and Responsibilities. These individuals are integral in ensuring that the approved work is implemented and that no unapproved work is carried out.

Chart 8 Scope Management Roles and Responsibilities

Role	Responsibilities
Project sponsor	● Has general oversight of the project. ● Provides initial parameters for the project scope and participates in initial planning. ● Verifies project scope, ensuring that the scope is achievable and realistic. ● Supports the project manager in relation to scope clarification, managing progress and scope guidance. ● Releases finances to fund the project. ● Interacts directly with the project manager. ● Approves or denies proposed scope changes. ● Government's escalation processes to be implemented when scope issues which are out of the project manager's reach. ● Establishes communication mechanisms for scope management. ● Tracks the progress of the project.

Project manager	• Defines scope and project specifications. • Creates the Work Breakdown Structure. • Outlines the success criteria based on guidelines and objectives provided. • Leads meetings related to the project. • Manages the change management process by facilitating change requests. • Updates scope management plan following approved changes. • Mitigates scope creep and alerts project sponsors of threats of scope creep. • Write the scope management plan. • Communicates with all scope management stakeholders. • Review reports from the project steering committee and other stakeholders. • Provides updates to the project sponsors. • Escalates issues which cannot be resolved to the project sponsor.
Project steering committee	• Assists the project manager to identify activities which align with project scope. • Provides technical feedback on the potential impact of activities on the scope of the project. • Provides reports and updates to the project manager. • Attends meetings as scheduled by the project manager. • Escalates issues to the project manager. • Communicates with other stakeholders, as needed and directed.

	• Provides support for school leaders.
Physical education curriculum development manager	• Acts as a liaison between the steering committee, content writers and principals. • Meets with the project steering committee to receive and provide updates. • Alerts project steering committee of any threats to project scope. • Monitors project activities at the writing level.
Curriculum content writers	• Develop and write the PE curriculum based on the project's objectives, ensuring that the content is age-appropriate, relevant, and aligned with the curriculum standards and requirements. • Collaborate with other stakeholders, including subject matter experts, teachers, and instructional designers, to ensure that the curriculum is comprehensive, accurate, and effective. • Research and analyze the latest trends, existing literature, and best practices in PE education to ensure that the curriculum is up-to-date and relevant. • Ensure that the curriculum is inclusive and accessible to all learners, including those with disabilities and diverse backgrounds. • Create assessment tools, including rubrics and performance indicators, to evaluate student learning and achievement. • Participate in peer reviews and provide feedback on the work of other curriculum writers to ensure that the final product is of high quality.

	• Keep abreast of project timelines and milestones and ensure that all deliverables are completed on time and within budget.
Curriculum content writers	• Report to the curriculum development manager on the project. This will ensure that the curriculum development process is aligned with the project objectives, timelines, and budget, and will allow for the timely rectification of any issues or concerns. Additionally, the project manager or curriculum development manager can provide guidance, support, and oversight to the curriculum content writers to ensure that the project is successful.

Note: Chart elaborated by Erasmus Wayne Benti based on own research, 2023

4.2.10 Key Performance Indicators

According to the Project Management Institute (PMI, 2017), key performance indicators (KPIs) are quantifiable measures that project teams use to assess project performance. KPIs provide valuable insights to the project manager and team, aiding in the evaluation of critical success factors and the determination of measurement methods for each indicator. The utilization of specific, measurable, achievable, results-oriented, and time-bound (SMART) goals is recommended for measuring the project's KPIs. Furthermore, Gido and Clements (2018) emphasize that project managers are responsible for evaluating any changes to the KPIs, subject to approval by the project steering committee and sponsor. Chart 9 below gives an example of the KPI required for the project.

Chart 9 Key Performance Indicators

Key Performance Areas	Success Criteria	KPI	Timeline	How is it Going to be Measured	How Often to Measure
Conduct training in curriculum and assessment	Development of a cadre of curriculum experts nationally.	100% of selected curriculum personnel trained curriculum development.	32 days	Certification upon completion of training course. Involvement in the writing of the curriculum.	Quarterly
Curriculum development	Completion of lower secondary school PE curriculum.	Published copies of curriculum for schools and teachers	100 days	Curriculum document distributed to every public school.	Once
Implementation of new curriculum	Students learn success in the use of curriculum.	Improvements in national assessments.	130 days	Key stage assessments	Yearly
Training of curriculum writers	Development of a cadre of curriculum experts nationally.	Number of curriculum writers trained.	30 days	Attendance records and evaluation of training program. Certification upon completion of training course. Involvement in the writing of the curriculum.	
Content development	Development of curriculum content and materials.	Number of lessons/activities developed	100 days	Evaluation of developed content by subject matter experts.	
Pilot testing and evaluation	Successful implementation of pilot testing phase.	Feedback from teachers and students.	Months 7-12	Surveys, interviews, and evaluation reports on pilot testing.	

Note: Chart elaborated by Erasmus Wayne Benti based on own research, 2023

4.2.10. 1 Key Performance Indicators – Schedule Compliance

To calculate this KPI, you'll need the following information:

1. Real Time: The actual time it takes to complete a task or project.
2. Planned Time: The estimated or scheduled time it should take to complete the same task or project.
3. Acceptance Criterion: The threshold that determines whether the real-time performance is acceptable. In this case, it's set at greater than 90%.

Key Performance Areas	**Real Time in Days**	**Planned Time in Days**	**Real Time in Hours**	**Planned Time in Hours**	**KPI = (Real Time / Planned Time) * 100**	**Acceptance Criteria Explanation**
Conduct training in curriculum and assessment	32	32	256	256	100	The real time spent on conducting training matches the planned time, resulting in a KPI of 100%.
Curriculum development	99	100	792	800	99	The real time spent on curriculum development is slightly below the planned time, resulting in a KPI of 99%.
Implementation of new curriculum	132	130	1056	1040	101.54	The real time spent on implementing the new curriculum slightly exceeds the planned time, resulting in a KPI of 101.54%.
Training of curriculum writers	30	30	240	240	100	The real time spent on training curriculum writers matches the planned time, resulting in a KPI of 100%.

Key Performance Areas	Real Time in Days	Planned Time in Days	Real Time in Hours	Planned Time in Hours	KPI = (Real Time / Planned Time) * 100	Acceptance Criteria Explanation
Content development	101	100	808	800	101	The real time spent on content development matches the planned time, resulting in a KPI of 101%.
Pilot testing and evaluation	90	90	720	720	100	The real time spent on pilot testing and evaluation matches the planned time, resulting in a KPI of 100%.

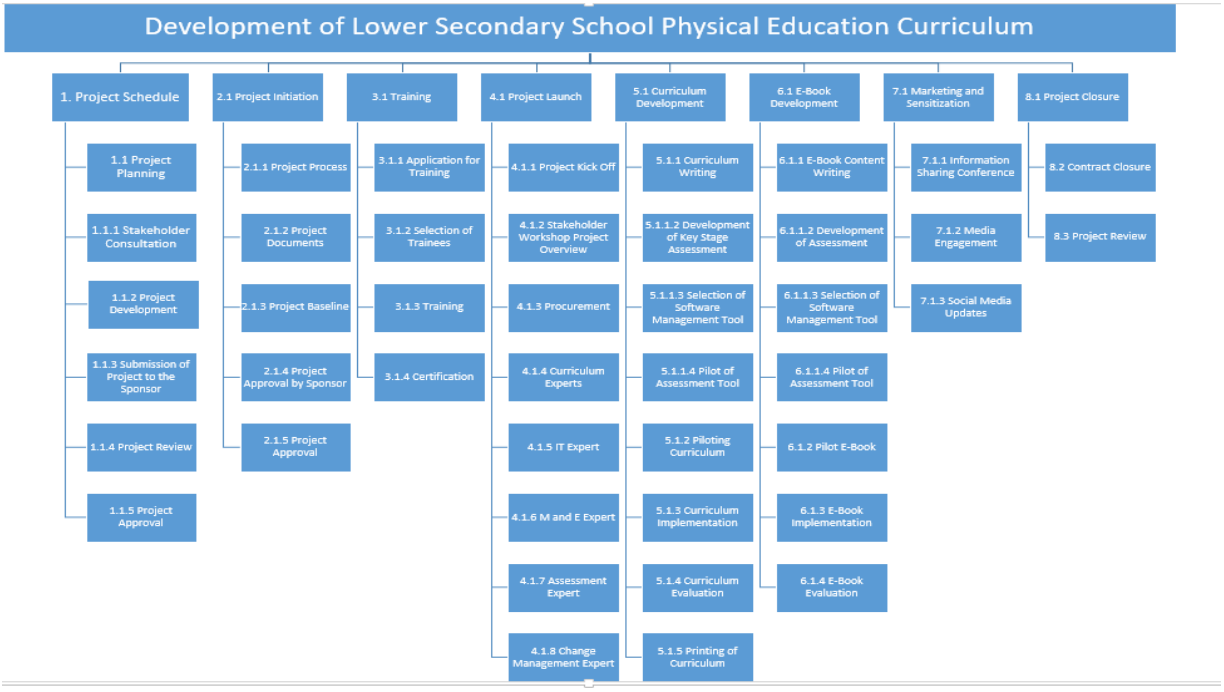
4.2.11 Work Breakdown Structure

The WBS is a fundamental tool in project management that helps to break down the entire scope of work required to achieve project objectives into smaller, more manageable components. It involves a hierarchical decomposition of tasks that must be performed by the project team to create the required deliverables.

The WBS serves as a guide to help project managers and their teams visualize the project's scope, define the activities required to complete the work, and allocate resources efficiently. By using the WBS, project managers can better estimate project timelines, set priorities, and identify potential risks.

The WBS for the project is provided below and it outlines all the tasks, sub-tasks, and activities required to accomplish the project objectives and deliverables. It is crucial that the project team follows the WBS to ensure that all necessary work is completed, and the project is completed successfully. See figure 17 below which gives the WBS for the development of the lower secondary school PE curriculum.

Figure 18 Work Breakdown Structure



Note: Source Erasmus Wayne Benti based on own research, 2023

4.2.12 Work Breakdown Structure Dictionary

The work breakdown structure dictionary is a document that provides detailed, deliverable activity and scheduling information about each component of the WBS. The WBS dictionary is created following input from various key stakeholders. **Chart 10** provides the WBS for the project.

Chart 10 Work Breakdown Structure Dictionary

WBS	Component Name	Description of Work	Deliverables	Resources	Budget
130	Project Schedule				30,000.00
1.1	Project Planning			Zoom Software, Internet	
1.1.1	Stakeholder Consultation	Engage with stakeholders to determine their needs, expectations and expertise.	Stakeholder power, influence matrix and inputs Communication Plan	Zoom Software Internet	
1.1.2	Project Development	Develop and update project documents.	Project concept and approval documented	Internet access, Printer, Computer	
1.1.3	Submission of Project to the Sponsor	Review project documents and submit them to the sponsor.	Draft project documents developed and approved by PSC	Internet Access, Printer, Computer	
1.1.4	Project Review	Review sponsor feedback on project documents.	Reviewed and updated project documents	Internet access, Printer, Computer	
1.1.5	Project Approval	Submit updated project documents to the sponsor for approval.	Approved project documents circulated to the team.	Internet access, Printer, Computer	

WBS	Component Name	Description of Work	Deliverables	Resources	Budget
2.1	Project Initiation	Develop Project Charter and obtain approval.	Project Charter approved and circulated	Internet access, Printer, Computer	25,000.00
2.1.1	Project Process	Develop project processes through data gathering and research.	Project process approved by PSC and sponsor	Internet access, Printer, Computer	
2.1.2	Project Documents	Develop relevant project documents for execution and implementation.	Project Management Plan Developed	Internet access, Printer, Computer	
2.1.3	Project Baseline	Develop project baselines based on Project Charter and Business Case.	Approved project Baselines	Internet access, Printer, Computer	
2.1.4	Project Approval by Sponsor	Develop project scope based on the Project Charter.	Approved project Scope	Internet access, Printer, Computer	
2.1.5	Project Approval	Submission of updated project documents to sponsor	Approved project documents circulated to the project team	Internet access, Printer, Computer	
3.1	Training	Application, selection, and certification of trainees.	Professional Development through training workshops	Communication specialist, Printer, Computer, Social media tools	60,000.00
3.1.1	Application for Training	Development of application for training and advertisement of training.	Application for training approved.	Communication specialist, printer, computer, social media tools	

WBS	Component Name	Description of Work	Deliverables	Resources	Budget
3.1.2	Selection of Trainees	Select trainees and communicate the selection.	Trainees selected.	Selection committee	
3.1.3	Training	Conduct training sessions.	Assessment and evaluation of learning	Curriculum training consultant, Training materials, Hardware, Software, Virtual teaching software	
3.1.4	Certification	Assess trainees and award diploma certificates.	Award trainees diploma certificate	Curriculum Development Consultant	
4.1	Project Launch	Officially start the project.	Meeting	Zoom software, Room, Lunch and snacks, Stationery	160,000.00
4.1.1	Project Kick Off	An official start to the project	A meeting	Zoom software.	
4.1.2	Stakeholder Workshop Project Overview	Meeting with stakeholders to present Project overview	One day conference	Room Lunch and snacks for attendees Stationery	
4.1.3	Procurement	Implement procurement strategy for hiring consultants.	Report procurement process and actions	Curriculum Consultant, IT Expert Consultant, M and E Expert Consultant, Assessment Expert Consultant, Change Management Expert Consultant	

WBS	Component Name	Description of Work	Deliverables	Resources	Budget
4.1.4	Curriculum Experts	Implement procurement strategy and process for the hiring of a consultant	Report procurement process and actions	Curriculum Expert consultant	
4.1.5	IT Expert	Implement procurement strategy and process for the hiring of a consultant	Report procurement process and actions	IT Expert Consultant	
4.1.6	M and E Expert	Implement procurement strategy and process for the hiring of a consultant	Report procurement process and actions	M and E Expert Consultant	
4.1.7	Assessment Expert	Implement procurement strategy and process for the hiring of a consultant	Report procurement process and actions	Assessment Expert Consultant	
4.1.8	Change Management Expert	Implement procurement strategy and process for the hiring of a consultant	Report procurement process and actions	Change management Expert Consultant	
5.1	Curriculum Development	Develop curriculum for lower secondary school PE.	Printed Curriculum for lower secondary school PE	Computer, Internet, Writing material, Printer, Stationery	85,000.00
5.1.1	Curriculum Writing	Write curriculum for lower secondary school PE.	Printed Curriculum for lower secondary school PE	Computer Access to internet Writing material Printer Stationery	

WBS	Component Name	Description of Work	Deliverables	Resources	Budget
5.1.1.2	Development of Key Stage Assessment	Create an assessment tool to assess early stage reading and numeracy	Assessment tool	Computer	
5.1.3	Selection of Software management tool	Select software for housing assessment tool	Software	Computer	
5.1.1.4	Pilot of Assessment Tool	Testing the instrument in identified school	Report	100 Tablets	
5.1.2	Piloting Curriculum	Run several pilot cycles to assess the curriculum	Report on Pilot cycles Recommendations for modification or improvements	Tracking forms and software Survey tools Researchers	
5.1.3	Curriculum Implementation	Curriculum is used in public schools	Use of curriculum in all schools	Coaches Tracking tools	
5.1.4	Curriculum Evaluation	Curriculum provides for avenues for overall assessment of its usefulness	Evaluation reports	Tablets	
5.1.5	Printing of Curriculum	Published copies of the curriculum	100 Copies of the curriculum	Printing resources Binding resources	
6.1	E-Book Development				
6.1.1	E - Book Content Writing	Write content for lower secondary school PE EBook.	Uploaded EBook Content for lower secondary school PE	Computer, Internet, Writing material, Printer, Stationery	
6.1.1.2	Development of Assessment	Create an assessment tool for fitness and knowledge assessment.	Assessment tool	Computer	

WBS	Component Name	Description of Work	Deliverables	Resources	Budget
6.1.1.3	Selection of Software Management tool.	Select and implement a software management tool that will be used to facilitate project management activities.	Implemented software management tool configured to meet the project's needs, documented guidelines for tool usage, training materials for project team members on how to effectively use the tool.	Project Manager, IT Expert Consultant, Access to software vendors and tools, Computer, Internet.	
6.1.1.4	Pilot of Assessment Tool	Develop and conduct a pilot test of the assessment tool designed for fitness and knowledge assessment of the lower secondary school PE curriculum.	Completed pilot test plan, assessment tool materials, assessment results data, findings report from the pilot test, identified areas for improvement in the assessment tool.	Assessment Expert Consultant, Curriculum Development Consultant, Lower Secondary School Students (for pilot testing), Assessment Tool Materials (questionnaires, tests), Computer, Internet.	
6.1.2	Pilot E - Book				
6.1.3	E -Book Implementation	Implement E-Book in public schools.	Use of E-Book in all schools	Coaches, Tracking tools	
6.1.4	E Book - Evaluation				
7.1	Marketing and Sensitization	Organize conferences, media	Hosted conference, Status update,	Venue, Snacks, Stationery,	50,000.00

		engagements, and social media updates.	Social media campaign	Computer, Internet	
WBS	Component Name	Description of Work	Deliverables	Resources	Budget
7.1.1	Information Sharing Conference	A conference held to disseminate information on the project	Hosted conference	Venue Snacks Stationery	
7.1.2	Media Engagement	Organize monthly media engagements for project status updates.	Developed status update	Computer, Internet	
7.1.2	Social Media Updates	Design and implement a social media campaign.	Implemented social media campaign, Uploaded information, Daily updates	Social media tools, Information, Internet	
8.1	Project Closure	Close the project and inform stakeholders.	Project Closure Report	Computer, Printing	25,000.00
8.1.1	Contract Closure	Close supplier contracts and release staff and equipment.	Project Implementation Report	Computer, Printing	
8.1.2	Project Review	Review project impact and implementation	Project Implementation Report	Computer Printing	
	Total Cost				435,000.00
	Contingency 10%				43,500.00
	Management Reserve 5%				217,00.00
	TOTAL COST				**500,200.00**

Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

4.2.13 Scope Validation

According to the Project Management Body of Knowledge (PMBOK), Scope Validation is "the process of formalizing acceptance of the completed project deliverables" (Project Management Institute, 2017, p. 177). In this project, the scope validation process will be conducted by the project manager and the project sponsor.

During scope validation, the project manager and the project sponsor will review the acceptance criteria, which were identified and documented during the scope definition process. Once the deliverables have been completed, the parties will compare them against the acceptance criteria to ensure that they meet the required standards.

After the verification of the scope has been completed, the project manager and the project sponsor will sign a document indicating formal acceptance of the deliverables. This process is essential to ensure that the project's scope has been met successfully, and all parties involved are satisfied with the final outcome.

4.2.14 Scope Acceptance Criteria

Chart 10 Scope Acceptance Criteria

The following requirements must be met for the project to be accepted as complete:

- All of the outlined components of the project management plan are completed which include the following:
    - The scope management plan
    - The schedule management plan
    - The cost management plan
    - The resource management plan
    - The quality management plan
    - The communication management plan
    - The risk management plan
    - The procurement management plan
    - The stakeholder management plan

Please note:

- All the requirements specified in the requirements traceability matrix must be met in compliance with the relevant laws and regulations, as well as the principles and standards outlined in the project management plan (PMP)
- In the event that any requirement is absent, kindly make a notation in this section and refrain from marking the corresponding checkbox. This approach ensures compliance with both legal obligations and the project management principles stipulated in the project management plan (PMP).

  _____

  _____

- The document has been signed as approved by the project sponsor.

Upon reviewing all documents and ascertaining that the project management plan is complete, the project manager and project sponsor will sign off on the project plan.

Approved by:

_____ _____ _____

Project sponsor - Name NAME	SIGNATURE	DATE
_____	_____	_____
Project sponsor - Name	SIGNATURE	DATE

Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

Chat 13 below provides the information on the traceability matrix.

Chart 11 Traceability matrix

ID	WBS	Description	Acceptance Criteria	Priority	Requested by	Responsible	Status/ Comments
1	1.1	Project Planning	Project planning documents completed	High	Project Team	Project Manager	Ongoing
2	1.1.1	Stakeholder Consultation	Stakeholder feedback obtained	High	Project Team	Project Manager	In Progress
3	1.1.2	Project Development	Project documents developed and reviewed	High	Project Team	Project Manager	Completed
4	1.1.3	Submission of Project to the Sponsor	Project documents reviewed by sponsor	Medium	Project Team	Project Manager	Pending Sponsor Approval
5	1.1.4	Project Review	Project reviewed by stakeholders	Medium	Project Team	Project Manager	In Progress
6	1.1.5	Project Approval	Project approved by sponsor	High	Sponsor	Project Manager	Pending Sponsor Approval
7	2.1	Project Initiation	Project initiation	High	Project Team	Project Manager	Completed

			documents completed				
ID	WBS	Description	Acceptance Criteria	Priority	Requested by	Responsible	Status/ Comments
8	2.1.1	Project Process	Project processes developed and approved	High	Project Team	Project Manager	Completed
9	2.1.2	Project Documents	Relevant project documents developed	Medium	Project Team	Project Manager	In Progress
10	2.1.3	Project Baseline	Project baseline developed	High	Project Team	Project Manager	Completed
11	2.1.4	Project Approval by Sponsor	Project approved by sponsor	High	Sponsor	Project Manager	Completed
12	3.1	Training	Training program developed and conducted	High	Project Team	Training Team	Ongoing
13	3.1.1	Application for Training	Training application submitted and approved	Medium	Project Team	Training Team	Completed
14	3.1.2	Selection of Trainees	Trainees selected for the program	High	Project Team	Training Team	In Progress
15	3.1.3	Training	Training sessions conducted	High	Project Team	Training Team	Ongoing
16	3.1.4	Certification	Trainees certified upon completion	Medium	Project Team	Training Team	In Progress
17	4.1	Project Launch	Project officially launched	High	Project Team	Project Manager	Completed

ID	WBS	Description	Acceptance Criteria	Priority	Requested by	Responsibility	Status/ Comments
18	4.1.1	Project Kick Off	Kick-off meeting conducted	High	Project Team	Project Manager	Completed
19	4.1.2	Stakeholder Workshop Project Overview	Workshop held to present project overview	Medium	Project Team	Project Manager	Completed
20	4.1.3	Procurement	Procurement process completed	Medium	Project Team	Project Manager	In Progress
21	4.1.4	Curriculum Experts	Curriculum experts contracted	High	Project Team	Project Manager	In Progress
22	4.1.5	IT Expert	IT expert contracted	High	Project Team	Project Manager	Completed
23	4.1.6	M and E Expert	M and E expert contracted	Medium	Project Team	Project Manager	Completed
24	4.1.7	Assessment Expert	Assessment expert contracted	Medium	Project Team	Project Manager	In Progress
25	4.1.8	Change Management Expert	Change management expert contracted	Medium	Project Team	Project Manager	Ongoing
26	5.1	Curriculum Development	Curriculum for PE developed and reviewed	High	Project Team	Curriculum Team	In Progress
27	5.1.1	Curriculum Writing	Curriculum content written and reviewed	High	Project Team	Curriculum Team	In Progress
28	5.1.1.2	Development of Key Stage Assessment	Key stage assessment developed and reviewed	Medium	Project Team	Curriculum Team	Ongoing

ID	WBS	Description	Acceptance Criteria	Priority	Requested by	Responsibility	Status/ Comments
29	5.1.1.3	Selection of Software management tool	Software tool selected for assessment	Low	Project Team	Curriculum Team	Completed
30	5.1.1.4	Pilot of Assessment Tool	Assessment tool piloted in identified school	Medium	Project Team	Curriculum Team	Ongoing
31	5.1.2	Piloting Curriculum	Curriculum piloted in schools	High	Project Team	Curriculum Team	Ongoing
ID	WBS	Description	Acceptance Criteria	Priority	Requested by	Responsible	Status/ Comments
ID	WBS	Description	Acceptance Criteria	Priority	Requested by	Responsible	Status/ Comments
32	5.1.3	Curriculum Implementation	Curriculum implemented in schools	High	Project Team	Curriculum Team	In Progress
33	5.1.4	Curriculum Evaluation	Curriculum evaluated for effectiveness	Medium	Project Team	Curriculum Team	Ongoing
34	5.1.5	Printing of Curriculum	Curriculum printed and distributed	High	Project Team	Curriculum Team	In Progress
35	6.1	E- Book Development	E-book for PE developed and reviewed	High	Project Team	E-book Team	In Progress
36	6.1.1	E- Book Content Writing	E-book content written and reviewed	High	Project Team	E-book Team	In Progress
37	6.1.1.2	Development of Key Stage Assessment	Key stage assessment developed and reviewed.	Medium	Project Team	E-book Team	Ongoing

ID	WBS	Description	Acceptance Criteria	Priority	Requested by	Responsibility	Status/ Comments
38	6.1.1.3	Selection of Software management tool	Software tool selected for assessment	Low	Project Team	E-book Team	Completed
39	6.1.1.4	Pilot of Assessment Tool	Assessment tool piloted in identified school	Medium	Project Team	E-book Team	Ongoing
40	6.1.2	Piloting eBook	E-Book piloted in schools	High	Project Team	E-book Team	Ongoing
41	6.1.3	E-Book Implementation	E-Book implemented in schools	High	Project Team	E-book Team	In Progress
42	6.1.4	E-Book Evaluation	E-Book evaluated for effectiveness	Medium	Project Team	E-book Team	Ongoing
43	7.1	Marketing and Sensitization	Project information shared through conference	High	Project Team	Project Manager	Completed
44	7.1.1	Information Sharing Conference	Conference organized to disseminate info.	High	Project Team	Project Manager	Completed
45	7.1.2	Media Engagement	Monthly media engagements for status updates	Medium	Project Team	Project Manager	Ongoing
46	7.1.3	Social Media Updates	Social media campaign for project updates	Low	Project Team	Project Manager	Ongoing
47	8.1	Project Closure	Project officially closed	High	Project Team	Project Manager	Completed

ID	WBS	Description	Acceptance Criteria	Priority	Requested by	Responsibility	Status/ Comments
48	8.2	Contract Closure	Project contracts officially closed	High	Project Team	Project Manager	In Progress
49	8.3	Project Review	Review of project impact and implementation	Medium	Project Team	Project Manager	Ongoing

Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

4.2.15 Scope Control

"Scope control refers to the process of continuously monitoring the status of the project and product scope and managing changes to the scope baseline" (Project Management Institute, 2017). The steering committee, project manager, and project sponsor are responsible for overseeing the project's progress to ensure that it aligns with the scope. If there are any recommendations for further changes, the concerned parties may make a request for change through a change request form. The project manager will then review the form and provide a decision of either approved or denied. If necessary, the project manager will communicate with the project sponsor before sharing the decision (Project Management Institute, 2017). See chart 13.

Chart 12 Change Request Form

PROJECT CHANGE REQUEST	
Name of Project	
Request Initiated by	
Date Initiated	
Priority (select one)	___ LOW ___ MEDIUM ___ HIGH
DETAILS OF REQUEST	
Description	
Justification	
Impact on	• Scope • Schedule • Cost • Communication • Stakeholders • Other _____
Effect on Deliverables	
Impact of not implementing the proposed change	
TO BE COMPLETED BY THE PROJECT MANAGER	
Decision	• Accept • Reject

Reason for the Decision	
Date	
Name (PRINT)	
Signature	

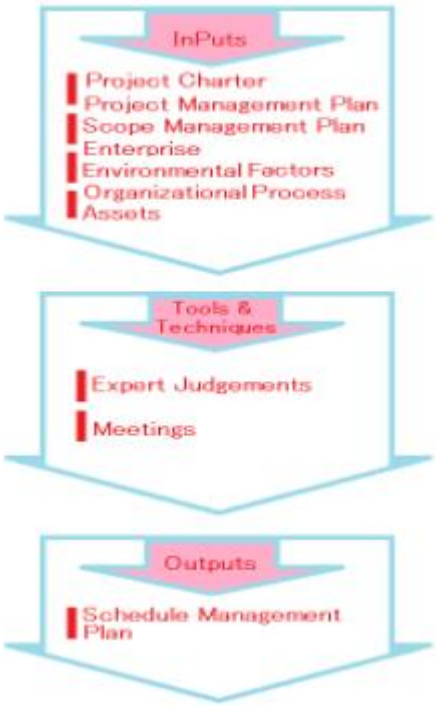
Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

4.3. SCHEDULE MANAGEMENT PLAN

4.3.1 Introduction

"Project schedule management is a critical component of project management, and it involves managing the timely completion of a project (Project Management Institute, 2017)." In the Lower Secondary School Physical Education Curriculum Project, a schedule management plan was established to guide the project's schedule development. The Project Management Body of Knowledge (2017) identifies six processes that are associated with project schedule management: plan schedule management, define activities, sequence activities, estimate activity durations, develop schedule, and control schedule. These processes were essential in developing the schedule for the Lower Secondary School Physical Education Curriculum Project. Due to the program's size, defining, estimating, and sequencing activities were combined into a single process, which could be implemented by a single person within a short time frame. In developing the schedule management plan, Microsoft Excel and Microsoft Project software tools were used to facilitate some of the processes. The Project Management Body of Knowledge (2017) provided guidance on the inputs, tools and techniques, and outputs for the project, as shown in Figure 18

Figure 19 Development of the Schedule Management Plan



Note. Adapted from the Project Management Body of Knowledge, 2017, p. 179

4.3.2 Schedule Management Approach

"When implementing a Schedule Management Approach for the development of a lower secondary school PE curriculum, the project will adhere to the tenets of the Project Management Professional (PMP) framework to ensure a systematic and efficient schedule. The process commences with a thorough needs assessment to ascertain requisites and objectives. Subsequently, the project will undergo segmentation into pivotal phases, encompassing Stakeholder Consultation, Curriculum Development, Curriculum Implementation, and Project Closure. Meticulous identification of interdependencies among tasks will be undertaken, acknowledging that specific undertakings, like Curriculum Writing and Pilot Testing, necessitate completion before advancing to

Curriculum Implementation. Provision for buffer time will be made to accommodate unforeseen delays, thereby preserving project alignment. Consistent monitoring and reporting will empower the project team to juxtapose real-time progress with the established baseline schedule, facilitating prompt recognition of any deviations. Stakeholders will receive continuous updates through established communication channels, fostering collaboration and alignment. A continuum of evaluation and feedback mechanisms will be instituted to ensure that the project seamlessly adapts to evolving prerequisites and maintains its quality throughout. This Schedule Management Approach will optimize resource allocation, punctual task fulfillment, and triumphant project delivery, harmonizing seamlessly with the core tenets of the PMP framework."

4.3.3 Schedule management approach

1. Expert Judgment: Expert judgment involves seeking input and advice from subject matter experts, experienced individuals, and professionals who possess knowledge and expertise in the relevant field. In the development of a PE curriculum, expert judgment can be invaluable for various aspects:

- **Curriculum Content:** Engaging curriculum experts to review and validate the curriculum content ensures its alignment with educational standards, age-appropriate activities, and learning objectives. Their input helps in creating a well-structured curriculum that effectively imparts physical education concepts.
- **Assessment Development:** Collaborating with assessment experts helps design appropriate evaluation methods that gauge students' progress accurately. Their

insights ensure that assessment tools align with the curriculum's objectives and effectively measure the students' physical and cognitive development.

- **Change Management:** When introducing changes to the existing curriculum, change management experts can provide guidance on implementing changes smoothly. Their expertise ensures that changes are well-communicated, stakeholders are prepared, and potential resistance is addressed effectively.

2. Data Analysis: Data analysis involves examining quantitative and qualitative data to gain insights and make informed decisions. In the development of a PE curriculum, data analysis can be applied in several ways:

- **Needs Assessment:** Analysing data from student surveys, fitness assessments, and educational guidelines helps identify specific needs and preferences. This informs the curriculum's content and design, ensuring it addresses students' physical development requirements.
- **Assessment Results:** Analysing assessment results from pilot tests and evaluations helps identify areas of improvement in the curriculum. Data-driven decisions enable curriculum developers to refine content and teaching methods for better student outcomes.
- **Effectiveness Evaluation:** Ongoing data analysis during curriculum implementation allows for continuous evaluation of its effectiveness. Analysing data on student engagement, performance, and feedback helps identify any necessary adjustments.

3. Meetings: Meetings are a fundamental communication and collaboration tool. They bring stakeholders together to discuss, plan, and make decisions. In the context of PE curriculum development:

- **Stakeholder Consultation:** Meetings with curriculum experts, teachers, school administrators, and parents facilitate the collaborative design of the curriculum. These discussions help align the curriculum with educational goals and ensure that it meets the needs of all stakeholders.
- **Project Review:** Regular project review meetings allow the project team to assess progress against the schedule, discuss challenges, and make necessary adjustments. These reviews ensure that the curriculum development stays on track and aligned with project goals.
- **Training and Certification:** Meetings with training experts, teachers, and certification bodies can be organized to plan and coordinate the training process. These meetings ensure that teachers are well-prepared to implement the curriculum effectively and receive necessary certifications.

By leveraging these Schedule Management Tools and Techniques—Expert Judgment, Data Analysis, and Meetings—the development of a lower secondary school PE curriculum can be executed with precision, ensuring a well-structured and effective curriculum that meets the educational needs of the students and aligns with project goals.

4.3.4 Activity List

1. **Stakeholder Consultation:**
    - Stakeholder Workshop Project Overview
    - Information Sharing Conference
    - Media Engagement
    - Social Media Updates
2. **Project Development:**
    - Curriculum Experts
    - IT Expert
    - M and E Expert
    - Assessment Expert
    - Change Management Expert
    - Curriculum Development
3. **Submission of Project to the Sponsor:**
    - Project Documents
    - Project Baseline
4. **Project Review:**
    - Project Review
5. **Project Approval:**
    - Project Approval by Sponsor
6. **Project Initiation:**
    - Project Kick Off
7. **Project Process:**
    - Curriculum Writing
    - Development of Key Stage Assessment
    - Selection of Software Management Tool
    - Pilot of Assessment Tool
    - Piloting Curriculum
8. **Project Approval by Sponsor:**
    - Project Approval

9. **Training:**
    - Application for Training
    - Selection of Trainees
    - Training
    - Certification
10. **Project Launch:**
    - Curriculum Implementation
    - Curriculum Evaluation
    - Printing of Curriculum
    - E-Book Development
11. **E-Book Development:**
    - E-Book Content Writing
    - Development of Assessment
    - Selection of Software Management Tool
    - Pilot of Assessment Tool
    - Pilot E-Book
12. **E-Book Implementation:**
    - E-Book Implementation
    - E-Book Evaluation
13. **Marketing and Sensitization:**
    - Marketing and Sensitization
14. **Project Closure:**
    - Contract Closure
    - Project Review

4.3.5 Activity Sequencing:

1. Stakeholder Consultation
    - Stakeholder Workshop Project Overview
    - Information Sharing Conference
    - Media Engagement
    - Social Media Updates
2. Project Development
    - Curriculum Experts
    - IT Expert
    - M and E Expert
    - Assessment Expert
    - Change Management Expert
    - Curriculum Development
3. Submission of Project to the Sponsor
    - Project Documents
    - Project Baseline
4. Project Review
    - Project Review
5. Project Approval
    - Project Approval by Sponsor
6. Project Initiation
    - Project Kick Off
7. Project Process
    - Curriculum Writing
    - Development of Key Stage Assessment
    - Selection of Software Management Tool
    - Pilot of Assessment Tool
    - Piloting Curriculum

8. Project Approval by Sponsor
    - Project Approval
9. Training
    - Application for Training
    - Selection of Trainees
    - Training
    - Certification
10. Project Launch
    - Curriculum Implementation
    - Curriculum Evaluation
    - Printing of Curriculum
    - E-Book Development
11. E-Book Development
    - E-Book Content Writing
    - Development of Assessment
    - Selection of Software Management Tool
    - Pilot of Assessment Tool
    - Pilot E-Book
12. E-Book Implementation
    - E-Book Implementation
    - E-Book Evaluation
13. Marketing and Sensitization
    - Marketing and Sensitization
14. Project Closure
    - Contract Closure
    - Project Review

4.3.6 Roles and Responsibilities

For a project's schedule management plan to be effective, it is crucial for key stakeholders to assume specific roles and responsibilities (Project Management Institute, 2017). In the case of the Lower Secondary School Physical Education Curriculum, the project's success depends on the involvement of three primary stakeholders: the project sponsor, project manager, and steering committee. Chart 14 below illustrates the roles and responsibilities of these key stakeholders in the project's schedule management.

Chart 13 Roles and Responsibilities

Stakeholder	Roles and Responsibilities
Project sponsor	- Provide overall project guidance and support.
	- Approve the project schedule and any changes or updates.
	- Ensure availability of necessary resources and support.
	- Monitor project progress and adherence to schedule.
	- Resolve any schedule-related issues or conflicts.
	- Provide necessary approvals for schedule-related decisions.

	- Review and approve any requested schedule adjustments.
	- Communicate schedule-related updates and changes to relevant stakeholders.
Project manager	- Develop and maintain the project schedule.
	- Identify and define project tasks, milestones, and dependencies.
	- Assign resources to project activities and tasks.
	- Monitor and track project progress against the schedule.
	- Update the schedule as needed, considering any changes or risks.
	- Communicate schedule status and any deviations or issues.
	- Coordinate with stakeholders to ensure schedule alignment and adherence.
	- Analyze and manage schedule risks and constraints.
	- Facilitate schedule-related meetings and discussions.
	- Ensure project team members understand their roles and responsibilities in schedule management.

Steering committee	- Provide guidance and oversight for the project's schedule management.
	- Review and approve the project schedule and any updates or changes.
	- Monitor schedule performance and progress against the plan.
Stakeholder	Roles and Responsibilities
	- Provide input and support in resolving schedule-related issues or conflicts.
	- Review and approve any schedule adjustments or deviations.
	- Provide necessary resources and support for schedule management.
	- Ensure the project schedule aligns with overall project goals and objectives.
	- Engage in regular communication with the project sponsor and project manager regarding schedule management matters.

Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

4.3.7 Unit of Measure

The project will utilize days as the primary unit of measurement for tracking the duration of each task and associated activity.

4.3.8 Estimated Duration of Activity

The project activities were sequenced to establish the relationships and dependencies between them. Estimations for activity durations were made using analogous estimation, drawing from data from similar projects in terms of size and type. Chart 15 illustrates the project duration activities, showcasing their respective start and finish dates, along with the duration and any predecessor activities.

Chart 14 Project duration activities

WBS	Task #	Task Name	Duration	Start	Finish	Predecessors
1	**1**	**Project Schedule**	***268 days***	**Mon 11/09/23**	**Wed 18/09/24**	
1.1	**2**	**Project Planning**	***22 days***	**Mon 11/09/23**	**Tue 10/10/23**	
1.1.1	**3**	Stakeholder Consultation	*1 day*	Mon 11/09/23	Mon 11/09/23	
1.1.2	**4**	Project Development	*11 days*	Tue 12/09/23	Tue 26/09/23	3
1.1.3	**5**	Submission of Project to the Sponsor	*1 day*	Wed 27/09/23	Wed 27/09/23	4
1.1.4	**6**	Project Review	*7 days*	Thu 28/09/23	Fri 06/10/23	5
1.1.5	**7**	Project Approval	*2 days*	Mon 09/10/23	Tue 10/10/23	6
2.1	**8**	**Project Initiation**	***13 days***	**Thu 12/10/23**	**Mon 30/10/23**	
2.1.1	**9**	Project Process	*6 days*	Thu 12/10/23	Thu 19/10/23	7
2.1.2	**10**	Project Documents	*2 days*	Fri 20/10/23	Mon 23/10/23	9
2.1.3	**11**	Project Baseline	*1 day*	Tue 24/10/23	Tue 24/10/23	10
2.1.4	**12**	Project Approval by Sponsor	*3 days*	Wed 25/10/23	Fri 27/10/23	11
WBS	**Task #**	**Task Name**	**Duration**	**Start**	**Finish**	**Predecessors**
2.1.5	**13**	Project Approval	*1 day*	Mon 30/10/23	Mon 30/10/23	12
3.1	**14**	**Training**	***32 days***	**Wed 25/10/23**	**Thu 07/12/23**	

WBS	Task #	Task Name	Duration	Start	Finish	Predecessors
1.3.1	**15**	Application for Training	*1 day*	Wed 25/10/23	Wed 25/10/23	11
1.3.2	**16**	Selection of Trainees	*1 day*	Thu 26/10/23	Thu 26/10/23	15
1.3.3	**17**	Training	*30 days*	Thu 26/10/23	Wed 06/12/23	15
1.3.4	**18**	Certification	*1 day*	Thu 07/12/23	Thu 07/12/23	17
4.1	**19**	**Project Launch**	***44 days***	**Tue 12/09/23**	**Fri 10/11/23**	
4.1.1	**20**	Project Kick Off	*1 day*	Mon 30/10/23	Mon 30/10/23	12
4.1.2	**21**	Stakeholder Workshop Project Overview	*1 day*	Mon 30/10/23	Mon 30/10/23	12
4.1.3	**22**	Procurement	*30 days*	Tue 12/09/23	Mon 23/10/23	3
4.1.4	**23**	Curriculum Experts	*10 days*	Mon 30/10/23	Fri 10/11/23	12
4.1.5	**24**	IT Expert	*10 days*	Mon 30/10/23	Fri 10/11/23	12
4.1.6	**25**	M and E Expert	*10 days*	Mon 30/10/23	Fri 10/11/23	12
4.1.7	**26**	Assessment Expert	*10 days*	Mon 30/10/23	Fri 10/11/23	12
4.1.8	**27**	Change Management Expert	*4 days*	Mon 30/10/23	Thu 02/11/23	12
5.1	**28**	**Curriculum Development**	***221 days***	**Mon 13/11/23**	**Mon 16/09/24**	
5.1.1	**29**	Curriculum Writing	*100 days*	Mon 13/11/23	Fri 29/03/24	19
5.1.1.2	**30**	Development of Key Stage Assessment	*10 days*	Mon 13/11/23	Fri 24/11/23	27
5.1.3	**31**	Selection of Software management tool	*10 days*	Mon 13/11/23	Fri 24/11/23	25
5.1.1.4	**32**	Pilot of Assessment Tool	*3 days*	Mon 13/11/23	Wed 15/11/23	27
5.1.2	**33**	Piloting Curriculum	*77 days*	Fri 15/03/24	Mon 01/07/24	30
5.1.3	**34**	Curriculum Implementation	*30 days*	Tue 02/07/24	Mon 12/08/24	33
WBS	**Task #**	**Task Name**	**Duration**	**Start**	**Finish**	**Predecessors**

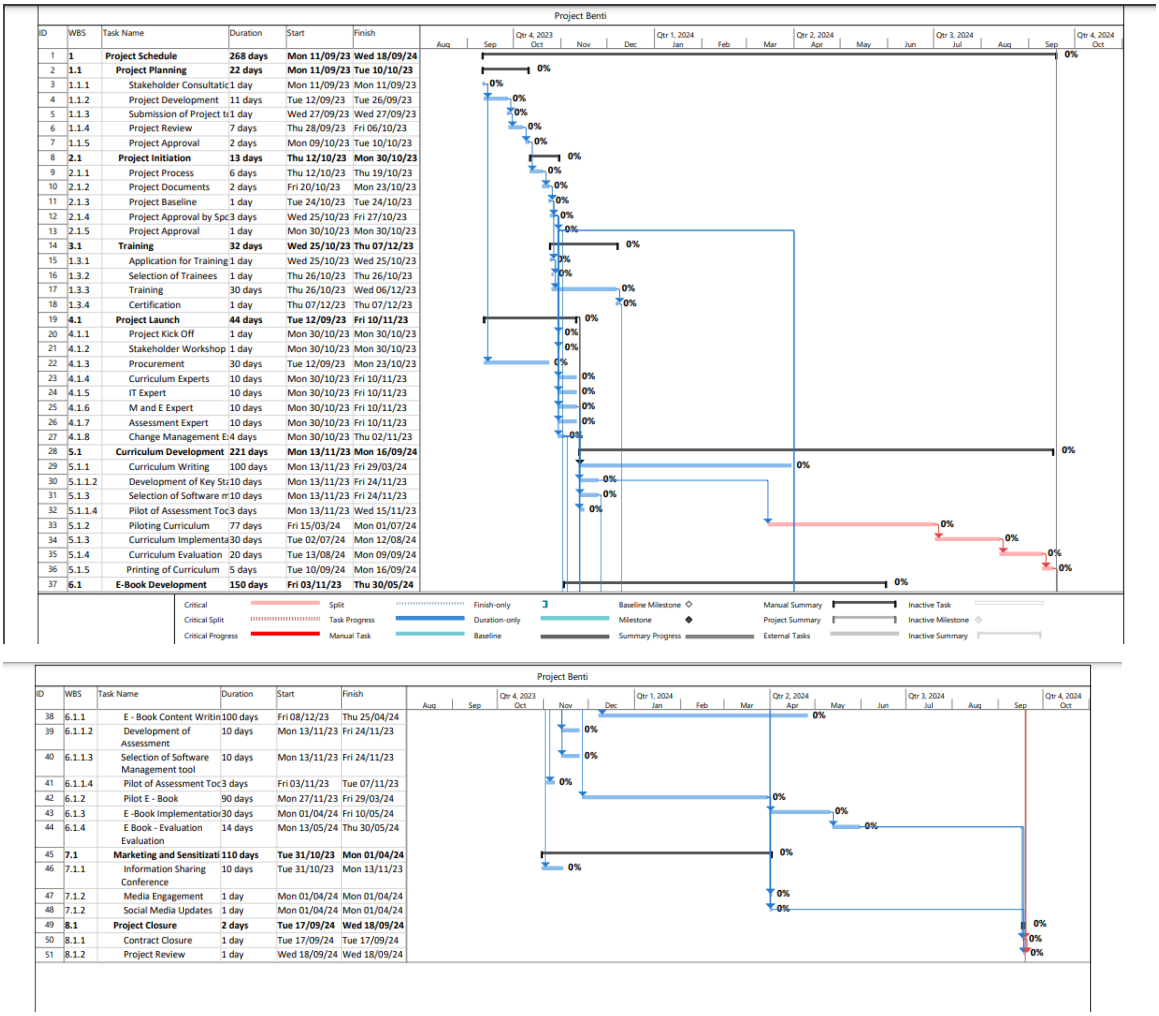
5.1.4	**35**	Curriculum Evaluation	*20 days*	Tue 13/08/24	Mon 09/09/24	34
5.1.5	**36**	Printing of Curriculum	*5 days*	Tue 10/09/24	Mon 16/09/24	35
6.1	**37**	**E-Book Development**	***150 days***	**Fri 03/11/23**	**Thu 30/05/24**	
6.1.1	**38**	E - Book Content Writing	*100 days*	Fri 08/12/23	Thu 25/04/24	18
6.1.1.2	**39**	Development of Assessment	*10 days*	Mon 13/11/23	Fri 24/11/23	27
6.1.1.3	**40**	Selection of Software Management tool	*10 days*	Mon 13/11/23	Fri 24/11/23	25
6.1.1.4	**41**	Pilot of Assessment Tool	*3 days*	Fri 03/11/23	Tue 07/11/23	27
6.1.2	**42**	Pilot E - Book	*90 days*	Mon 27/11/23	Fri 29/03/24	31
6.1.3	**43**	E -Book Implementation	*30 days*	Mon 01/04/24	Fri 10/05/24	42
6.1.4	**44**	E Book - Evaluation	*14 days*	Mon 13/05/24	Thu 30/05/24	43
7.1	**45**	**Marketing and Sensitization**	***110 days***	**Tue 31/10/23**	**Mon 01/04/24**	
7.1.1	**46**	Information Sharing Conference	*10 days*	Tue 31/10/23	Mon 13/11/23	13
7.1.2	**47**	Media Engagement	*1 day*	Mon 01/04/24	Mon 01/04/24	13,42
7.1.2	**48**	Social Media Updates	*1 day*	Mon 01/04/24	Mon 01/04/24	13,42
8.1	**49**	**Project Closure**	***2 days***	**Tue 17/09/24**	**Wed 18/09/24**	
8.1.1	**50**	Contract Closure	*1 day*	Tue 17/09/24	Tue 17/09/24	36,44
8.1.2	**51**	Project Review	*1 day*	Wed 18/09/24	Wed 18/09/24	**36,44,50,48**

Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

4.3.9 Project Schedule

The project schedule (Figure 19) encompasses all the allocated tasks, which will be assigned to members of the project team. To ensure timely execution of tasks and to avoid delays, adherence to approved schedules is essential. The project schedule will be closely monitored and tracked during regular team meetings. Actual start and finish dates will be recorded for each task, and a specific column will indicate whether the task or project is on schedule.

Figure 20 Project Schedule



ID	WBS	Task Name	Duration	Start	Finish
1	**1**	**Project Schedule**	**268 days**	**Mon 11/09/23**	**Wed 18/09/24**
2	**1.1**	**Project Planning**	**22 days**	**Mon 11/09/23**	**Tue 10/10/23**
3	1.1.1	Stakeholder Consultatic	1 day	Mon 11/09/23	Mon 11/09/23
4	1.1.2	Project Development	11 days	Tue 12/09/23	Tue 26/09/23
5	1.1.3	Submission of Project t	1 day	Wed 27/09/23	Wed 27/09/23
6	1.1.4	Project Review	7 days	Thu 28/09/23	Fri 06/10/23
7	1.1.5	Project Approval	2 days	Mon 09/10/23	Tue 10/10/23
8	**2.1**	**Project Initiation**	**13 days**	**Thu 12/10/23**	**Mon 30/10/23**
9	2.1.1	Project Process	6 days	Thu 12/10/23	Thu 19/10/23
10	2.1.2	Project Documents	2 days	Fri 20/10/23	Mon 23/10/23
11	2.1.3	Project Baseline	1 day	Tue 24/10/23	Tue 24/10/23
12	2.1.4	Project Approval by Spc	3 days	Wed 25/10/23	Fri 27/10/23
13	2.1.5	Project Approval	1 day	Mon 30/10/23	Mon 30/10/23
14	**3.1**	**Training**	**32 days**	**Wed 25/10/23**	**Thu 07/12/23**
15	1.3.1	Application for Training	1 day	Wed 25/10/23	Wed 25/10/23
16	1.3.2	Selection of Trainees	1 day	Thu 26/10/23	Thu 26/10/23
17	1.3.3	Training	30 days	Thu 26/10/23	Wed 06/12/23
18	1.3.4	Certification	1 day	Thu 07/12/23	Thu 07/12/23
19	**4.1**	**Project Launch**	**44 days**	**Tue 12/09/23**	**Fri 10/11/23**
20	4.1.1	Project Kick Off	1 day	Mon 30/10/23	Mon 30/10/23
21	4.1.2	Stakeholder Workshop	1 day	Mon 30/10/23	Mon 30/10/23
22	4.1.3	Procurement	30 days	Tue 12/09/23	Mon 23/10/23
23	4.1.4	Curriculum Experts	10 days	Mon 30/10/23	Fri 10/11/23
24	4.1.5	IT Expert	10 days	Mon 30/10/23	Fri 10/11/23
25	4.1.6	M and E Expert	10 days	Mon 30/10/23	Fri 10/11/23
26	4.1.7	Assessment Expert	10 days	Mon 30/10/23	Fri 10/11/23
27	4.1.8	Change Management E	4 days	Mon 30/10/23	Thu 02/11/23
28	**5.1**	**Curriculum Development**	**221 days**	**Mon 13/11/23**	**Mon 16/09/24**
29	5.1.1	Curriculum Writing	100 days	Mon 13/11/23	Fri 29/03/24
30	5.1.1.2	Development of Key St	10 days	Mon 13/11/23	Fri 24/11/23
31	5.1.3	Selection of Software m	10 days	Mon 13/11/23	Fri 24/11/23
32	5.1.1.4	Pilot of Assessment Toc	3 days	Mon 13/11/23	Wed 15/11/23
33	5.1.2	Piloting Curriculum	77 days	Fri 15/03/24	Mon 01/07/24
34	5.1.3	Curriculum Implementa	30 days	Tue 02/07/24	Mon 12/08/24
35	5.1.4	Curriculum Evaluation	20 days	Tue 13/08/24	Mon 09/09/24
36	5.1.5	Printing of Curriculum	5 days	Tue 10/09/24	Mon 16/09/24
37	**6.1**	**E-Book Development**	**150 days**	**Fri 03/11/23**	**Thu 30/05/24**
38	6.1.1	E - Book Content Writin	100 days	Fri 08/12/23	Thu 25/04/24
39	6.1.1.2	Development of Assessment	10 days	Mon 13/11/23	Fri 24/11/23
40	6.1.1.3	Selection of Software Management tool	10 days	Mon 13/11/23	Fri 24/11/23
41	6.1.1.4	Pilot of Assessment Toc	3 days	Fri 03/11/23	Tue 07/11/23
42	6.1.2	Pilot E - Book	90 days	Mon 27/11/23	Fri 29/03/24
43	6.1.3	E -Book Implementatio	30 days	Mon 01/04/24	Fri 10/05/24
44	6.1.4	E Book - Evaluation Evaluation	14 days	Mon 13/05/24	Thu 30/05/24
45	**7.1**	**Marketing and Sensitizati**	**110 days**	**Tue 31/10/23**	**Mon 01/04/24**
46	7.1.1	Information Sharing Conference	10 days	Tue 31/10/23	Mon 13/11/23
47	7.1.2	Media Engagement	1 day	Mon 01/04/24	Mon 01/04/24
48	7.1.2	Social Media Updates	1 day	Mon 01/04/24	Mon 01/04/24
49	**8.1**	**Project Closure**	**2 days**	**Tue 17/09/24**	**Wed 18/09/24**
50	8.1.1	Contract Closure	1 day	Tue 17/09/24	Tue 17/09/24
51	8.1.2	Project Review	1 day	Wed 18/09/24	Wed 18/09/24

4.3.10 Control Schedule

The project manager will diligently monitor the project to ensure its adherence to the established schedule. Any proposed changes to the schedule will be subject to a robust change management process, which entails thorough evaluation, impact assessment, and appropriate approval channels. This approach ensures that any adjustments to the schedule are carefully considered and implemented, maintaining overall project alignment and minimizing potential disruptions.

By diligently following these steps, the project manager can effectively control the schedule for developing the lower secondary school PE curriculum. This approach ensures that changes are carefully evaluated, approved, and managed, minimizing disruptions and maintaining alignment with project objectives:

- **Monitoring and Tracking:** Regularly monitor the project's progress against the established schedule. This involves comparing the actual progress to the planned milestones and tasks. Use project management tools and software to track the completion of tasks, identify any delays, and gather real-time data.
- **Variance Analysis:** Perform variance analysis to identify discrepancies between the planned schedule and the actual progress. Identify the root causes of any delays or deviations from the original plan. This analysis helps in understanding where the project is falling behind and allows for informed decision-making.
- **Change Management Process:** Implement a robust change management process to handle any proposed changes to the schedule. This process should include the following steps: a. Thorough Evaluation: Assess the proposed changes' necessity

and impact on the project schedule. Determine whether the change is essential and how it might affect other tasks or milestones. b. Impact Assessment: Analyze the potential consequences of the proposed changes on the project's timeline, resources, budget, and overall objectives. Quantify the impact in terms of time and resources required. c. Appropriate Approval Channels: Establish a clear hierarchy for approving changes to the schedule. Ensure that changes are reviewed and approved by the relevant stakeholders, such as project sponsors, senior management, or the project steering committee.

- **Risk Management:** Identify and assess risks that could impact the project schedule. Develop contingency plans to mitigate these risks and account for potential delays. By being proactive in risk management, you can minimize the likelihood of disruptions to the schedule.
- **Communication and Reporting:** Maintain open communication with all stakeholders regarding the project schedule. Regularly update stakeholders on progress, any deviations, and proposed changes. Transparency in communication fosters trust and ensures that everyone is aware of the project's status.
- **Documentation**: Keep detailed records of all changes, approvals, and related communication. This documentation helps in tracking the evolution of the schedule, understanding decision-making processes, and providing a historical perspective if needed.
- **Continuous Improvement:** Continuously assess the effectiveness of the schedule control process. Analyze the outcomes of schedule adjustments and the impact on project performance. Use lessons learned to refine future scheduling and control efforts.

4.4 RISK MANAGEMENT PLAN

4.4.1 Introduction

In this chapter, we delve into the domain of risk management within the context of the development of the Lower Secondary School Physical Education Curriculum Project. We present a comprehensive risk management plan that encompasses the identification, analysis, and response to potential risks. Additionally, we outline the specific roles and responsibilities of stakeholders involved in the project's risk management processes. By adopting these principles and approaches, the project team can effectively address and mitigate risks, ensuring the successful development and implementation of the Lower Secondary School Physical Education Curriculum Project.

4.4.2 Risk management tools and techniques

1. Expert Judgment: Expert judgment involves seeking insights and opinions from individuals with specialized knowledge and experience. In the development of a PE curriculum, expert judgment can be invaluable:

- **Curriculum Development:** Engaging curriculum experts who have experience in physical education and educational standards can provide valuable input to ensure the curriculum's alignment with best practices and age-appropriate activities.
- **Assessment Strategies:** Seeking advice from assessment experts can help in designing effective evaluation methods that accurately gauge students' physical and cognitive development.

2. Data Gathering: Data gathering involves collecting information from various sources. In the context of curriculum development:

- **Needs Assessment:** Gathering data through surveys and interviews with teachers, students, and parents can provide insights into the specific needs and preferences of the target audience.
- **Educational Guidelines:** Collecting data from educational guidelines and standards ensures that the curriculum adheres to established educational requirements.

3. Brainstorming: Brainstorming involves generating ideas from a group of individuals to identify potential risks or opportunities. In curriculum development:

- **Content Creation:** Brainstorming sessions involving curriculum developers and subject matter experts can lead to creative ideas for engaging and effective lesson plans and activities.
- **Assessment Methods:** Brainstorming with assessment experts can result in innovative assessment methods that measure students' progress accurately.

4. Checklists: Checklists are predefined lists of items used to systematically identify risks or tasks. In the curriculum development process:

- **Curriculum Design:** Using checklists, curriculum developers can ensure that all necessary components, such as learning objectives, activities, and assessment methods, are included in the curriculum.
- **Quality Control:** Checklists can be employed to verify that the developed curriculum aligns with educational standards and guidelines.

5. Interviews: Interviews involve direct conversations with stakeholders to gather information. For curriculum development:

- **Stakeholder Needs:** Interviews with teachers, students, and parents help in understanding their expectations and preferences, informing the design of the curriculum.
- **Expert Insights:** Conducting interviews with curriculum experts and educators can yield valuable insights into effective teaching methods and curriculum structure.

6. Data Analysis: Data analysis involves examining data to extract meaningful insights. In curriculum development:

- **Assessment Results:** Analysing assessment data from pilot tests and evaluations helps identify areas where students are excelling and where improvements are needed.
- **Feedback Evaluation:** Analysing feedback from teachers and students can provide valuable information to enhance the curriculum's effectiveness.

7. Root Cause Analysis: Root cause analysis seeks to identify the underlying causes of issues. In curriculum development:

- **Curriculum Challenges:** Conducting root cause analysis on challenges faced during curriculum development can help address issues at their source, ensuring a smoother process.
- **Student Performance Issues:** If assessment data shows consistent performance issues, conducting root cause analysis can help pinpoint reasons for the challenges.

8. Assumption and Constraint Analysis: Assumption and constraint analysis involves examining project assumptions and constraints. In curriculum development:

- **Resource Constraints:** Analysing budget and resource constraints helps in designing a curriculum that aligns with available resources.
- **Assumptions:** Identifying and validating assumptions, such as students' familiarity with certain concepts, can impact curriculum design and lesson planning.

9. SWOT Analysis: SWOT analysis assesses strengths, weaknesses, opportunities, and threats. In curriculum development:

- **Curriculum Evaluation:** Conducting a SWOT analysis of the curriculum can identify areas of improvement and potential opportunities for enhancement.
- **Market Positioning:** Analyzing curriculum strengths and opportunities can help position the curriculum effectively within the education landscape.

10. Document Analysis: Document analysis involves reviewing existing documents for insights. In curriculum development:

- **Educational Standards:** Analyzing educational guidelines and standards helps ensure that the curriculum aligns with established benchmarks.
- **Lesson Plan Review:** Document analysis can be used to review and improve existing lesson plans or teaching materials.

11. Interpersonal and Team Skills: Interpersonal and team skills are crucial for effective communication and collaboration:

- **Stakeholder Engagement:** Interpersonal skills are vital when engaging with teachers, students, parents, and experts to ensure their perspectives are considered in curriculum development.
- **Team Collaboration:** Effective teamwork among curriculum developers, assessment experts, and curriculum reviewers enhances the quality of the final curriculum.

12. Facilitation: Facilitation involves guiding discussions to achieve desired outcomes:

- **Brainstorming Sessions:** A skilled facilitator can lead brainstorming sessions to generate creative ideas for curriculum content and activities.
- **Stakeholder Meetings:** Facilitated meetings with stakeholders ensure productive discussions and the exploration of various viewpoints.

13. Prompt Lists: Prompt lists provide a structured framework for exploring ideas or identifying issues:

- **Curriculum Content Creation:** Using prompt lists, curriculum developers can systematically brainstorm topics and activities for each curriculum module.
- **Risk Identification:** Prompt lists can guide discussions during risk identification sessions to ensure a comprehensive exploration of potential risks.

14. Meetings: Meetings are essential for communication and collaboration:

- **Curriculum Planning:** Meetings with curriculum developers, teachers, and experts facilitate discussions on curriculum structure and content.

- **Feedback Gathering:** Regular meetings with teachers and students allow for ongoing feedback, ensuring that the curriculum remains relevant and effective.

4.4.3 Risk Management Plan

Risk management will be a continuous process for the development of the lower secondary school physical education curriculum. The risks will be identified and monitored throughout the life cycle of the project to guarantee its successful implementation. The management of the risk component of the project will be undertaken by the project manager. The project manager will identify risks, then qualitative analysis will be used to determine both the impact and the likelihood of the risk, in order to establish the most appropriate risk response to be applied.

4.4.4 Plan Risk Management

The development of the Lower Secondary School Physical Education Curriculum Project necessitates the continuous process of risk management. Risks will be diligently identified and closely monitored throughout the project's entire life cycle to ensure its successful implementation. The responsibility of managing the project's risk component lies with the project manager, who will diligently identify risks and employ qualitative analysis techniques to assess their impact and likelihood. Based on this analysis, appropriate risk responses will be determined and implemented.

4.4.5 Risk Management and Responsibilities

To ensure effective monitoring and timely action, the roles and responsibilities of stakeholders are clearly defined. In Chart 16, the key stakeholders on the risk management team are identified, outlining their respective roles and responsibilities. This structured approach allows for efficient collaboration and accountability among team members, facilitating effective risk management throughout the project.

4.4.6 Identify Risks

Risk identification for the development of the Lower Secondary School Physical Education Curriculum Project begins during the project charter development phase and continues throughout the project life cycle. This iterative process involves regular meetings and progress reports to ensure that risks are promptly identified and assessed. The identified risks are categorized and organized in the risk breakdown structure, which assigns unique codes to each risk. Chart 16 presents the risk breakdown structure, providing a visual representation of the categorized risks for the project.

Chart 15 Risk Breakdown Structure RBS Level 2

Risk Level 1: Internal Risks
1.1 Organization and Management
1.1.1 Inadequate Project Oversight
1.1.2 Undefined Roles and Responsibilities
1.1.3 Ineffective Communication Among Stakeholders
1.1.4 Lack of Project Leadership

1.1.5 Poor Decision-Making Processes

1.2 Resources

1.2.1 Budget Constraints

1.2.2 Limited Access to Tools and Technology

1.2.3 Insufficient Staffing or Expertise

1.2.4 Unavailability of Required Resources

1.2.5 Lack of Funding Allocation

1.3 Technical

1.3.1 Software Development Challenges

1.3.2 Hardware Limitations

1.3.3 Technical Complexities

1.3.4 Inadequate Technical Expertise

1.3.5 Compatibility Issues

Risk Level 2: Curriculum Design Risks

1.1.1 Misalignment with Educational Objectives

1.1.1.1 Lack of Understanding of Educational Goals

1.1.1.2 Failure to Incorporate Educational Standards

1.1.1.3 Disconnect from Learning Outcomes

1.1.2 Lack of Expertise in PE Curriculum Design

1.1.2.1 Insufficient Subject Matter Experts

1.1.2.2 Inadequate Knowledge of PE Curriculum Guidelines

1.1.2.3 Limited Experience in Curriculum Development

1.1.3 Inadequate Integration of Core Subjects

1.1.3.1 Challenges in Aligning PE with Other Subjects

1.1.3.2 Difficulty in Creating Interdisciplinary Learning

1.1.3.3 Lack of Synergy Among Different Subjects

1.1.4 Inconsistent Assessment Methods

1.1.4.1 Variations in Grading Criteria

1.1.4.2 Lack of Uniform Evaluation Practices

1.1.4.3 Inequitable Student Assessment

Risk Level 3: Content Development Risks

1.1.1.1 Limited Access to Relevant Learning Resources

1.1.1.1.1 Inadequate Availability of Learning Materials

1.1.1.1.2 Restricted Access to Up-to-Date Resources

1.1.1.1.3 Lack of Suitable Reference Materials

1.1.1.2 Insufficient Engagement of Subject Matter Experts

1.1.1.2.1 Low Involvement of PE Experts

1.1.1.2.2 Limited Collaboration with Content Developers

1.1.1.2.3 Incomplete Review of Developed Content

1.1.2.1 Outdated or Incomplete Content

1.1.2.1.1 Use of Outdated Educational Information

1.1.2.1.2 Incomplete Coverage of Curriculum Topics

1.1.2.1.3 Missing Learning Objectives or Concepts

1.1.2.2 Lack of Diversity and Inclusion in Content

1.1.2.2.1 Limited Representation of Diverse Perspectives

1.1.2.2.2 Absence of Culturally Inclusive Content

1.1.2.2.3 Failure to Address Different Learning Styles

Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

Chart 16 Probability Scale

Scale	Very Low	Low	Medium	High	Very High
Probability	0.1	0.3	0.5	0.7	0.9
Description	Very minimal chance of occurring	Unlikely to occur	May occur	Likely to occur	Very Likely to occur

Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

Chart 17 Impact Scale

Scale	**Very low**	**Low**	**Medium**	**High**	**Very High**
Impact	0.10	0.30	0.50	0.70	0.90
Scope	Barely noticeable change	Minor areas affected	Important areas affected	Unacceptable change in scope	Change in project objectives
Cost	Insignificant cost increase	Less than 10% cost increase	10-20% cost increase	21-40% cost increase	More than 40% cost increase
Schedule	Can be absorbed	Less than 5% change	6-10% change	11-20% change	More than 20% change

Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

Chart 18 Probability and Impact Results

Risk	Score
High	Greater than 0.2
Medium	0.05- 0.20
Low	Less than 0.05

Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

Chart 19 Probability and Impact Scale

Probability	Scale		Threats					Opportunity					Scale		Probability
	Very high	0.9	0.09	0.27	0.45	0.63	0.81	0.81	0.63	0.45	0.27	0.09	0.9	**Very high**	
	High	0.7	0.07	0.21	0.35	0.49	0.63	0.63	0.49	0.35	0.21	0.07	0.7	**High**	
	Medium	0.5	0.05	0.15	0.25	0.35	0.45	0.45	0.35	0.25	0.15	0.05	0.5	**Medium**	
	Low	0.3	0.03	0.09	0.15	0.21	0.27	0.27	0.21	0.15	0.09	0.03	0.3	**Low**	
	Very low	0.1	0.01	0.03	0.05	0.07	0.09	0.09	0.07	0.05	0.03	0.01	0.1	**Very low**	
			0.1	0.3	0.5	0.7	0.9	0.9	0.7	0.5	0.3	0.1			
			Very low	**Low**	**Moderate**	**High**	**Very high**	**Very high**	**High**	**Moderate**	**Low**	**Very low**			
			Negative Impacts					**Positive Impact**							

Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

4.4. 7 Qualitative Risk Analysis

Risk analysis for the development of a lower secondary school physical education curriculum project necessitates the application of qualitative analysis techniques. Crucial to this process are the probability and impact scales, which enable a comprehensive evaluation of risks. The probability scale, as depicted in Chart 18, provides five levels to assess the likelihood of occurrence, while the impact scale, presented in Chart 19, measures the potential consequences. Chart 20 illustrates the integration of probability and impact, with scores above 0.20 indicating high risk (colored red), scores ranging from 0.05

to 0.20 indicating medium risk (colored orange), and scores below 0.05 indicating low risk (colored green). Chart 20 presents a qualitative analysis, highlighting both threats and opportunities related to the identified risks.

4.4.8 Risk and Opportunities Register

It is crucial to identify and document both risks and opportunities in the project, as they can significantly impact its success. These risks and opportunities are captured and regularly updated as they arise, ensuring their proper management. The work breakdown structure, as presented in Chart 21, serves as a framework for documenting and organizing these risks and opportunities. Throughout the project, the risk and opportunities register is continuously updated, providing a comprehensive record of identified risks and opportunities. A key component of risk assessment is the Probability multiplied by Impact (P x I) analysis, which aids in prioritizing and addressing risks.

Chart 20 Risk Register

Risk	Consequence	Opportunity /Threat	Probability	Impact	P x I	Cost	Owner	Risk Response and Strategies
Uncontrolled expansion of project scope.	Delayed project timelines and increased costs.	Improved scope management and project control.	High	High	0.7	High cost overruns	Project Manager	Regular scope reviews and change control procedures. Clearly defined scope and scope change approval process.

Risk	Consequence	Opportunity /Threat	Probability	Impact	P x I	Cost	Owner	Risk Response and Strategies
Lack of support and involvement from stakeholders.	Misalignment with project goals and decreased stakeholder satisfaction.	Increased stakeholder engagement and collaboration.	High	High	0.7	Delays due to stakeholder disputes.	Stakeholder Engage-ment Manager	Develop a comprehensive stakeholder engagement plan. Regular communication and feedback loops with stakeholders
Risk	Consequence	Opportunity /Threat	Probability	Impact	P x I	Cost	Owner	Risk Response and Strategies
Insufficient allocation of resources.	Delayed project completion and compromised deliverables.	Improved resource planning and allocation.	Medium	High	0.5	Additional expenses for rush resource procurement	Resource Manager	Thorough resource assessment and allocation based on project needs. Regular resource monitoring and adjustments.
Changes in educational policies and regulations.	Non-compliance and need for extensive revisions.	Adapting to new regulations and ensuring compliance.	Medium	Medium	0.35	Increased expenses for legal consultation.	Legal Counsel	Establish a regulatory tracking system. Regular review of policies and timely updates to the curriculum.

Risk	Consequence	Opportunity /Threat	Probability	Impact	P x I	Cost	Owner	Risk Response and Strategies
Inadequate understanding of project requirements.	Misaligned curriculum and unmet stakeholder needs.	Enhanced needs assessment and accurate data collection.	Medium	Medium	0.35	Increased expenses for additional assessment efforts	Needs Assessment Lead	Comprehensive data gathering methods. Involvement of stakeholders in needs assessment process.
Risk	Consequence	Opportunity /Threat	Probability	Impact	P x I	Cost	Owner	Risk Response and Strategies
Curriculum objectives not aligned with educational goals.	Ineffective learning outcomes and reduced educational impact.	Improved alignment with educational objectives.	Medium	High	0.5	Extra expenses for curriculum redesign	Curriculum Director	Regular alignment checks with educational goals. Integration of feedback from educators and stakeholders.
Insufficient knowledge and expertise in curriculum design.	Poorly designed curriculum and ineffective teaching methods.	Enhanced curriculum design and instructional expertise.	Medium	High	0.5	Invest in curriculum design training.	Curriculum Design Lead	Identify areas lacking expertise. Provide training and professional development for curriculum designers.

Risk	Consequence	Opportunity /Threat	Probability	Impact	P x I	Cost	Owner	Risk Response and Strategies
Lack of integration between PE curriculum and core subjects.	Fragmented learning experiences and reduced interdisciplinary learning.	Improved integration of core subjects within the curriculum.	Low	Medium	0.15	Collaborate with subject specialists.	Interdisciplinary Team	Identify opportunities for cross-curricular integration. Collaborate with subject teachers for seamless integration.
Incoherent assessment approaches in PE curriculum.	Inaccurate evaluation of student performance and progress.	Enhanced assessment methods and fair evaluation.	Medium	Medium	0.35	Establish consistent assessment guidelines	Assessment Coordinator	Develop standardized assessment methods. Regularly review and update assessment procedures.
Insufficient availability of learning resources.	Restricted learning opportunities and reduced student engagement.	Enhanced access to diverse and relevant learning resources.	Medium	High	0.5	Increased budget for resource acquisition	Resource Procurement Manager	Identification and procurement of a wide range of learning materials. Collaboration with libraries and online platforms.
Insufficient engagement of subject matter experts.	Limited expertise in curriculum development	Increased engagement of subject	Low	Medium	0.21	Allocate budget for expert consultation	Curriculum Development Lead	Identify key areas requiring expert input. Collaborate

	and content creation.	matter experts.						with experts to enhance curriculum content.
Outdated or incomplete content included in the curriculum.	Reduced effectiveness of learning and student engagement.	Updated and comprehensive curriculum content.	Medium	High	0.49	Invest in content review and updates	Content Review Team	Regularly review curriculum content. Identify and replace outdated materials.
Lack of diversity and inclusivity in curriculum content.	Limited cultural relevance and inclusiveness.	Enhanced diversity and cultural sensitivity in curriculum.	Low	Medium	0.35	Allocate resources for content diversification	Diversity and Inclusion Officer	Ensure content reflects diverse perspectives. Collaborate with educators to create inclusive materials.
Insufficient resources and materials for teacher training.	Inadequate knowledge and skills among teachers.	Enhanced availability of training resources and materials.	Medium	High	0.5	Allocate budget for training materials	Training Coordinator	Assess training material gaps. Procure and develop relevant materials.
Resistance and reluctance to adapt to the new curriculum.	Ineffective implementation and reduced student engagement.	Increased teacher acceptance and willingness to change.	High	Medium	0.35	Develop a change management plan	Change Management Lead	Identify concerns. Communicate benefits. Provide training and support for teachers.

Risk	Consequence	Opportunity/Threat	Probability	Impact	P x I	Cost	Owner	Risk Response and Strategies
Limited time allocated for teacher professional development.	Inadequate preparation and implementation of the curriculum.	Enhanced time allocation for professional growth.	Medium	High	0.5	Adjust schedules for professional development.	School Administration	Reevaluate teacher schedules. Prioritize and allocate time for development.
Challenges in assessing teachers' proficiency in delivering PE curriculum.	Inaccurate evaluation of teachers' effectiveness.	Improved assessment methods and fair evaluation.	Medium	Medium	0.35	Implement peer evaluations and mentoring.	Professional Development Committee	Establish peer evaluations. Provide mentorship for accurate assessment.
Lack of effective communication and insufficient stakeholder buy-in.	Misalignment with stakeholders' expectations and decreased support.	Improved project understanding and stakeholder involvement.	High	High	0.7	Increased budget for communication efforts	Communication Manager	Develop a comprehensive communication plan. Regular updates to stakeholders and engagement activities.
Inadequate facilities and infrastructure for curriculum implementation.	Limited access to resources and compromised learning environment.	Enhanced infrastructure and facilities for effective implementation.	Medium	High	0.5	Allocate budget for infrastructure improvements	Facilities Manager	Identify facility gaps. Allocate funds for facility improvements and resource acquisition.

Risk	Consequence	Opportunity/Threat	Probability	Impact	P x I	Cost	Owner	Risk Response and Strategies
Absence of proper monitoring and evaluation processes.	Inability to track progress and make necessary improvements.	Enhanced monitoring and evaluation practices.	Medium	Medium	0.35	Implement regular monitoring and evaluation procedures	Evaluation Coordinator	Develop monitoring and evaluation protocols. Regularly assess progress and adjust as needed.
Lack of active involvement and participation of teachers and students.	Reduced motivation and interest in PE curriculum.	Increased engagement and enthusiasm.	High	Medium	0.35	Implement engagement strategies.	Engagement Team	Identify engagement barriers. Develop strategies to foster teacher-student interactions.
Insufficient funding for project execution.	Limited resources and compromised project outcomes.	Enhanced funding opportunities and financial support.	High	High	0.7	Seek additional funding sources.	Financial Manager	Identify potential funding sources. Apply for grants and donations.
Difficulties in implementing and utilizing technology in curriculum delivery.	Inefficient use of technology and reduced effectiveness.	Enhanced technological capabilities and seamless integration.	Medium	Medium	0.35	Invest in technology training and support.	Technology Coordinator	Provide technology training for staff. Establish technology support channels.

Risk	Consequence	Opportunity/Threat	Probability	Impact	P x I	Cost	Owner	Risk Response and Strategies
Resistance from society and cultural barriers to curriculum changes.	Limited acceptance and integration of new approaches.	Improved acceptance and cultural inclusivity.	Medium	Medium	0.35	Develop a cultural sensitivity plan.	Diversity and Inclusion Officer	Address cultural concerns in communication. Promote inclusivity in curriculum content.
Alterations in educational policies and standards.	Non-compliance and misalignment with updated regulations.	Adaptation to new policies and alignment with standards.	Medium	Medium	0.35	Monitor policy changes and update curriculum	Policy Compliance Officer	Stay updated on policy changes. Modify curriculum to ensure compliance with new standards.

Source: Author of Study, Erasmus Wayne Benti based on own research, 202

4.4.9 Plan Risk Response

Chart 21 Risk Response Strategy

Risk Level	Strategy/Response	Explanation
High	Transfer	Risk may be transferred to a third party if unable to resolve internally.
Medium	Mitigate	Changing the project's risk to achieve the project's objectives.
Low	Accept	Continue with project as defined.

Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

4.4.10 Risk Response

Chart 22 Risk Response

RBS	Risk	PxI	Risk Response Strategy	Explanation
1.1	Uncontrolled expansion of project scope	0.63	Transfer	Risk may be transferred to a third party if it cannot be resolved internally.
1.2	Lack of support and involvement from stakeholders	0.35	Mitigate	Changing the project's risk to achieve the project's objectives.
1.3	Insufficient allocation of resources	0.45	Mitigate	Changing the project's risk to achieve the project's objectives.
1.4	Changes in educational policies and regulations	0.45	Mitigate	Changing the project's risk to achieve the project's objectives.
1.5	Inadequate understanding of project requirements	0.18	Accept	Continue with the project as defined.
2.1	Curriculum objectives not aligned with educational goals	0.32	Mitigate	Changing the project's risk to achieve the project's objectives.

2.2	Insufficient knowledge and expertise in curriculum design	0.49	Mitigate	Changing the project's risk to achieve the project's objectives.
2.3	Lack of integration between PE curriculum and core subjects	0.28	Accept	Continue with the project as defined.
2.4	Incoherent assessment approaches in PE curriculum	0.45	Mitigate	Changing the project's risk to achieve the project's objectives.
3.1	Insufficient availability of learning resources	0.35	Mitigate	Changing the project's risk to achieve the project's objectives.
3.2	Lack of involvement of subject matter experts	0.21	Accept	Continue with the project as defined.
3.3	Inclusion of outdated or incomplete content in the curriculum	0.49	Mitigate	Changing the project's risk to achieve the project's objectives.
3.4	Insufficient representation of diversity and inclusivity in content	0.35	Mitigate	Changing the project's risk to achieve the project's objectives.

4.1	Insufficient resources and materials for teacher training	0.21	Accept	Continue with the project as defined.
4.2	Resistance and reluctance to adapt to new curriculum	0.35	Mitigate	Changing the project's risk to achieve the project's objectives.
4.3	Limited time allocated for teacher professional development	0.32	Mitigate	Changing the project's risk to achieve the project's objectives.
4.4	Challenges in assessing teachers' proficiency in delivering PE curriculum	0.35	Mitigate	Changing the project's risk to achieve the project's objectives.
5.1	Lack of effective communication and insufficient stakeholder buy-in	0.49	Mitigate	Changing the project's risk to achieve the project's objectives.
5.2	Inadequate facilities and infrastructure for curriculum implementation	0.45	Mitigate	Changing the project's risk to achieve the project's objectives.
5.3	Absence of proper monitoring and evaluation processes	0.45	Mitigate	Changing the project's risk to achieve the project's objectives.

5.4	Lack of active involvement and participation of teachers and students	0.45	Mitigate	Changing the project's risk to achieve the project's objectives.
6.1	Insufficient funding for project execution	0.63	Transfer	Risk may be transferred to a third party if it cannot be resolved internally.
6.2	Difficulties in implementing and utilizing technology in curriculum delivery	0.49	Mitigate	Changing the project's risk to achieve the project's objectives.
6.3	Resistance from society and cultural barriers to curriculum changes	0.49	Mitigate	Changing the project's risk to achieve the project's objectives.
6.4	Alterations in educational policies and standards	0.49	Mitigate	Changing the project's risk to achieve the project's objectives.

Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

4.4.11 Risk Monitoring and Response

The development of the lower secondary school PE curriculum requires effective monitoring and control of risks throughout its life cycle. Continuous monitoring of risks will be carried out, with weekly meetings and monthly reports providing updates on identified risks and corresponding responses. The project manager plays a crucial role in overseeing the implementation of the risk management framework and ensuring that the necessary measures are taken to address and mitigate risks.

4.4.12 Project Risk Management and Change Response

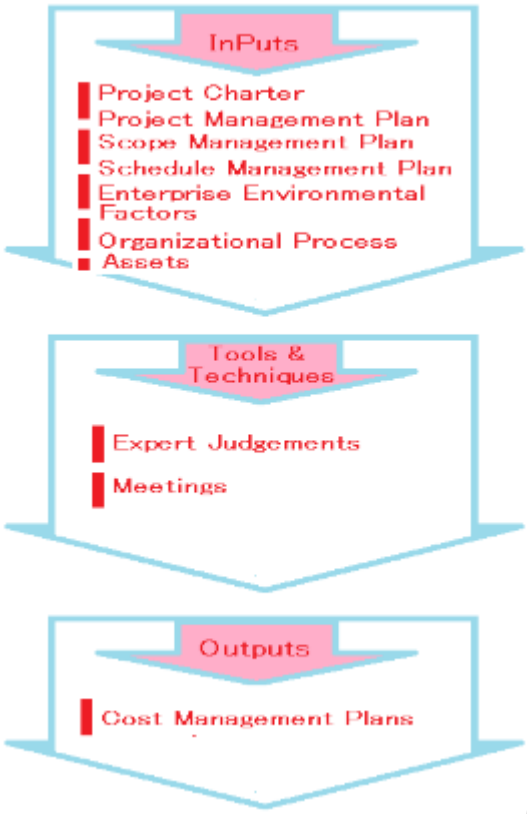
Any proposed changes to the project risk management plan will follow a formal change request process. The project manager will carefully evaluate each submission to determine its acceptance or denial. During this assessment, consultation with the project sponsor will be sought to provide additional insights and support in making the final decision. Once a decision is reached, a response will be promptly communicated to the relevant stakeholders. If the change request is approved, the project manager will update the risk management plan accordingly to reflect the approved changes.

4.5 COST MANAGEMENT PLAN

4.5.1 Introduction

The majority of projects have some form of cost associated with them. Sometimes the costs are minimal. Nonetheless, given that there are costs associated, a cost management plan is important. “Project cost management includes the processes involved in planning, estimating, budgeting, financing, funding, managing and controlling costs (Project Management Institute [PMI], 2017).” The aim of project cost management is to ensure that the project is completed within the approved budget. The project cost management processes are as follows: plan cost management, estimate costs, determine budget and control costs (PMI, 2017). The plan cost management process is integral in shaping the cost management plan. The plan cost management process outlines the inputs, tools and techniques, and outputs. Figure 20 represents the development of the cost management plan (PMI, 2017).

Figure 21 Development of the cost management plan.



Adapted from the Project Management Body of Knowledge, 2017, p. 235

4.5.2 Cost Management Tools and Techniques

1. Expert Judgment: Expert judgment involves seeking insights and opinions from individuals with specialized knowledge and experience. In the development of a PE curriculum:

- **Resource Allocation:** Engaging curriculum development experts who understand the resource requirements for curriculum creation can provide valuable input on cost estimation. Their experience can help anticipate resource needs, such as teacher time, materials, and technology.

- **Budget Validation:** Seeking expert judgment from educational professionals who have worked on similar projects can assist in validating the accuracy of cost estimates. Their insights can ensure that budget projections align with industry standards and expectations.

2. Data Analysis: Data analysis involves examining information to draw meaningful conclusions. In curriculum development:

- **Resource Allocation Analysis:** Data analysis can be used to review historical data from similar projects, identifying patterns in resource allocation and costs. This information can guide the allocation of resources for the PE curriculum development.
- **Budget Variance Analysis:** By analyzing actual expenditures against the budget during curriculum development, data analysis helps identify any discrepancies. This allows for timely adjustments to ensure the project remains on budget.

3. Meetings: Meetings provide a platform for communication, collaboration, and decision-making. In curriculum development:

- **Resource Allocation Planning:** Meetings with curriculum developers, educators, and administrators facilitate discussions on the allocation of resources such as teacher time, materials, and technology. These discussions help determine resource needs and associated costs.
- **Budget Review and Approval:** Meetings with project stakeholders, including school administration and funding authorities, are essential for reviewing and

gaining approval for the project budget. These meetings ensure alignment between financial expectations and project objectives.

- **Cost Control Strategies:** Regular project review meetings provide an opportunity to discuss cost performance and potential adjustments. For instance, if certain curriculum components are proving more expensive than anticipated, meetings can be used to brainstorm cost-saving measures without compromising quality.
- **Budget Monitoring:** Meetings with the project team can be scheduled to monitor actual spending against the budget. These discussions allow for proactive management of cost deviations and reallocation of resources if necessary.

Relating Cost Management Tools and Techniques to the PE Curriculum Development:

In the context of developing a lower secondary school PE curriculum, these Cost Management Tools and Techniques play a crucial role:

- **Resource Allocation:** Expert judgment aids in accurately estimating resource requirements, ensuring that teachers, equipment, and materials are adequately planned for. Data analysis helps identify trends in resource allocation, improving accuracy in estimating costs.
- **Budget Validation:** Expert judgment and data analysis ensure that the budget is realistic and aligned with the educational objectives. Meetings with educators and administrators help gain consensus on the budget and obtain necessary approvals.
- **Budget Variance Analysis:** Data analysis allows for the comparison of actual expenses with the budget, highlighting any discrepancies that need attention. This

analysis ensures that cost overruns or underutilized resources are addressed promptly.

- **Cost Control Strategies:** Meetings provide a platform to discuss cost control measures, such as optimizing resource usage or adjusting curriculum components to manage costs while maintaining quality.

4.5.3 Cost Management Approach

The cost management plan for the development of the lower secondary school physical education curriculum will outline the plan for estimating, budgeting, managing, and controlling costs. Financial support for the project will come through the support of the project's sponsor, the Government of Saint Lucia. As the sponsor, the proper management of funds is crucial to the Government of Saint Lucia. Therefore, the project manager is expected to exercise oversight and meticulous attention to the allocation of funds, ensuring that the project is completed within the approved budget.

4.5.4 Roles and Responsibilities

In developing a cost management plan, key stakeholders are involved in the financial elements of the project. For the development of the Lower Secondary School Physical Education Curriculum, the stakeholders who contribute to the development of the plan and the utilization of funds include the project sponsor, the project manager, and to a lesser extent, the project steering committee. The roles and responsibilities of these stakeholders in cost management are outlined in Chart 24.

Chart 23 Cost Management Roles and Responsibilities

Role	Responsibilities
Project sponsor	• Lobbying for funding of the project. • Approving the project's proposed budget. • Reviewing the project's financial reports. • Supporting the project manager in ensuring that the cost management plan aligns with the sponsor's mission and vision. • Providing guidance and non-negotiables in relation to cost management. • Establishing deadlines and targets for financial reports. • Engaging in stakeholder management related to project funding and costs. • Collaborating with the project manager to establish cost control measures. • Monitoring cost performance against the approved budget. • Evaluating and approving change requests that impact project costs. • Ensuring alignment of project costs with organizational financial policies. • Identifying and addressing cost-related risks and issues. • Participating in project reviews and providing support for cost-related decisions. • Communicating financial status and cost-related updates to project stakeholders. • Providing strategic guidance to ensure cost effectiveness and value for money.
Project manager	• Leading the creation of the financial management plan. • Assigning roles to steering committee members in relation to cost management. • Compiling financial reports to be shared with the project sponsor. • Reviewing change requests. • Approving change requests for cost management in collaboration with the project sponsor. • Ensuring that the project remains on target for successful completion within budget. • Escalating cost management-related issues to the project sponsor, if necessary. • Developing and implementing cost management processes and procedures. • Conducting cost estimation and budgeting activities.

	• Monitoring and controlling project costs throughout the project life cycle. • Managing vendor contracts and negotiations related to cost. • Tracking and analyzing cost performance against planned targets. • Identifying and mitigating cost-related risks. • Ensuring compliance with financial policies and procedures. • Communicating cost-related updates to project stakeholders. • Collaborating with the steering committee to optimize cost-effectiveness and value for money. • Implementing cost-saving measures and identifying opportunities for cost optimization. • Participating in cost audits or reviews as required.
Steering committee	• Providing recommendations to the project manager in relation to costs of items to be procured, vendor costs, etc. • Submitting quotes to the project manager. • Alerting the project manager if there is any evidence that the project is in danger of cost overruns. • Reviewing and approving the project's financial management plan. • Monitoring and controlling project costs throughout the project life cycle. • Participating in budget reviews and revisions. • Evaluating cost performance against planned targets. • Providing guidance and support to the project manager in managing cost-related risks. • Reviewing and approving change requests related to cost management. • Collaborating with the project sponsor and project manager to ensure cost effectiveness and value for money. • Ensuring compliance with financial policies and procedures. • Identifying opportunities for cost savings or cost optimization. • Participating in cost audits or reviews as required.

Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

4.5.5 Project Duration

The projected time frame for the completion of the project is 90 days. Smith and Johnson (2019), who conducted a comprehensive study on project duration, found that the cumulative duration of individual activities directly determines the overall duration of the project. Therefore, it is pivotal to acknowledge that any unforeseen delays or obstacles encountered during the project execution phase would invariably lead to an extension of its duration (Smith & Johnson, 2019).

4.5.6 Activity List and Sequencing

The development of the lower secondary school physical education curriculum will involve a series of activities which will be carried out within a designated 447-day time frame. It is important to note that certain activities may occur simultaneously, while others are dependent on the successful completion of preceding tasks before they can be considered finished.

4.5.7 Project Cost Estimation

The process of estimating costs and determining the budget for this project were intricately connected. The cost estimates were denoted in United States Dollars (USD), and analogous estimating was employed to ascertain these cost projections.

To finalize the estimated budget, the contingency and management reserve was incorporated. A contingency of 10% and management reserve of 5% was factored into the budget. Chart 25 provides an overview of the estimated budget, encompassing the initial estimate, contingency reserve, and management reserve.

Chart 24 Budget for Lower Secondary School Curriculum Development

Type of Expense	**Cost - USD**
Training	60, 000.00
Consultants	60, 000.00
Procurement of teaching and learning materials	30, 000.00
Curriculum and eBook Development, Implementation and Evaluation	60, 000.00
Use of Facilities	35, 000.00
Sensitization and Marketing	40, 000.00
Reserve	30,500.00
Total	**315,500.00**

Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

This budget outlines the estimated costs for various components involved in creating and implementing the curriculum. Let's break down each expense category:

Training ($60,000.00 USD): This expense covers the training of teachers or educators who will be involved in delivering the PE curriculum. This could include workshops, seminars, or professional development sessions to enhance their teaching skills and understanding of the new curriculum.

Consultants ($60,000.00 USD): This category includes fees paid to external experts or consultants who provide specialized guidance in designing an effective PE curriculum. Consultants could offer insights into curriculum design, physical fitness assessment methods, and best practices in PE education.

Procurement of Teaching and Learning Materials ($30,000.00 USD): This budget is allocated for purchasing necessary teaching aids, equipment, and resources that will be used during PE classes. This can include sports equipment, fitness gear, educational posters, and any other materials needed to support effective teaching and learning.

Curriculum and eBook Development, Implementation, and Evaluation ($60,000.00 USD): This expense covers the costs associated with developing the curriculum itself. This could include the creation of lesson plans, instructional materials, and potentially even digital resources like eBooks. Implementation and evaluation costs are also included, ensuring that the curriculum is successfully delivered and assessed.

Use of Facilities ($35,000.00 USD): This category covers the cost of using appropriate facilities for conducting PE classes. This might include renting gymnasiums, outdoor sports fields, or other suitable spaces for physical activities.

Sensitization and Marketing ($40,000.00 USD): These funds are allocated for promoting and raising awareness about the new PE curriculum. This could involve marketing campaigns, workshops for parents and students, and other activities that help communicate the benefits and goals of the curriculum.

Reserve ($30,500.00 USD): This amount is set aside as a reserve or contingency fund. Contingency funds are used to cover unexpected expenses or emergencies that might arise during the curriculum development and implementation process.

Total Budget: $315,500.00 USD: This is the grand total of all the individual expenses outlined in the budget. It represents the estimated amount needed to successfully develop, implement, and promote the new PE curriculum.

4.6 QUALITY MANAGEMENT PLAN

4.6.1 Introduction

Quality is a critical aspect of every project. Project quality management encompasses the processes involved in planning, managing, and controlling project and product quality requirements to fulfill stakeholders' objectives (Project Management Body of Knowledge [PMBOK], 2017). According to Rose (2014), quality holds a significant position alongside time, cost, and scope within the project triple constraint. However, during the project's implementation, trade-offs between quality and other constraints may occur.

The project quality management processes consist of three steps: plan quality management, manage quality, and control quality. The initial step, plan quality management, is outlined in the project management plan and serves as a guide for managing and verifying the project's quality throughout its duration. This process specifies inputs, tools and techniques, and outputs to ensure effective quality management. Refer to Figure 13 (see Appendix D) for an illustration of the development of the cost management plan.

4.6.2 Quality Management Tools and Techniques

1. Expert Judgment: Expert judgment involves seeking insights from individuals with specialized knowledge and experience. In the development of a PE curriculum:

- **Curriculum Content Validation:** Engaging curriculum experts with expertise in physical education can provide judgments on the accuracy and relevance of the

curriculum content. Their insights ensure that the curriculum effectively meets educational standards and objectives.

- **Assessment Design:** Seeking advice from assessment experts ensures that the evaluation methods align with curriculum objectives, providing expert judgment on the quality and effectiveness of the assessment tools.

2. Data Gathering: Data gathering involves collecting information to make informed decisions. In curriculum development:

- **Stakeholder Feedback:** Gathering feedback from teachers, students, and parents provides valuable insights into the effectiveness of the curriculum. This data helps in identifying areas for improvement.
- **Educational Guidelines:** Collecting data from established educational guidelines ensures that the curriculum aligns with educational standards and best practices.

3. Data Representation: Data representation involves presenting information in a visual manner for easy comprehension. In curriculum development:

- **Curriculum Mapping:** Representing the curriculum's learning objectives, activities, and assessment methods visually can provide a clear overview, aiding in quality assurance by ensuring all components are accounted for.
- **Performance Metrics:** Visualizing student performance data can help identify trends, strengths, and areas needing improvement, assisting in refining the curriculum to enhance student outcomes.

4. Testing and Inspection: Testing involves evaluating products or processes to identify defects or deviations from requirements. In curriculum development:

- **Pilot Testing:** Conducting pilot tests of curriculum modules with a small group of students allows for the identification of any issues, such as unclear instructions or learning gaps, which can then be addressed before full implementation.
- **Content Inspection:** Reviewing curriculum materials for accuracy, clarity, and alignment with educational goals ensures the quality of the content delivered to students.

5. Meetings: Meetings provide a platform for communication, collaboration, and decision-making. In curriculum development:

- **Content Review Meetings:** Regular meetings with curriculum developers, educators, and experts facilitate discussions to ensure that curriculum content is accurate, engaging, and aligned with educational objectives.
- **Quality Assurance Meetings:** Meetings involving stakeholders such as teachers, administrators, and experts allow for the review of curriculum quality indicators, ensuring that the curriculum meets predefined quality benchmarks.

Relating Quality Management Tools and Techniques to the PE Curriculum Development:

- **Curriculum Design:** Expert judgment is used to validate curriculum content and assessment methods, ensuring that they are accurate, relevant, and of high quality.
- **Feedback Incorporation:** Data gathering from stakeholders allows for the collection of feedback on curriculum components, which is then used to make informed improvements and adjustments.

- **Visual Representation:** Data representation techniques help visualize curriculum components, such as learning objectives and assessment methods, ensuring their clear communication and alignment with intended outcomes.
- **Content Validation:** Testing and inspection, in the form of pilot testing and content reviews, ensure that curriculum modules are thoroughly evaluated for accuracy, clarity, and effectiveness.
- **Collaborative Refinement:** Meetings serve as a platform for collaborative discussions, where curriculum developers, educators, and experts can collectively ensure the quality and effectiveness of the curriculum.

4.6.3 Quality Management Approach

Quality is a vital aspect of every project, including the development of the Lower Secondary School Physical Education Curriculum Project. The quality management approach for this project will commence with defining quality requirements. The project manager, in consultation with the project sponsor and the steering committee, will be responsible for defining these requirements. The identified quality requirements will be documented, and measures will be implemented to continuously assess and monitor quality throughout the project's life cycle.

To ensure a strong foundation for quality, necessary training will be conducted for the presenters, actors, and digital content generators well in advance of the workshops. Additionally, a thorough review and vetting process will be implemented to assess the content before the workshops take place.

The terms of reference and contracts will serve as quality control mechanisms by ensuring that only qualified individuals are assigned key roles in the project's implementation. Any key stakeholder has the opportunity to propose recommendations for quality improvements; however, such recommendations must receive approval before implementation.

4.6.4 Roles and Responsibilities

The roles and responsibilities concerning quality management are distributed among the key stakeholders involved in the project. According to Smith (2018), project quality is no longer confined to a single department or stakeholder within an organization. Rather, it has become a collective responsibility of all individuals involved in the project. Smith 2018 emphasizes that stakeholders cannot simply delegate their quality-related responsibilities to others.

Chart 25 Roles and responsibilities

Role	Responsibility
Project sponsor	● Defining and establishing clear expectations for the project's quality standards and requirements. ● Developing a comprehensive quality management plan that outlines the processes and activities to achieve the desired quality outcomes. ● Assisting the project manager in ensuring that the established quality expectations and requirements are consistently maintained throughout the project. ● Collaborating closely with the project manager to address any quality-related

	concerns or challenges that arise during the project. ● Interacting directly with the project manager to provide guidance, advice, and support in implementing effective quality management practices. ● Reviewing and evaluating proposed quality changes or issues that exceed the project manager's authority, making informed decisions to approve or deny them. ● Acting as a point of escalation for quality-related matters that require higher-level decision-making and resolution. ● Facilitating internal and external quality audits for the project, if necessary, to assess compliance with quality standards and identify areas for improvement. ● Providing support and guidance to the project team in implementing corrective actions and continuous improvement initiatives based on audit findings. ● Regularly monitoring and assessing project quality performance to ensure alignment with established quality objectives and to proactively identify and address any deviations.
Project manager	● Facilitating the development of the quality management plan, taking the lead in creating a comprehensive and tailored plan that aligns with project objectives and requirements. ● Effectively communicating the quality management plan, including its objectives, processes, and expectations, to key stakeholders involved in the project. ● Establishing a clear plan for reporting quality-related updates to stakeholders, ensuring that the right

	information is communicated at the appropriate intervals to foster transparency and stakeholder engagement. ● Receiving and reviewing reports pertaining to project quality, assessing the findings and recommendations, and taking appropriate actions to address any identified issues or risks. ● Taking charge of scheduling and leading internal quality audits, organizing and conducting systematic assessments to evaluate project compliance with quality standards and identify areas for improvement. ● Maintaining a vigilant approach to ensure that project quality is upheld across all aspects of the project, working closely with the project team and relevant stakeholders to promote adherence to established quality requirements. ● Reviewing change requests associated with quality, carefully assessing their potential impact on project quality, and taking relevant actions, such as approving or rejecting the requests, or initiating appropriate change management procedures. ● Keeping quality documents up to date, regularly reviewing and revising them as needed to reflect changes in project requirements, quality standards, or best practices.
Project steering committee	● Providing guidance and support in the development of project quality management processes and procedures. ● Reviewing and approving the project quality management plan. ● Monitoring project quality performance and ensuring compliance with established quality standards.

	• Resolving any escalated quality issues or conflicts. • Making decisions and providing resources to address quality improvement opportunities.
Content writers	• Understanding and adhering to the defined quality standards for content creation. • Ensuring accuracy, consistency, and clarity in the content produced. • Conducting thorough reviews and edits to identify and correct any quality-related issues. • Collaborating with project stakeholders to address any content-related quality concerns. • Participating in the development and implementation of content quality improvement initiatives.

Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

4.6.5 Quality Requirements

In the pursuit of developing a comprehensive and effective lower secondary school Physical Education (PE) curriculum, a meticulous adherence to quality requirements becomes paramount. The intricate process begins with a resolute focus on Alignment with Learning Objectives. This quality metric, quantified as a percentage, stands as a testament to the curriculum's commitment to addressing, in a holistic manner, the learning goals established for physical education at the lower secondary level. With a Content Relevance perspective, feedback ratings sourced from educators, students, and subject matter experts assume significance. This quality metric echoes the imperative that the curriculum not only remains timely and relevant but remains harmoniously aligned with the evolving needs, interests, and contemporary trends discerned from its key stakeholders.

As education strives for inclusivity, the paradigm of Diversity and Inclusivity comes to the forefront. Quantified through the count of diverse cultural perspectives and representation within curriculum content, this quality metric serves as an embodiment of the curriculum's commitment to embracing and reflecting diverse cultural, gender, and ability perspectives. The spectrum of Learning Activities Variety is evaluated by the number of distinct learning activity types present. This tenet captures the curriculum's resolve to cater to a multifaceted student populace, encompassing varying learning styles and abilities.

Within the realm of curriculum evaluation, the factor of Assessment Effectiveness emerges as a crucial litmus test. Manifested in the correlation between assessment results and learning objectives, this quality metric underscores the essence of assessment methods and tools in effectively gauging the realization of student learning objectives. Engagement Level, quantified through attendance rates, participation levels, and assignment completion percentages, attests to the curriculum's commitment to fostering a dynamic and participatory learning environment.

Acknowledging the synergistic relationship between curriculum development and stakeholder engagement, the facet of Feedback Incorporation assumes prominence. Measured as a percentage, it accentuates the curriculum's acumen in actively considering and seamlessly integrating stakeholder feedback into curriculum revisions. Embracing the digital age, the strategic utilization of technology emerges under the banner of Use of

Technology. Quantified as a percentage, it exemplifies the curriculum's prowess in harnessing technological resources to amplify learning experiences and resources.

Turning to the tangible, the evaluation of Physical Resources Adequacy delves into the availability and condition of sports equipment and facilities. This quality metric underscores the curriculum's commitment to ensuring that essential physical resources are adequately accessible for the seamless implementation of its outlined activities. Amidst diverse educational contexts, the principle of Adaptability and Flexibility rises, gauged through the ease of customization. This tenet signifies the curriculum's agility in accommodating the dynamic needs of diverse school environments and student requisites.

Underpinning all efforts is the pursuit of Student Progress, quantified by measuring improvements in student skills through pre- and post-assessment comparisons. This metric serves as a testament to the curriculum's efficacy in cultivating measurable advancements in skill development. Simultaneously, the facet of Teacher Training and Support substantiates the availability of training materials and participation rates, cementing the curriculum's dedication to empowering educators with requisite resources for curriculum delivery.

In amalgamating these nuanced quality requirements, the development of the lower secondary school PE curriculum embraces a multi-dimensional commitment to excellence, inclusivity, and stakeholder alignment, resonating seamlessly with the principles championed by the Project Management Body of Knowledge (PMBOK).

4.6.6 Quality Control and Quality Improvement

Quality control and quality improvement play significant roles in the development of the lower secondary school PE curriculum. *When considering changes that may impact quality, a change management form is utilized, similar to other proposed changes (Smith, 2021).

The PDCA cycle is a four-step approach to quality improvement. It begins with planning, where opportunities for improvement are identified, and change is planned accordingly. The next step is doing, which involves implementing the change on a smaller scale, such as through pilot programs or trials. Subsequently, the checking phase evaluates the effectiveness of the adjustments made. Finally, the acting phase involves scaling up the successful changes to a larger scope. If the change is deemed unsuccessful, the cycle is repeated to identify and implement alternative approaches (Jones, 2022).

Implementing quality control and quality improvement processes ensures that the lower secondary school PE curriculum adheres to established standards and continuously evolves to meet the needs of students and educational goals. It enables the identification of areas for enhancement, the evaluation of the impact of changes, and the incorporation of successful modifications into the curriculum development process. By adopting these practices, educational institutions can ensure a high-quality curriculum that promotes effective teaching and learning experiences.

4.6.7 Quality Metrics for Lower Secondary School PE Curriculum Development

1. Alignment with Learning Objectives
   - Percentage of objectives addressed by curriculum

2. Content Relevance
   - Feedback from educators, students, experts
   - Assessment of content's appropriateness

3. Diversity and Inclusivity
   - Representation of diverse cultures, genders, abilities
   - Count of diverse perspectives included

4. Learning Activities Variety
   - Number of activity types
   - Balance between theoretical and practical components

5. Assessment Effectiveness
   - Alignment of assessments with objectives
   - Analysis of student performance data
6. Engagement Level
   - Attendance rates
   - Participation in class activities
   - Assignment completion

7. Feedback Incorporation
   - Percentage of feedback integrated

8. Use of Technology
   - Integration of interactive content, online resources

9. Physical Resources Adequacy
   - Availability and adequacy of sports equipment, facilities

10. Adaptability and Flexibility
   - Customization ease for different school contexts

11. Student Progress
   - Pre- and post-assessment comparisons

12. Teacher Training and Support
   - Availability of training materials, workshops

4.6.8 Key Factors Related to Quality Metrics for the Development of Lower Secondary School PE Curriculum

In the context of the Project Management Body of Knowledge (PMBOK), several key factors play a pivotal role in shaping the quality metrics for the development of a lower secondary school Physical Education (PE) curriculum. To ensure a successful curriculum development process, it is imperative to align these factors with the various project management processes and knowledge areas. Firstly, meticulous attention must be given to Project Scope and Requirements Management, involving a clear delineation of curriculum scope and learning objectives. Stakeholder Management is equally crucial, necessitating engagement with educators, students, parents, and experts to ascertain their quality expectations. Quality Planning should include well-documented standards, criteria, and metrics that will guide curriculum assessment.

Risk Management should anticipate potential risks that could affect curriculum quality. Effective Procurement Management would involve ensuring external contributors adhere to defined quality metrics. A well-prepared Human Resource Management approach ensures the project team comprehends and embraces quality metrics. Communication Management is pivotal in communicating these metrics to stakeholders, and Integration Management involves seamless integration of quality metrics within project management processes. During the Monitoring and Control phase, the curriculum's adherence to quality metrics must be continuously monitored, while Continuous Improvement involves using collected data to refine quality metrics for future curriculum development projects. This comprehensive approach ensures that quality expectations are met, the curriculum aligns with stakeholder needs, and the PE curriculum development proceeds effectively.

4.7 RESOURCE MANAGEMENT PLAN

4.7.1 Introduction

The project resource management processes consist of the following components: plan resource management, estimate activity resources, acquire resources, develop team, manage team, and control resources. These processes collectively facilitate resource identification, allocation, and utilization throughout the project life cycle. Resources can be categorized as either team resources, which refer to human resources, or physical resources, which include supplies, materials, facilities, or infrastructure.

For the development of the Lower Secondary School Physical Education Curriculum Project, the objective of the resource management plan is to establish a comprehensive plan that effectively addresses and allocates the necessary resources. This plan aims to cater to the project's unique requirements and ensure resource availability and allocation align with project goals and timelines.

4.7.2 Resource Management Approach

1. Data Representation: Data representation involves presenting information in a visual format for better understanding. In the development of a PE curriculum:

- **Curriculum Structure:** Utilize graphical representations or flowcharts to visually depict the structure of the curriculum. This allows stakeholders to easily grasp how different modules, activities, and assessments are interconnected.

- **Resource Allocation:** Represent resource allocation using bar graphs or pie charts to show how time, budget, and human resources are distributed across various curriculum development phases.

2. Organizational Theory: Organizational theory studies how organizations function, and it can guide effective resource management. In curriculum development:

- **Division of Labour:** Apply principles of organizational theory to allocate specific tasks to curriculum developers, content writers, reviewers, and technical experts based on their respective expertise.
- **Hierarchy and Communication:** Implement hierarchical structures and clear communication channels within the curriculum development team to streamline decision-making and collaboration.

3. Meetings: Meetings are essential for communication, collaboration, and decision-making. In curriculum development:

- **Resource Planning:** Conduct meetings to discuss resource requirements, allocate responsibilities, and ensure that the right skills are available for each phase of curriculum development.
- **Progress Monitoring:** Regular project review meetings help assess resource utilization and identify any bottlenecks or resource shortages that need to be addressed.

4. Expert Judgment: Expert judgment involves seeking insights from individuals with specialized knowledge and experience. In the development of a PE curriculum:

- **Resource Allocation:** Engage experts in curriculum development to provide insights on the allocation of resources such as time, personnel, and technology. Their expertise ensures efficient use of resources.
- **Risk Identification:** Experts can contribute to identifying potential resource-related risks, such as shortages of specific expertise or unavailability of necessary equipment.

Relating Resource Management Tools and Techniques to the PE Curriculum Development:

- **Curriculum Planning:** Data representation tools can help visually map out the timeline, resource allocation, and dependencies for curriculum development phases.
- **Optimal Resource Utilization:** Organizational theory principles guide the efficient allocation of resources by considering factors such as expertise, availability, and workload distribution.
- **Collaborative Efforts:** Meetings foster collaboration among curriculum developers, content writers, reviewers, and technical experts, ensuring that resources are aligned with the project's needs.
- **Informed Decisions:** Expert judgment ensures that resource allocation decisions are informed by the insights and recommendations of individuals with domain expertise.

4.7.3 Resource Management Approach

The approach to developing the resource management plan for the development of the Lower Secondary School PE Curriculum Project. The project resource management

process has several inputs, tools and techniques and outputs. The lower secondary school PE curriculum project includes identifying the resources, generating a responsibility assignment matrix as seen in Chart 27, estimating the resources needed for the various activities, developing and managing the team and highlighting the change process.

Chart 26 Responsibility Assignment Matrix - RACI Chart

RACI KEY	
R	Responsible
A	Accountable
C	Consult
I	Inform

Chart 27 Responsibility Assignment Matrix

WBS Code	Element Name	Role				
		Project Sponsor	Project Manager	Project Steering Committee	Physical Education Officers	Curriculum Writer
1	Project management		A	R		
1.1	Project charter	I	A	R	C	
1.2	Scope management	I	A	R	C	
1.3	Schedule management	I	A	R	C	
1.4	Cost Management	I	A	R	C	
WBS Code	Element Name	Role				
		Project Sponsor	Project Manager	Project Steering Committee	Physical Education Officers	Curriculum Writer
1.5	Resource management	Project Sponsor	Project Manager	Project Steering Committee	Physical Education Officers	Curriculum Writer

1.6	Quality management	I	A	R	C	
1.7	Communication management	I	A	R	C	
1.8	Risk management	I	A	R	C	
1.9	Procurement management	I	A	R	C	
1.10	Stakeholder management	I	A	R	C	
2	Terms of reference	I	A	R	C	
2.1	Presenters' TOR	I	A	R	C	
2.2	Digital resource generator's TOR	I	A	R	C	
3	Review content	I	A	R	C	C
3.1	Pilot curriculum	I	A		R	C
4	Materials	I	A	R	I	
4.1	Selection	I	A	R	I	
4.2	Procurement	I	A	R	I	
4.3	Packaging	I	A	R	I	
5	Digital content preparation	I	A	R	C	

Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

4.7.4 Identified Resources

1. **Human Resources:**

    - Curriculum Developers: Professionals with expertise in physical education, curriculum design, and instructional methods.

- Content Writers: Individuals skilled in creating engaging and educational curriculum content for different grade levels.
- Reviewers: Subject matter experts who can review and ensure the accuracy and quality of curriculum materials.
- Technical Experts: Individuals with expertise in integrating technology into educational materials, including multimedia elements.
- Assessment Experts: Professionals who can design appropriate evaluation methods to measure student progress.

2. **Educational Materials and Equipment:**
    - Textbooks: Relevant physical education textbooks and educational resources to support curriculum content.
    - Educational Software: Software for creating interactive lessons, quizzes, and assessments.
    - Audio-visual Equipment: Tools for recording and editing multimedia content, such as videos and animations.
    - Classroom Materials: Supplies like whiteboards, markers, charts, and posters to enhance the learning environment.
    - Exercise Equipment: Equipment needed for practical lessons, such as sports equipment, fitness tools, and mats.
3. **Technology and Software:**
    - Computers: Hardware for curriculum development, including desktops or laptops.
    - Software Tools: Software for content creation, multimedia editing, and assessment design.

- Learning Management System (LMS): A platform for delivering online content, assignments, and assessments.

4. **Physical Facilities:**
    - Curriculum Development Workspace: Office space equipped with computers and necessary software for curriculum development.
    - Workshop Venues: Locations for in-person curriculum development workshops and training sessions.
5. **Financial Resources:**
    - Budget Allocation: Funds for stipends, software licenses, equipment purchase, and other expenses related to curriculum development.
    - Contingency Fund: A portion of the budget set aside to address unforeseen expenses or changes in project scope.
6. **Stakeholder Involvement:**
    - Teachers: Involvement of physical education teachers who provide insights, feedback, and practical expertise.
    - Students: Engagement of students through surveys, focus groups, and pilot testing to ensure curriculum relevance and effectiveness.
    - Parents: Communication with parents to inform them about the curriculum and gather feedback.
7. **Educational Guidelines and Standards:**
    - Educational Frameworks: Official educational standards and guidelines provided by educational authorities to ensure curriculum alignment with learning objectives.
8. **Time and Scheduling:**

- Project Timeline: Clearly defined schedule indicating milestones, deliverables, and timelines for curriculum development phases.
- Calendar: Tools to manage project timelines, meetings, and important deadlines.

9. **Communication Channels:**
    - Email and Communication Platforms: Tools for efficient communication and collaboration among curriculum developers, reviewers, and stakeholders.
10. **Training and Development:**
    - Training Materials: Resources for training teachers on curriculum implementation, including guides, manuals, and instructional videos.
11. **Quality Assurance Tools:**
    - Rubrics and Assessment Guidelines: Tools to ensure consistent and standardized assessment methods across curriculum modules.
12. **Evaluation and Feedback Mechanisms:**
    - Surveys and Feedback Forms: Instruments to collect feedback from teachers, students, and parents for continuous improvement.

4.7.5 Resource Management Roles and Responsibilities

To ensure effective management of all resources, specific responsibilities must be assigned to key stakeholders involved in the Lower Secondary School PE Curriculum Project. Chart 29 outlines the roles and responsibilities for these stakeholders, as follows:

Chart 28 Roles and Responsibilities, Resource Management Plan

Stakeholder	Roles and Responsibilities
Project manager	1. Oversee the overall resource management process for the project.
	2. Identify and define the resource requirements for the curriculum development activities.
	3. Allocate resources based on project priorities and timelines.
	4. Monitor and track resource utilization and make adjustments as necessary.
Stakeholder	**Roles and Responsibilities**
Curriculum writers	1. Identify and request specific resources required for curriculum development.
	2. Collaborate with the project manager to ensure resources are allocated appropriately.

	3. Utilize allocated resources efficiently and effectively during curriculum development.
	4. Communicate any resource-related issues or constraints to the project manager.
Subject matter experts	1. Provide input and expertise in identifying resource requirements for the curriculum.
	2. Collaborate with curriculum developers to ensure resources support the desired educational outcomes.
	3. Assist in selecting and evaluating resources that align with the curriculum objectives.
Project steering committee	1. Provide guidance and support in resource management decisions for the project.
	2. Review and approve resource allocation plans and resource-related changes.
	3. Ensure alignment of resource allocation with project goals and strategic objectives.

	4. Monitor resource utilization and address any resource-related issues or conflicts.
	5. Collaborate with the project manager to optimize resource allocation and management.

Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

4.7.6 Estimating Resources

According to the Project Management Body of Knowledge (2017), the process of estimating resources includes estimating team resources as well as the quantities of materials needed to perform the project work. The resources needed can be divided into categories and then further subdivided. This division allows for the creation of the resource breakdown structure for the development of the Lower Secondary School Physical Education Curriculum Project.

4.7.7 Acquiring the Team

The project primarily relies on personnel employed by the Ministry of Education. However, specific roles requiring specialized skills, such as presenters, actors, and digital content developers, will be advertised to attract suitable candidates. To facilitate this

process, terms of references (TORs) will be created, outlining the job requirements and expectations. Short-term contracts will be advertised to engage individuals for the project.

After the advertisement phase, an interview process will be conducted to assess the applicants' qualifications and suitability for the roles. Based on the evaluation, the best candidates will be selected. Selected candidates will then enter into contracts that align with the terms of references, ensuring a clear understanding of their responsibilities and project expectations.

This approach guarantees that the project can access the necessary expertise and skills required for specialized roles. By creating TORs, advertising positions, conducting interviews, and finalizing contracts, the project can effectively identify and engage individuals who can contribute to its success.

4.7.8 Developing the Team

The develop team process aims to enhance project performance by improving competencies, fostering positive team member interactions, and creating a conducive environment (PMBOK, 2017). In the context of the lower secondary school PE curriculum project, individuals would participate in various team development activities throughout the project duration. These activities encompass training sessions, team-building exercises, and regular meetings. The team development activities are designed to enhance the skills, knowledge, and collaboration among team members. Training sessions provide opportunities for individuals to acquire new competencies or strengthen existing ones relevant to their roles in the project.

4.7.8.1 Training

The members of the steering committee will have the opportunity to participate in training activities aimed at enhancing their skills and knowledge in various areas. These activities will specifically focus on developing terms of references (TORs), preparing presenters, vetting presenter content, and providing overall support for the success of the project. The training will enable the committee members to effectively fulfill their roles and responsibilities.

All key stakeholders involved in the project will also be engaged in relevant training activities tailored to their specific roles. These training sessions will aim to prepare and support stakeholders in carrying out their responsibilities effectively. For example, presenters and actors will receive training on how to engage the target audience in a compelling and effective manner.

4.7.8.2 Team Building

Creating synergy among team members is indispensable for project success. To foster this synergy, a series of short team-building activities will be implemented for the project team members. These activities will be integrated into training sessions or introduced during meetings, either at the project's outset or periodically throughout its duration. By engaging in these team-building activities, the project team members can enhance their collaboration, communication, and trust, ultimately contributing to a more cohesive and effective team dynamic.

4.7.8.3 Meetings

Regular meetings will be conducted to monitor the progress of the project and ensure its smooth execution. These meetings will be held at various intervals throughout the project's duration. The project steering committee will convene weekly to ensure essential updates and coordination. The project manager will hold monthly meetings with the project team to review progress and address any issues. Furthermore, specific meetings will be scheduled with the presenters and actors to provide guidance and instructions for their assigned tasks, ensuring alignment with project objectives and requirements. By conducting these meetings, effective communication, collaboration, and oversight can be maintained, enabling the successful implementation of the project.

4.7.9 Managing the Team

According to the Project Management Body of Knowledge (2017), the managed team process involves monitoring team member performance, offering feedback, addressing issues, and managing team changes. This process plays a vital role in influencing team behavior and effectively resolving conflicts and challenges. In the development of the Lower Secondary School PE Curriculum Project, specific mechanisms are in place to manage the project team. These mechanisms include an approach to conflict management, ensuring that conflicts are addressed and resolved in a constructive manner. Additionally, team performance is tracked to monitor progress, identify areas for improvement, and provide feedback to enhance overall team effectiveness. Through these management strategies, the project team can operate harmoniously, tackle issues

proactively, and foster a collaborative environment conducive to the successful completion of the curriculum development project4.7.7.1 Tracking Team Performance

Team performance will be systematically monitored through the completion of a monthly performance report. Key metrics including attendance, efficiency, initiative, quality of work, and adherence to task completion schedules will be evaluated/assessed. Each metric will be scored on a Likert scale ranging from 1 to 5, with the assessment conducted by the individual or committee directly supervising the team member being evaluated. The assessment results will be shared directly with the project manager. Individuals who receive three or more metrics with fewer than three stars will engage in a follow-up conversation with the project manager to address areas of improvement. To facilitate the process, the performance report will be accessible through a user-friendly interface on Google Forms, compatible with both computer and mobile devices. This streamlined approach enables effective tracking and evaluation of team performance, supporting the project manager in identifying and addressing performance-related matters.

4.7.9.1 Conflict Resolution

In conjunction with conflict resolution training, a clear procedure will be followed to address any conflicts that may arise during the project. The steps are as follows:

Step 1: Individuals involved in the conflict will first attempt to resolve the issue among themselves through open and constructive communication.

Step 2: If the conflict remains unresolved after Step 1, the matter will be brought to the attention of the individual overseeing the specific component of the project. A meeting will be arranged to discuss the conflict and explore possible resolutions.

Step 3: If steps 1 and 2 do not lead to a resolution, a formal complaint should be submitted to the project manager via email. A meeting will be scheduled to address the conflict, followed by an investigation to gather relevant information. Based on the findings, a decision will be made on the appropriate course of action to move forward.

4.7.10 Resource Management Plan Change Process

All changes to the resource management plan are required to be submitted through a change management form. The project manager will review the form and provide a response to the team member(s) who initiated the request. In situations where the project manager is unable to make a decision, the request will be escalated to the project sponsor for further evaluation and resolution. This process ensures that any modifications to the resource management plan are properly documented, assessed, and approved by the relevant authorities, enabling effective management and control of project resources.

4.7.11 Resource Control

Ensuring the seamless availability of resources, timely procurement from the right suppliers, and preventing delays are paramount in project success. Resource control, specifically targeting equipment, materials, facilities, and infrastructure, is a critical process complementing human resource management within the project. The Projects Manager assumes a pivotal role in overseeing this facet, primarily by vigilantly monitoring resource expenditures, identifying shortages or surpluses, and promptly detecting resource deficiencies in alignment with project requisites using work performance data. This

proactive approach necessitates pre-activity assessments as well as post-resource acquisition evaluations to enact timely corrective measures when warranted.

Collaboratively, the Seniors Projects Officer alongside the projects officer strategically employ negotiation and influencing competencies to ensure the prompt acquisition of necessary resources. These professionals adhere to a systematic approach involving problem identification, analysis, solution selection, and implementation. The systematic problem-solving sequence begins by meticulously defining the problem, encompassing aspects such as who, what, where, why, when, or how the issue arose. Subsequently, a comprehensive root cause analysis is conducted to delve into the underlying triggers of the problem, facilitating the identification of causes and paving the way for viable solutions. The selection of an appropriate solution involves a diligent blend of cognitive exploration, research, and consideration of expectations, priorities, available resources, and measurable success indicators.

Following the implementation of the chosen solution, a rigorous evaluation ensues to determine whether the problem has been effectively resolved. This evaluation process employs logical reasoning to ascertain the availability of resources and their alignment with the budgetary allotments. Moreover, it ensures that the resource allocation remains consistent with the project's financial plan.

In instances where resources are deemed unavailable or failures are detected, pertinent stakeholders are promptly informed. Any necessitated modifications to the project plan are executed through a change request process, subsequently addressed in the Perform Integrated Change Control procedure to ensure a cohesive and streamlined adaptation.

In essence, the comprehensive resource control strategy inculcates proactive vigilance, meticulous problem-solving, and collaborative engagement. Through effective coordination, astute monitoring, and strategic troubleshooting, the project team endeavours to uphold a seamless resource flow, fostering the project's progression with efficiency and minimizing delays.

1. Resource Identification and Allocation:

- Identify roles and responsibilities for curriculum developers, content writers, and reviewers. Allocate specific tasks based on their expertise. A curriculum developer with experience in physical education can be tasked with creating lesson plans, while a content writer can draft engaging instructional materials.

2. Resource Tracking and Monitoring:

- Use project management software to track the allocation of resources and tasks. If a curriculum developer encounters unexpected challenges and requires more time for lesson planning, the software can help reassign other tasks accordingly.

3. Change Management:

- If a key subject matter expert becomes unavailable due to unforeseen circumstances, assess the impact on the project's timeline and quality. Implement a change control process to evaluate whether adjustments are needed and communicate changes to stakeholders.

4. Resource Optimization:

- Regularly assess the workload of content writers and reviewers. If one content writer consistently finishes tasks early, their workload can be adjusted by reallocating some tasks or involving them in quality assurance activities.

5. Resource Constraints Management:

- If there's limited availability of multimedia experts for video creation, consider alternatives such as outsourcing video editing tasks or rescheduling the project timeline to align with their availability.

6. Performance Metrics and Reporting:

- Monitor resource utilization using metrics like task completion rates and resource allocation efficiency. If a content writer consistently completes tasks ahead of schedule, it may indicate that they could take on additional responsibilities.

7. Risk Management:

- **Example:** Identify the risk of unforeseen equipment failures during the curriculum development phase. Mitigate this risk by having backup equipment available or a contingency plan in place to address any disruptions.

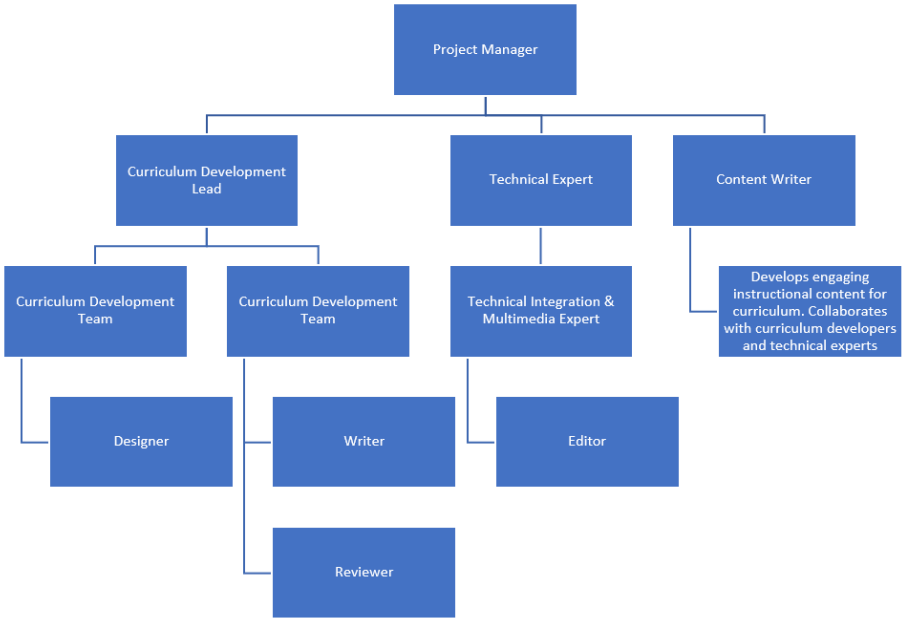
8. Continuous Improvement:

- Conduct regular feedback sessions with the curriculum development team to identify resource-related challenges. If the team points out delays caused by limited access to specific software, consider upgrading the software licenses or providing training to mitigate the issue.

9. Resource Allocation Adjustment:

- As curriculum modules progress, reassess the allocation of resources. If a certain module requires more content revision than initially anticipated, adjust the allocation of content writers' time accordingly.

4.7.12 Organizational Chart



4.7.13 Identification of Resource

Identification of resources is a crucial process in project management that involves identifying, documenting, and securing the various resources required to successfully execute a project. Resources can include personnel, materials, equipment, facilities, budget, and more. The goal of this process is to ensure that all necessary resources are available when needed to complete project tasks, meet objectives, and deliver the desired outcomes.

Resource Quantities: Determine the quantity of each type of resource needed for various project activities. This involves estimating how many resources will be required for different tasks and stages of the project.

Resource Availability: Assess the availability of the identified resources. This includes considering factors such as the skills and expertise of personnel, the availability of

equipment, the availability of materials in the required quantities, and the availability of facilities.

Resource Constraints: Identify any constraints or limitations related to resources. This could include resource availability, budget constraints, vendor contracts, and other factors that might impact the procurement or allocation of resources.

Resource Calendar: Develop a schedule or calendar that outlines when specific resources will be needed during the project's lifecycle. This helps in planning resource allocation and prevents resource bottlenecks.

Resource Roles and Responsibilities: Define the roles and responsibilities of individuals or teams responsible for managing and allocating specific resources. This ensures clarity in resource allocation and usage.

Resource Acquisition: Determine whether resources will be acquired internally (from within the organization) or externally (through vendors or contractors). This decision depends on factors such as cost, availability, expertise, and project requirements.

Resource Allocation: Specify how resources will be allocated to different tasks and activities. This involves assigning resources based on their skills, availability, and suitability for the task.

Resource Estimation Methods: Describe the methods used to estimate resource requirements, such as expert judgment, historical data, or specific estimation tools.

Resource Contingency Planning: Develop contingency plans to address potential resource shortages, overages, or unexpected changes in resource requirements.

4.7.14 Breakdown of the resources

Personnel:

- **Curriculum Development Experts**: Subject matter experts in physical education curriculum design.
- **Teachers and Educators:** PE teachers who will provide input and insights into the curriculum content.
- **Instructional Designers:** Professionals who can structure the curriculum content effectively for learning.
- **Content Writers:** Individuals who can create engaging and informative curriculum content.
- **Assessment Specialists:** Experts who can design assessment tools and methods.
- **Project Manager:** Responsible for coordinating and managing the overall project.

Facilities:

- **Meeting Rooms:** Spaces for curriculum development meetings and discussions.

- **Training Facilities:** Locations for training sessions and workshops.

Equipment and Materials:

- **Computers and Laptops:** For curriculum writing, research, and documentation.
- **Projector and Screen:** For presentations and training sessions.
- **Whiteboards and Markers:** For brainstorming and idea-sharing during meetings.
- **Printing and Stationery:** For printing curriculum materials, drafts, and worksheets.

Software and Tools:

- **Curriculum Development Software:** Tools for creating, editing, and formatting curriculum content.
- **Assessment Tools:** Software for creating and managing assessment materials.
- **Communication Tools:** Email, instant messaging, and project management software for team collaboration.
- **Learning Management System (LMS):** Platform for hosting and delivering curriculum content to students.

Materials and Supplies:

- **Books and Reference Materials:** Textbooks, research articles, and other resources for curriculum development.
- **Teaching Aids:** Visual aids, models, and other materials to enhance learning experiences.
- **Training Materials:** Handouts, presentation slides, and training resources for professional development.

External Resources:

- **Curriculum Development Consultants:** External experts who can provide specialized guidance.
- Assessment Experts: Consultants who can help design effective assessment methods.

- Technology Experts: Professionals who can assist in implementing digital learning solutions.

Budget and Funding:

- **Financial Resources:** Budget allocation for hiring external consultants, acquiring software, and purchasing materials.

Time and Schedule:

- **Project Schedule:** Clearly defined timelines for each phase of curriculum development.
- **Project Management Tools:** Software for scheduling, tracking, and managing project tasks.

4.8 COMMUNICATIONS MANAGEMENT PLAN

4.8.1 Introduction

Effective communication and the implementation of suitable communication mechanisms are vital for the successful development of any project. Communication involves the exchange of information between two parties and can take various forms, including verbal or nonverbal, formal or informal. To support effective communication, several mechanisms are utilized. According to the PMBOK (2017), project communications management encompasses the processes necessary to ensure that the information requirements of the project and stakeholders are met. This involves developing communication artifacts and implementing activities that enable efficient and effective information exchange. The project communications management processes include plan communications management, manage communications, and monitor communications. The plan communications management process involves several inputs, tools and techniques, and outputs. By following these processes, project teams can establish a robust communication framework that enhances collaboration, facilitates timely information sharing, and ensures alignment with stakeholder needs and project objectives.

4.8.2 Communication Management Approach

To effectively manage communications and develop a comprehensive communications management plan, it was essential to identify the diverse stakeholders involved in the communication process (See chart 31). Next, the various communication mechanisms and expectations were identified and clearly outlined. Any necessary adjustments or improvements will be made to optimize communication effectiveness and maintain alignment with project goals and stakeholder needs. By proactively reviewing and adapting the communication strategy, the project can foster robust and seamless communication that facilitates collaboration, information sharing, and successful project outcomes.

Chart 29 Summary of Project Communication

Who	What	When	Where	Why	How
Project manager	Updates the project sponsor.	Weekly Monthly	Meetings, reports	To keep abreast of any developments, issues and the general status of the project.	Project manager updates project sponsor. Project manager → project sponsor.
Project steering committee	Updates project manager.	Weekly	Debriefings, meetings, reports, emails	To interact with and receive updates from various stakeholders. To compile information for reporting and responding. To ensure that the project manager is kept abreast and that all proposed changes are documented and responded to.	Project steering committee →Project manager→project sponsor.
Who	**What**	**When**	**Where**	**Why**	**How**

Education 0fficials	Update curriculum officers.	As needed	Meetings, debriefings, emails	To ensure smooth flow of information between the Department of Education and the schools.	Education officials→project steering committee→project manager→project sponsor.
Curriculum officers	Update curriculum writers.	As needed	Meetings, emails	To ensure that information reaches writers.	Curriculum officers' →project steering committee→project manager→project sponsor.
Principals	Update teachers and parents and send feedback to the curriculum officer.	As needed and per project schedule	Letters, briefings, meetings	To ensure that information reaches parents and teachers.	Principals→ education officials→project steering committee→project manager→project sponsor.

Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

4.8.3 Roles and Responsibilities

Effective communication plays a vital role in fostering meaningful and transparent interactions among stakeholders. To achieve this, key stakeholders have specific responsibilities that, when executed effectively, contribute to successful communication and, consequently, the overall success of the project. Chart 31 provides a comprehensive overview of the roles and responsibilities assigned to these key stakeholders within the communications management plan, ensuring that they are aware of their roles in facilitating clear and cohesive communication. By fulfilling these responsibilities, stakeholders can establish a robust communication framework that promotes collaboration, alignment, and successful project outcomes. See chart 32 for further information.

Chart 30 Communications Management Roles and Responsibilities

Role	Responsibility
Project sponsor	● Clearly communicates all aspects of the project to the project manager and other key stakeholders, as needed. ● Sets parameters for communication mechanisms to be used in the project. ● Facilitates the resolution of issues which may be beyond the capacity of the project manager. ● Reviews proposed communications management plan and requisite reports and provides feedback.
Project manager	● Leads the creation of the communications management plan. ● Shares the project sponsor's vision and communicates parameters for the project. ● Facilitates meetings with other stakeholders to ensure that the project is successful. ● Reviews reports from other key stakeholders. ● Manages and resolves issues related to the project. ● Escalates issues to the project sponsor, if needed.
Project steering committee	● Contributes to the development of the project management plan. ● Prepares reports that are shared with the project manager. ● Manages and resolves issues within the remit of the work of the committee. ● Escalates issues to the project manager, if needed. ● Communicates with curriculum officers to ensure that information is shared with the principals. ● Receives feedback from curriculum officers.
Curriculum officers	● Facilitate the flow of information between the project steering committee and principals. ● Manage and resolve issues within the remit of the work of the curriculum officer. ● Escalate issues to the project steering committee, if needed.
Role	**Responsibility**
Content writers	● Ensure clarity and coherence: It is their responsibility to communicate information clearly and coherently, ensuring that the intended message is effectively conveyed to the target audience. This involves using appropriate language, tone, and style that align with the project's communication objectives. ● Adhere to brand guidelines: They are responsible for

	following brand guidelines and maintaining consistency in the content produced. This includes using the approved terminology, adhering to the brand voice, and upholding the established messaging and branding guidelines. ● Collaborate with stakeholders: They will collaborate closely with other stakeholders, such as the project manager, subject matter experts, and the project team, to gather necessary information to understand project requirements. Effective collaboration and active communication with these stakeholders will help ensure that the content meets the project's objectives. ● Review and incorporate feedback: They should be open to feedback from stakeholders and incorporate it into their work. Moreover, they should actively seek feedback on content drafts and make revisions based on the input received. This iterative process helps improve the quality and effectiveness of the content. ● Maintain project documentation: Keep track of all communication-related documents, such as content briefs, style guides, and feedback records. This ensures proper documentation and easy. reference throughout the project, supporting consistency and accuracy in communication materials. ● Meet deadlines: Adhere to project timelines and deadlines for content deliverables. Timely delivery of content enables smooth project progress and supports overall project communication goals.

Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

4.8.4 Communication Standards

Establishing communication standards is essential to provide clear guidance and set expectations for effective communication within a project. In the context of the development of the Lower Secondary School PE Curriculum Project, standard forms and templates for communication have been developed to ensure consistency and clarity. Chart 32 outlines the authorized communication channels that should be utilized by stakeholders.

Additionally, the communication flow chart (Figure 21) offers further guidance on how various stakeholders should manage communication-related matters. These resources play a crucial role in facilitating structured and efficient communication processes, enabling effective information exchange and alignment among project participants.

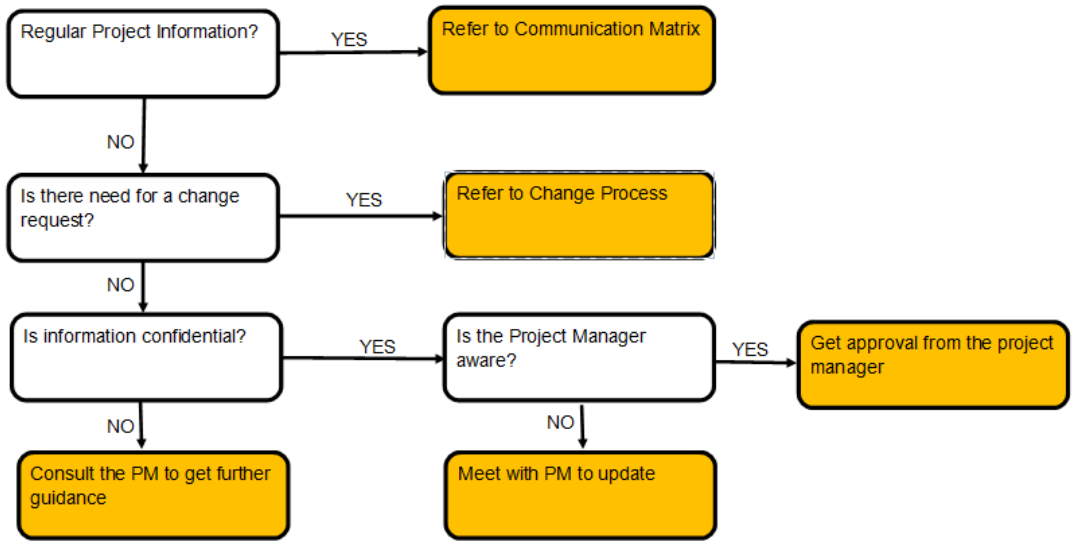
Chart 31 Authorized Communication Channels

Authorized Channel	Description
Shared documents via Microsoft Office365/SharePoint	For effective collaboration between the project steering committee and the project manager, documents should be uploaded to Microsoft Office 365's SharePoint platform. This centralized platform allows for seamless document sharing and collaboration. The initiator of the document must provide clear guidelines regarding expectations and timelines to ensure that all stakeholders are aligned and aware of their responsibilities. By utilizing SharePoint as the designated platform, the project team can streamline document management, enhance collaboration, and maintain a centralized repository for efficient and organized collaboration.
Written communication (letters, flyers etc.)	All communication should be done in standard English.
Emails	To maintain proper communication protocols, all email correspondence should be directed to the assigned niagov.com email addresses provided by the Department of Education. When communicating with external stakeholders, such as the project sponsor, it is crucial to use and receive emails through the organization's designated email account. It is important to avoid sending emails to personal email addresses to ensure the security and integrity of project-related communications. By adhering to these guidelines, the project can maintain a professional and secure email communication environment.
Meetings, briefings, debriefings	Meetings, briefings, or debriefings can be conducted either virtually through the organization's designated Microsoft Teams account or in person. It is essential to record minutes during these sessions and circulate them to all relevant stakeholders. A timeline should be established for proposing amendments to the minutes, and the acceptance of the amended minutes should be included as an agenda item in the subsequent meeting. Amendments should

	be submitted no later than two (2) days after receiving the minutes. For briefings and debriefings, it is crucial to document the dates, times, and topics or subjects of discussion. These practices ensure effective communication, accountability, and documentation of key discussions and decisions within the project.

Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

Figure 22 Communication Flowchart



4.8.5 Communications Matrix

The communications matrix serves as a guiding framework for effective communication among stakeholders. Developed by the project manager in collaboration with the project sponsor and project steering committee, the communications matrix outlines the key communication channels, methods, and stakeholders involved in the project. It is the responsibility of the project manager to maintain and update the communications matrix to ensure accurate and timely information exchange. For a detailed

overview, please refer to Chart 33, which provides a comprehensive outline of the communications matrix.

Chart 32 Communications Matrix

Communication Type	Audience	Description/ Purpose	Frequency	Owner	Channel
Personal communication	Project sponsor	Regular communication to ensure that project objectives are being met.	Weekly or as needed.	Project manager	Virtual meetings, face to face meetings, telephone calls.
	Project steering committee	Regular communication to ensure that project objectives are being met.	Two times per week.	Project manager	Meetings, emails, telephone calls.
	Education officers	Providing updates and fostering an environment for feedback from the schools and community.	Weekly	Project steering committee	Meetings, emails.
Communication Type	**Audience**	**Description/ Purpose**	**Frequency**	**Owner**	**Channel**
Reports	Project sponsor	Updates on the status of the project.	Bi-weekly	Project manager	Emails, meetings, written reports.
	Project manager	Updates on the status of the project.	Weekly	Project steering committee	Emails, meetings, written reports.

	Project steering committee	Updates on the status of the project, particularly feedback from schools (principals and teachers) and parents.	Weekly	Education officers	Emails, meetings, written reports.
	Project steering committee	Reports on the project, including whether objectives were met and outlining deliverables per terms of reference.	After completing the workshop.	Presenters	Emails, meetings, written reports.
Communication Type	**Audience**	**Description/ Purpose**	**Frequency**	**Owner**	**Channel**
Project announcements	Project steering committee	Provides updates, scheduled activities, timelines etc.	As needed.	Project manager	Emails, meetings.
	Education officials	Provide updates, scheduled activities, timelines etc.	As needed.	Project steering committee	Meetings, emails.
	Principals	Provide updates to be shared with school personnel and parents.	As needed.	Education officials	Letters, emails, meetings.
	Parents and the general public	Provide information on scheduled activities.	As needed/ in accordance with	Project manager, project steering	Letters, flyers, social media,

			the schedule timeline.	committee, principals.	television, radio.
Presentations	Project sponsor	Provides updates and allows for feedback and discussion.	Monthly. End of project.	Project manager	Meetings (virtual and in person).
	Project manager	Shares content for feedback and approval.	Bi-weekly or as needed.	Project steering committee	Meetings
	Project steering committee	Shares content for feedback and approval.	Per schedule management plan.	Presenters, digital content generators.	Meetings

Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

4.8.6 Project Reporting

The project report plays a vital role in ensuring the success of the project by providing essential information. Throughout the project, various reports will be generated and presented to stakeholders. Weekly status updates will be shared either through email or during meetings, keeping everyone informed of the project's progress. Additionally, a monthly report encapsulating the project's overall status will be prepared and presented to the project manager. When key milestones are communicated during the project, each key stakeholder will present their final report to the project manager. These reports will then be utilized to compile the final report for the project sponsor.

To gather feedback from parents following the workshop, a survey will be administered using Microsoft Forms. The data collected from the survey will be processed and analyzed using Microsoft Excel to generate a comprehensive report, providing

valuable insights into the workshop's impact and effectiveness. This feedback-driven report will contribute to continuous improvement and informed decision-making for future project endeavors.

4.8.7 Change Process

To make changes to the communications management plan, the prescribed change process must be followed. Individuals seeking a change must submit a formal change request using the designated change request form. The project manager will thoroughly review the request and provide a response based on its merits. The project manager has the authority to either accept or deny the change request. If approved, the accepted changes will be incorporated into the updated version of the communications management plan, ensuring that all communication activities remain aligned with project objectives and stakeholder needs.

4.8.7 Monitor Communications

The process of monitoring communication ensures the effective and efficient flow of project information among stakeholders. This process enables adjustments to methods and techniques to align with the project's status and evolving stakeholder needs. The following actions are undertaken in this process:

i. Stakeholder Engagement Audits: Scheduled by the project team, these audits assess the outcomes and impact of communication activities. They include a stakeholder satisfaction survey to gauge the effectiveness of communication actions. Audits measure aspects such as communication frequency, mode, audience, and resultant changes. These evaluations help the communication expert and project team address information gaps, misinformation, and stakeholder satisfaction.

ii. Work Performance Information: The project team utilizes data from work performance information to decide on the plan's influence on project deliverables. Progress reports and feedback from stakeholder satisfaction surveys guide the project team in determining appropriate messages and communication channels.

iii. Meetings: Managed by the Communication specialist with project manager support, meetings control information dissemination to all stakeholders. Meetings facilitate information exchange within the project team and with stakeholders. Meeting guidelines include:

- Establishing an agenda and objectives for each meeting.
- Distributing the agenda at least three (3) working days before the meeting.
- Developing and sharing working documents at least three (3) working days before the meeting.
- Having the communications specialist chair the meeting.
- Appointing a project team member to record and circulate meeting minutes.
- Planning recurring meetings in advance.

iv. Change Control: During project implementation, adjustments to the Communication Management Plan might be necessary. Proposed changes should be documented, including an analysis of their impact on the project's budget, schedule, quality, and scope. Associated risks should be identified and evaluated before the Change Control Committee reviews the changes.

Before committee review, consultations with the Project Steering Committee (PSC) and stakeholders are conducted to gather feedback on proposed changes. Once approved,

changes are documented, and relevant parts of the Project Management Plan, such as the stakeholder register and engagement plan, are updated accordingly.

4.8.8 Communication plan tools and techniques

- **Stakeholder Analysis:** Conduct a thorough analysis to identify all stakeholders involved in the curriculum development project. Categorize them based on their roles, interests, and influence levels. This analysis helps tailor communication strategies to address the specific needs of each stakeholder group.

- **Stakeholder Communication Matrix:** Create a matrix that outlines the communication needs of different stakeholders. Specify the frequency, channels, content, and sender of communications for each stakeholder group. This matrix acts as a reference guide for crafting targeted messages.

- **Communication Channels Selection:** Choose appropriate communication channels based on the nature of information and preferences of stakeholders. Channels could include emails, meetings, video conferences, newsletters, intranet portals, and social media platforms.

- **Project Management Software:** Utilize project management software that includes communication features to facilitate document sharing, task updates, and real-time collaboration among project team members.

- **Communication Guidelines:** Develop guidelines for effective communication, including tone, format, and language. Ensure that all project-related communications align with the project's objectives and maintain a consistent and professional tone.

- **Status Reports:** Regularly prepare and distribute status reports that provide an overview of project progress, milestones achieved, and upcoming activities. This keeps stakeholders informed about the project's current status.
- **Regular Meetings:** Schedule regular meetings with key stakeholders to discuss project updates, challenges, and decisions. These meetings can help address concerns, clarify doubts, and maintain alignment among team members.

- **Feedback Mechanisms:** Implement feedback mechanisms such as surveys or suggestion boxes to gather input from stakeholders. This helps in understanding their perspectives and making necessary adjustments to the curriculum development process.

- **Collaboration Tools:** Use online collaboration tools and platforms to facilitate discussion, document sharing, and virtual meetings. Tools like Microsoft Teams, Slack, or Google Workspace can enhance communication and collaboration.

- **Change Management Communication:** Develop a communication strategy for any changes in the curriculum development process. Clearly communicate the reasons for changes, expected impacts, and benefits to stakeholders.

- **Training and Workshops:** Organize training sessions and workshops to educate stakeholders about the curriculum's progress, goals, and potential impacts. These sessions foster engagement and ensure everyone is on the same page.

- **Regular Updates:** Maintain an updated project website or portal where stakeholders can access relevant project information, resources, and announcements.
- **Crisis Communication Plan:** Develop a plan to address unexpected challenges or crises that may arise during curriculum development. Ensure a clear process for communicating with stakeholders in such situations.

- **Monitoring and Evaluation:** Incorporate a mechanism to assess the effectiveness of communication efforts. Gather feedback, analyze communication outcomes, and make improvements as needed.

4.9 PROCUREMENT MANAGEMENT PLAN

4.9.1 Introduction

The procurement process holds significant importance within projects. According to the PMBOK (2017), project procurement management encompasses the necessary processes for acquiring products, services, or results from external sources beyond the project team's scope. Additionally, it covers the management and control processes required to establish and administer agreements such as contracts, purchase orders, memoranda of understanding, or internal service-level agreements. The primary objective of the procurement management plan for the Lower Secondary School PE Curriculum Project is to develop a comprehensive plan that outlines the expectations for procuring the necessary resources for the project's success. The plan procurement management process entails various inputs, tools, techniques, and outputs. These processes and guidelines ensure effective procurement management, enabling the project team to acquire the required resources efficiently while adhering to project goals and standards.

4.9.2 Procurement Management Approach

The procurement of services and materials is a crucial aspect for the development of the lower secondary school PE curriculum. While the project manager holds ultimate responsibility for the procurement management plan, support will be provided by other team members, particularly the project steering committee. The project will involve procuring services, such as trainers, through the development of terms of references (TORs) and contracts. Additionally, materials and resources will be procured from vendors to support the curriculum development process. Any changes to the procurement management plan will follow the established change management process, ensuring proper documentation and approval of modifications. By implementing effective procurement practices, the project can ensure the timely acquisition of necessary resources, ultimately contributing to the successful enhancement of the curriculum.

4.9.3 Roles and Responsibilities

The successful completion of the procurement management process relies on assigning specific responsibilities to key stakeholders. Chart 34 outlines the roles and responsibilities that contribute to the project's overall success. By clearly defining and assigning these roles, the project (team can effectively manage the procurement activities, ensuring the timely acquisition of required resources and adherence to project goals and objectives. This collaborative approach promotes accountability and ensures that each stakeholder understands their role in contributing to the successful execution of the procurement process.

Chart 33 Procurement Management Plan Roles and Responsibilities

Roles	Responsibilities
Project sponsor	● Provides the framework and guidelines for the procurement management plan. ● Approves the procurement management plan. ● Reviews reports on procurement management. ● Resolves issues which may be escalated from the project manager. ● Provides guidance and support, as needed, to the project manager. ● Approves the TORs and contracts.
Project manager	● Leads the process of creating the procurement management plan. ● Provides guidance in the creation of the TORs and contracts. ● Edits and provides feedback on the TORs and contracts. ● Presents the TORs and contracts to the project sponsor for final approval. ● Resolves issues related to procurement management. ● Escalates issues to the project sponsor, where necessary. ● Provides reports to the project sponsor. ● Approves or denies requests for changes to the procurement management plan.
Project steering committee	● Assists the project manager with the development of the procurement management plan. ● Develops the TORs and contracts. ● Provides recommendations for changes in the procurement management plan, when needed. ● Provides reports to the project manager.

Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

4.9.4 Procurement Definition

There are several items and services needed to facilitate the success of the project. These materials and services are outlined in Chart 35 below.

Chart 34 Procurement Items and Services

Services		
Curriculum trainers	To identify trainers to teach curriculum course.	9 months before curriculum writing.
Curriculum course	To develop a curriculum for training writers.	4 months before curriculum writing begins.
Curriculum developer	To support the presenters in the role of writing of the curriculum.	6 weeks before writing begins.
Reviewers	To review and make modifications to the curriculum draft.	2 weeks into the writing of the curriculum.

Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

4.9.5 Procurement Terms of Reference and Contracts

Regarding the procurement of services, a term of reference (TOR) will be developed specifically for the curriculum trainers and writers. Once the selection process is completed, contracts will be signed with the chosen individuals or organizations, ensuring alignment with the TOR. Time and material contracts will be utilized for this purpose, providing flexibility in terms of resource allocation and cost management. By utilizing TORs and appropriate contracts, the project can establish clear expectations, ensure the engagement of qualified trainers and writers, and effectively manage the procurement of services required for the curriculum development.

4.9.6 Procurement Risks and Risk Management

There are some potential risks in the area of procurement management. These risks were identified in Section 4.8. Chart 37 outlines procurement risks and management of those risks.

Chart 35 Procurement Risk and Risk Management

Procurement Risk	Risk Management
Supplier failure	● Conduct supplier assessment and due diligence. ● Develop contingency plans and identify backup suppliers. ● Monitor supplier performance and conduct audits. ● Establish clear contractual terms and service level agreements.
Lack of curriculum courses to meet the needs of the education sector.	1. Conduct a thorough needs analysis and stakeholder consultation to identify specific curriculum requirements and expectations. 2. Engage subject matter experts and curriculum specialists to develop clear and comprehensive Terms of Reference (TOR) for curriculum development services. 3. Implement a robust evaluation and selection process to ensure that the chosen curriculum course aligns with the identified needs and requirements of the education sector. 4. Regularly review and monitor the progress and outcomes of the curriculum development process to verify if it is meeting the desired goals and objectives. 5. Maintain open communication channels with stakeholders to gather feedback and address any gaps or shortcomings in the curriculum course. 6. Have a contingency plan in place to explore alternative curriculum options or revisions if the initially procured course does not adequately meet the needs of the education sector.
Applicants for services do not meet TOR requirements.	1. Clearly define and communicate the TOR requirements to potential service providers during the procurement process. 2. Develop a comprehensive evaluation criteria matrix aligned with the TOR requirements to assess and score applicant proposals. 3. Conduct a rigorous evaluation and selection process that includes thorough assessment of applicant qualifications, experience, and capability to meet TOR requirements. 4. Maintain open communication with applicants to clarify any questions or concerns related to the TOR requirements. 5. Implement a proper contract management process to ensure

	that selected service providers are contractually obligated to meet the TOR requirements. 6. Establish a performance management framework to monitor the performance of service providers and take corrective actions if they fail to meet the TOR requirements.
Output from service providers does not meet expectations and specifications.	1. Clearly define and communicate the expectations and specifications to service providers during the procurement process. 2. Establish a quality assurance process to monitor and evaluate the outputs during the service provider's engagement. 3. Conduct regular progress reviews and provide feedback to service providers to ensure that their outputs align with expectations and specifications. 4. Implement a contract management process that includes performance milestones and deliverable acceptance criteria to ensure compliance with expectations and specifications. 5. Conduct periodic evaluations and assessments of service provider performance against the defined expectations and specifications. 6. Develop contingency plans to address any deviations or non-compliance with expectations and specifications, including seeking alternative service providers if necessary.

Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

4.9.7 Cost Determination

The procurement of services will be based on fixed rates aligned with the current market value, which will be incorporated into the service provider's contract. As for the cost of materials, a quotation will be obtained from the sole vendor for the required items. The quotation must encompass essential details such as the material description, quantity, unit cost per material, total cost for the requested quantity, and the total cost for all items requested. This transparent and structured approach ensures that services and materials are procured at fair and competitive rates, facilitating effective budget management and ensuring the project's financial viability.

4.9.8 Vendor and Service Provider Management

To ensure the successful fulfillment of deliverables, the project manager will arrange meetings with vendors and service providers. During the initial meeting, requirements and expectations will be shared, establishing a clear understanding between all parties involved. Subsequent check-in meetings will be conducted to follow up on the procurement progress and ensure that expectations are being met. The project steering committee will be responsible for scheduling these meetings and providing updates to the project manager.

To effectively monitor vendor performance, a feedback mechanism will be established. The project steering committee will utilize Microsoft Forms to document and evaluate the vendor's performance in various areas. This feedback, which covers aspects such as timeliness, quality, and adherence to requirements, will be directly sent to the project manager. If any areas fall below expectations, the project steering committee will address them and escalate the matter to the project manager if necessary. This feedback loop ensures accountability, facilitates continuous improvement, and allows for prompt corrective actions to be taken when needed.

4.9.9 Procurement Management, Change Process

For any changes related to procurement, a formal submission must be made to the project manager using the designated change management form. The project manager will review the request in consultation with the project sponsor and provide a response within

1-2 days, clearly indicating whether the request has been accepted or denied. Approved changes will result in an update to the procurement management plan, ensuring that the procurement processes align with the modified requirements. This structured approach to change management helps maintain transparency, accountability, and alignment with project objectives throughout the procurement phase.

4.9.10 Procurement Management Tool and Techniques

1. **Market Research:** Conduct thorough market research to identify potential vendors, suppliers, and service providers in the education and curriculum development industry. This research helps in understanding the available options and selecting the most suitable ones.
2. **Supplier Prequalification:** Develop a prequalification process to assess the capabilities, financial stability, and experience of potential suppliers. This ensures that only qualified vendors are invited to participate in the procurement process.
3. **Bid Documents:** Prepare comprehensive bid documents that outline the project requirements, specifications, evaluation criteria, terms and conditions, and submission guidelines. Clear bid documents help vendors understand the project's needs and expectations.
4. **Request for Proposal (RFP):** Use an RFP to solicit detailed proposals from potential suppliers. An RFP includes project details, scope of work, pricing, delivery timelines, and other relevant information.
5. **Evaluation Criteria:** Define the criteria that will be used to evaluate and compare the proposals received from different suppliers. Criteria may include cost, quality, experience, technical expertise, and delivery capabilities.

6. **Bid Evaluation Process:** Establish a structured process for evaluating received bids. Create an evaluation team that assesses the proposals based on the predefined criteria to ensure an objective selection process.
7. **Negotiation Strategies:** Develop negotiation strategies to engage with potential suppliers and optimize the terms and conditions of the contract. Negotiations may involve pricing, payment terms, delivery schedules, and other relevant aspects.
8. **Contract Types:** Determine the appropriate type of contract for the procurement needs. Options include fixed-price contracts, cost-reimbursable contracts, and time and materials contracts, among others.
9. **Contract Templates:** Create standardized contract templates that clearly outline the rights, responsibilities, and obligations of both parties. Tailor the templates to the specific requirements of the curriculum development project.
10. **Risk Management:** Identify and assess potential procurement-related risks. Develop risk mitigation strategies to address issues such as supplier non-performance, cost overruns, and quality issues.

11. **Supplier Performance Metrics:** Define key performance indicators (KPIs) to measure the performance of selected suppliers throughout the project. These metrics help ensure that suppliers meet their contractual obligations.
12. **Vendor Management:** Establish a vendor management process to maintain regular communication with selected suppliers. This includes regular updates, progress tracking, and addressing any issues that arise.

13. **Change Management:** Develop procedures for handling changes to the procurement process, such as scope adjustments or contract modifications. Establish a clear process for documenting and approving changes.
14. **Ethics and Compliance:** Incorporate ethical and compliance considerations into the procurement process. Ensure that vendors adhere to industry standards, regulations, and ethical practices.
15. **Procurement Audits:** Conduct periodic procurement audits to ensure that the procurement process is being followed as per the established plan. Audits help identify areas for improvement and ensure adherence to procurement guidelines.

4.10 STAKEHOLDER MANAGEMENT PLAN

4.10.1 Introduction

The stakeholder management plan serves to identify and effectively manage stakeholders involved in the project, playing a crucial role in the development of the Lower Secondary School PE Curriculum Project. According to PMI (2017), “project stakeholder management encompasses various processes aimed at identifying individuals, groups, or

organizations that may have an influence on or be influenced by the project, and devising appropriate management strategies to engage stakeholders effectively in project decisions and implementation. These processes involve identifying stakeholders, planning stakeholder engagement, managing stakeholder engagement, and monitoring stakeholder engagement."

4.10.2 Stakeholder Management Approach

At the project's outset, stakeholders will be identified and incorporated into both the project management plans and the project charter. For the development of the Lower Secondary School PE Curriculum, stakeholders can be categorized as direct or indirect, each possessing different levels of power, interest, and impact. The engagement of stakeholders will commence from the project's initiation and continue throughout its duration. Consistent communication with stakeholders will be maintained to ensure effective engagement. Moreover, the planning of stakeholder management is of utmost importance, involving a range of inputs, techniques, tools, and outputs to facilitate this process.

4.10.3 Stakeholder Management Roles and Responsibilities

For the stakeholder management plan to achieve effective stakeholder engagement, it is essential that certain key stakeholders undertake specific responsibilities in stakeholder management and engagement. Chart 37 provides an overview of the roles and responsibilities associated with stakeholder management and engagement.

Chart 36 Stakeholder Management Roles and Responsibilities

Role	Responsibilities

Project sponsor	● Provides a framework for stakeholder engagement and management. ● Provides support to the project manager. ● Resolves stakeholder issues when escalated by the project manager. ● Ensures that stakeholders are involved in the project. ● Ensures that the proper communication strategies are in place which facilitate stakeholder engagement.
Project manager	● Works with members of the steering committee and project sponsor to create a stakeholder management plan. ● Identifies and ranks stakeholders. ● Manages relationships with and among various stakeholders. ● Keeps stakeholders abreast and informed. ● Escalates stakeholder issues which cannot be resolved, to the project sponsor.
Role	**Responsibilities**
Project steering committee	● Assists the project manager with the development of the stakeholder management plan. ● Engages stakeholders such as the curriculum officers and vendors. ● Provides reports on stakeholder engagement to the project manager. ● Resolves stakeholder issues. ● Escalates stakeholder issues which cannot be resolved to the project manager.
Curriculum officers	● Engage stakeholders such as the principals, teachers, parents and vendors (if assigned/necessary). ● Provide reports on stakeholder engagement to the project steering committee. ● Resolve stakeholder issues. ● Escalate stakeholder issues which cannot be resolved to the project steering committee.
Principals	● Engage stakeholders such as teachers and parents. ● Provide reports on stakeholder engagement to the curriculum officers. ● Resolve stakeholder issues. ● Escalate stakeholder issues which cannot be resolved to the curriculum officer.
Curriculum writers	● Engage stakeholders such as teachers and parents. ● Engage in the writing of the lower secondary school PE curriculum.

	● Escalate stakeholder issues which cannot be resolved to the curriculum officer.
Physical education teachers	● Engage stakeholders such as parents and students. ● Engage in the implementation of the curriculum.

Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

4.10.4 Identify Stakeholders

To ensure effective stakeholder management and engagement, the identification of all stakeholders, both direct and indirect, is crucial for the success of the Lower Secondary School PE Curriculum Project. Chart 38 presents a comprehensive overview of the project stakeholders, assigning a unique ID number starting from one and indicating whether they are direct or indirect stakeholders. Once stakeholders are identified, a stakeholder register is established to document their details. The register includes the stakeholder's assigned ID number, name, functional area of involvement, roles and responsibilities, main expectations and requirements, as well as their influence and impact on the project. Please refer to Chart 39 for the Stakeholder Register.

Chart 37 Stakeholders

ID	Stakeholder	Direct/Indirect
1	Project sponsor	Direct
2	Ministry of Education – CAMDU	Direct
3	Project Manager	Direct
4	Project steering committee	Direct
5	Curriculum officers - physical education	Direct
6	Principals	Indirect
7	Physical education teachers	Direct
8	Curriculum writers	Direct
9	Curriculum trainers	Direct
10	Private sector	Indirect

Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

4.10.5 Monitor Stakeholder Engagement

In addition to overseeing stakeholder engagement, the project manager, in conjunction with the project team, will ensure vigilant monitoring of stakeholder relationships. Adaptations to engagement strategies and plans will be flexibly implemented as the project progresses. The project manager shoulders the pivotal responsibility of meticulously tracking, evaluating, and regulating project advancement and performance. Furthermore, the identification of areas necessitating modifications and the subsequent application of corrective and preventive measures fall within the project manager's purview.

While it is within the realm of expectation that stakeholder power dynamics and levels of interest remain consistent throughout the project life cycle, any unforeseen shifts in these dimensions would mandate a reevaluation of engagement strategies. Should such an eventuality arise, the response would involve recalibrating strategies to appropriately involve stakeholders. Any proposed alterations to the plan will undergo a rigorous integrated change control process, subject to approval by both the project manager and the sponsoring entities.

Chart 38 Stakeholder Register

Stakeholders	Functional Area	Roles/Responsibilities	Main Expectations	Major Requirements	Influence	Impact
Project sponsor	Sponsorship	Provide overall support for the project including funding.	Project completion	Successful completion of project within schedule, cost and scope requirement.	High	High
Ministry of Education CAMDU	Sponsorship	Provide in-kind contributions to the project.	Project completion	Successful completion of project within schedule, cost and scope requirement.	High	High
Project manager	Project management	General oversight of the project and all project management processes.	Project completion	Successful completion of project within schedule, cost and scope requirement.	High	High
Project steering committee	Project management	Support the project manager in project planning and implementation.	Project completion	Successful completion of project within schedule, cost and scope requirement.	High	High
Curriculum officers	Content expert	Liaise with the steering committee, curriculum writers and schools to ensure efficient flow of information and feedback.	Smooth flow of information.	To be kept abreast of project information.	High	High
Curriculum trainers	Content experts	Train curriculum writers.	Completion of training course.	High level of commitment by trainees.		
Stakeholders	**Functional Area**	**Roles/Responsibilities**	**Main Expectations**	**Major Requirements**	**Influence**	**Impact**

Principals	Curriculum implementer	Liaise with Curriculum Officers, schools and community to ensure efficient flow of information and feedback.	Timely updates and information.	Provision of updates and forum for feedback.	Medium	Medium
Curriculum writers	Curriculum developers	Draft and review curriculum.	Completed curriculum	Timely feedback from curriculum officers.	Medium	High
Physical education teachers	Curriculum implementers	Implement and monitor the curriculum.	Completed curriculum.	Professional development sessions.	Medium	High
Parents		Support curriculum.	Clear information and feedback.	Support the curriculum implementation.	Medium	Low
Students	End users	Use the curriculum and engage in key stage assessment.	None	None	Low	Low
Private sector	End users	Use curriculum.	Curriculum is transferable to the labor market.	None	Medium	Low
Digital content creators	Workshop	Create digital content related to the project for informational and marketing purposes.	Content generation and dissemination.	Provision of information to create digital resources.	Low	High
Vendors	Supply and sales	Provide the requested resources and the requisite quantities.	Costs not exceeding current market value.	Clearly outlined item and quantity lists.	Medium	High
Community members	Other	None	None	None	Low	Low

Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

4.10.5 Analyze Stakeholders

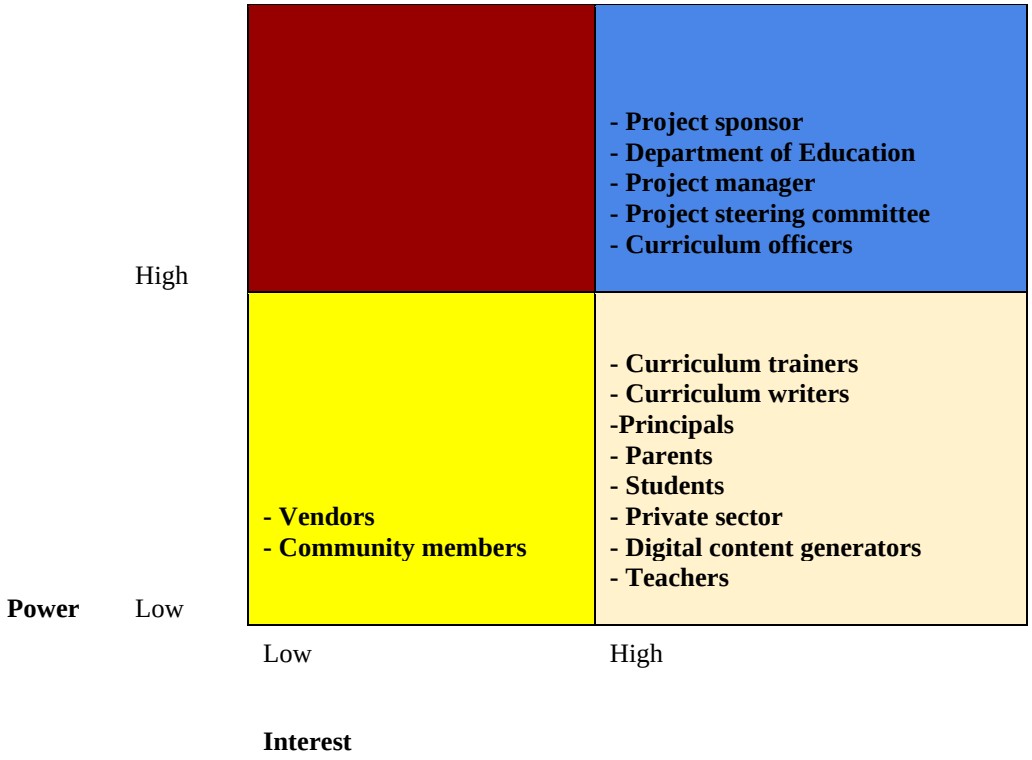
To guarantee both effective stakeholder engagement and the overall success of the project, it is imperative to conduct a thorough analysis of the stakeholders. This involves creating a power interest matrix, which categorizes stakeholders based on their power and interest levels in the project's completion. Chart 40 presents the initial power interest matrix, while Figure 22 displays the power/interest distribution specifically related to the lower secondary school PE curriculum.

Chart 39 Stakeholder Power Interest Matrix

ID	Stakeholders	Classification	
		Power (Low/High)	**Interest (Low/High)**
1	Project sponsor	High	High
2	Department of Education	High	High
3	Project manager	High	High
4	Project steering committee	High	High
6	Curriculum officers	High	High
7	Curriculum trainers	Low	High
8	Principals	Low	High
9	Curriculum writers	Low	High
9	Teachers	Low	High
10	Parents	Low	High
11	Students	Low	High
12	Private sector	Low	High
13	Digital content generators	Low	High
14	Vendors	Low	Low
15	Community members	Low	Low

Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

Figure 23 Power/ Interest Matrix



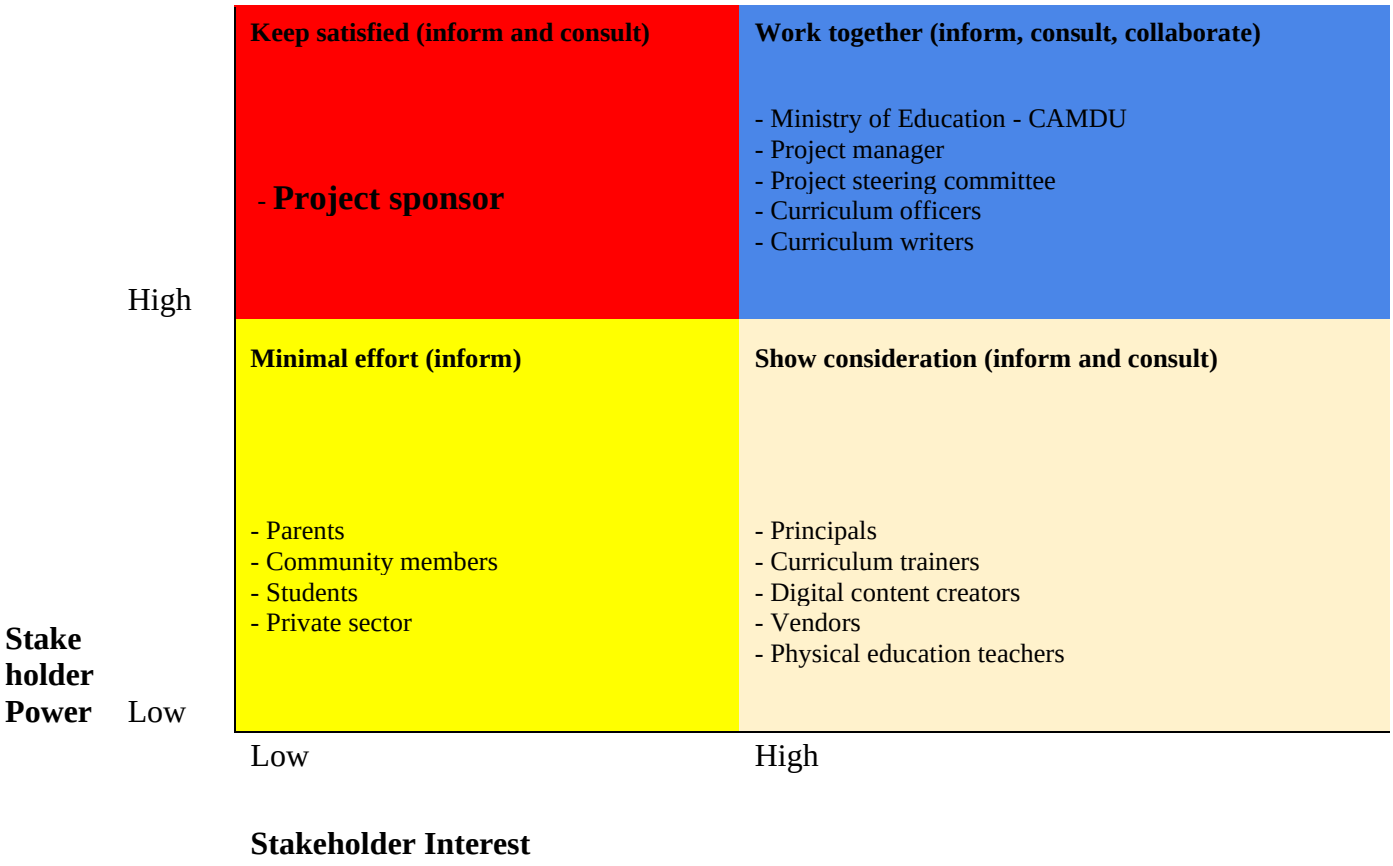
Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

4.10.6 Manage Stakeholders

To effectively manage stakeholders and maintain or enhance their level of interest in the project, a crucial aspect of the stakeholder management plan is determining the appropriate approach for each stakeholder. Figure 23 outlines the management strategy tailored to each stakeholder, considering their interest and power. This understanding enables the project to garner support from initially reluctant or indifferent stakeholders, ultimately contributing to project success. The management strategies employed include "keep satisfied" (inform and consult), "work together" (inform, consult, collaborate),

"minimal effort" (inform), and "show consideration" (inform and consult). The matrix will be regularly updated throughout the project's duration. Furthermore, an assessment will be conducted to evaluate each stakeholder's current (C) and desired (D) status. The Project Management Body of Knowledge (2017) categorizes stakeholders into the following engagement levels: unaware, resistant, neutral, supportive, and leading. Chart 40 showcases the stakeholder engagement assessment matrix for the lower secondary school PE curriculum project.

Figure 24 Stakeholder Engagement Matrix



Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

Chart 40 Stakeholder Engagement Assessment Matrix.

ID	Stakeholders	Unaware	Resistant	Neutral	Supportive	Leading
1	Project sponsor					C D
2	Ministry of Education – CAMDU				C	D
3	Project manager					C D
4	Project steering committee					C D
5	Curriculum officers				C	D
6	Principals				C	D
7	Curriculum writers				C	D
8	P E teachers				C	D
ID	**Stakeholders**	**Unaware**	**Resistant**	**Neutral**	**Supportive**	**Leading**
9	Parents	C			D	
10	Students			C	D	
11	Private sector			C	D	
12	Digital content developer			C	D	
13	Vendors			C	D	
14	Community members	C			D	

Source: Author of Study, Erasmus Wayne Benti based on own research, 2023

4.10.7 Stakeholder Management Plan, Change Process

Any modifications to the stakeholder management plan must follow the established change management processes. Formal change requests can be submitted using the change management form. These requests will undergo evaluation by the project manager, who will either approve or reject them. If approved, the stakeholder management plan will be revised accordingly. In the case of a denial, the project manager will provide a clear explanation for the decision to the respective team member(s) involved.

4.10.8 Stakeholder Management Tools and Techniques

1. **Stakeholder Identification and Analysis:**
    - **Stakeholder Register:** Create a comprehensive stakeholder register that identifies all individuals, groups, and organizations that may be impacted by or have an impact on the curriculum development project.
    - **Stakeholder Analysis:** Conduct a thorough analysis to categorize stakeholders based on their level of influence, interest, and potential impact on the project. This analysis helps prioritize communication and engagement efforts.
2. **Stakeholder Engagement Strategies:**
    - **Power/Interest Grid:** Determine the appropriate engagement strategy for each stakeholder by plotting them on a power/interest grid. This grid helps tailor communication and engagement approaches based on stakeholders' characteristics.
3. **Communication Planning and Execution:**
    - **Communication Matrix:** Develop a communication matrix that outlines what information needs to be communicated to each stakeholder, the frequency of communication, the channels to be used, and the sender and receiver of the messages.
    - **Stakeholder Engagement Plan:** Create a plan that defines the strategies and activities for engaging stakeholders throughout the curriculum development project. This plan should include methods for addressing their needs and concerns.

4. **Stakeholder Communication:**
    - **Regular Updates:** Provide regular updates to stakeholders through newsletters, progress reports, and other relevant communication channels. Keep stakeholders informed about project milestones, achievements, and challenges.
    - **Town Hall Meetings:** Organize town hall meetings to facilitate direct interaction between project leaders and stakeholders. These meetings provide a platform for stakeholders to ask questions, share feedback, and voice concerns.
5. **Stakeholder Feedback Mechanisms:**
    - **Surveys and Questionnaires:** Distribute surveys and questionnaires to stakeholders to gather their opinions, suggestions, and feedback on various aspects of the curriculum development project.
    - **Focus Groups:** Conduct focus group discussions with selected stakeholders to gather in-depth insights and opinions about the project. Use the feedback to make informed decisions.
6. **Conflict Management:**
    - **Conflict Resolution Techniques:** Implement conflict resolution techniques to address disagreements or conflicts that may arise among stakeholders. This ensures that issues are resolved promptly and collaboratively.

7. **Stakeholder Influence Strategies:**
    - **Engagement Champions:** Identify and collaborate with key stakeholders who can serve as project champions. Leverage their influence to advocate for the project and align other stakeholders.
8. **Monitoring and Evaluation:**
    - **Stakeholder Engagement Audits:** Conduct periodic audits to assess the effectiveness of stakeholder engagement efforts. Use the audit results to make improvements and adjustments to the engagement strategies.
9. **Continuous Improvement:**
    - **Lessons Learned:** Gather insights from stakeholder engagement experiences to identify lessons learned and best practices. Apply these lessons to enhance future stakeholder engagement efforts.
10. **Technology Tools:**
    - **Stakeholder Relationship Management Software:** Utilize software tools designed for stakeholder relationship management to track interactions, preferences, and engagement history.

5. CONCLUSIONS

The development of the lower secondary school PE curriculum was guided by the principles and best practices presented by the Project Management Institute (PMI). The overarching goal of the project was to formulate a project management plan that adhered to the high standards set by PMI. To achieve this, the team heavily relied on the PMBOK® Guide 6th Edition, which offered a comprehensive framework of best practices, ensuring the effective design and execution of the project management plan.

The following can be concluded regarding the ten (10) specific objectives of the project.

1. The project charter was created using a template as a reference to capture and organize crucial aspects of the project, including objectives, project description, preliminary risks and scope, stakeholder identification, project milestones, and budget. The sponsor approved the project charter, essentially authorizing the project's commencement. In addition, the project charter also contains change control mechanisms to manage modifications throughout the project.

2. To effectively define and develop the project scope, the project scope management plan was formulated, utilizing tools such as the work breakdown structure (WBS), WBS dictionary template, and the scope acceptance template. These documents were compiled with insights from project experts during meetings along with information gathered from document reviews, and they clearly outline project roles and responsibilities.

3. The schedule management plan includes the project delivery schedule, meticulously designed to guarantee the timely completion of each project activity.

4. The risk management plan was devised to address potential project risks and determine the responsible parties for risk management. The risk register template was developed to capture and categorize project-related risks, facilitating the formulation of effective risk response strategies.

5. The cost management plan acts as a guide for funding requirements, the cost baseline, and reporting formats, relying on expert judgment and meetings. Additionally, a budget template was utilized to ensure the comprehensive capture of all project expenses and adequate funding for project activities.

6. The quality management plan, along with the quality management checklist template, categorizes quality requirements and the project's approach to quality. It identifies quality control and assurance standards to ensure that quality is embedded in both project deliverables and processes.

7. The resource management plan outlines the human resources essential for successful project completion, specifying their roles and responsibilities. It also includes the project organization chart and details how human resources will be managed throughout the project.

8. The communication management plan, encompassing the stakeholder's roles and responsibilities list, identifies the communication needs of stakeholders and designs a communication matrix to ensure timely and appropriate dissemination of information by the responsible personnel.

9. The procurement management plan plays a crucial role in the project, detailing how procurement risks will be managed. It also includes a roles and responsibilities template, providing information on names, roles, responsibilities, levels of authority, and spending power.

10. The stakeholder management plan, developed through expert judgment and meetings, ensures thorough identification of all stakeholders. The plan specifies how stakeholders will be identified, classified, engaged, and managed throughout the project life cycle, and it incorporates stakeholder register and engagement matrix templates as additional resources for comprehensive stakeholder engagement.

6. RECOMMENDATIONS

In order to develop the lower secondary school PE curriculum, it is recommended that the Ministry of Education through CAMDU applies project management methods and tools similar to those used in development of the Lower Secondary School PE Curriculum Project Management Plan. The following actions should therefore be taken:

1. The Ministry of Education should utilize the project management methods and tools employed during the development of the lower secondary school PE curriculum as a valuable reference for managing similar projects in the future.
2. The Ministry of Education should create a future scope management plan using the template established in this project to effectively control scope creep. Implementing key performance indicators (KPIs) as a monitoring mechanism will ensure project focus and adherence to the defined scope.
3. The project manager should prioritize timely communication with stakeholders to maintain the project schedule and ensure its successful completion of the project.
4. The project steering committee must give special attention to the cost management plan to prevent cost overruns and maintain project budget adherence. As resources play a pivotal role in the project, the project manager must effectively manage human resources, ensuring that stakeholders receive necessary support to prevent any negative impact on the project.

5. The project manager should proactively monitor identified risks and remain vigilant throughout the project, applying established risk management strategies and resources to address new risks as they arise.
6. The project manager should closely monitor change management during the project implementation phase, recognizing that the project's final success relies on stakeholders' ability and willingness to embrace and adapt to change.
7. The Ministry of Education should establish a dedicated monitoring and evaluation unit for all its projects. This independent body will ensure continuous monitoring and assessment of projects.
8. To assess the overall success of the project, the Ministry of Education and individual projects, a balanced approach can serve as a tracking tool. Utilizing this approach for monitoring the implementation of the lower secondary school PE curriculum will focus on financial performance, customer satisfaction, attitudes, market share goals, internal operational goals, and learning and growth or innovation perspectives. This model can set a benchmark for other projects to follow.

VALIDATION OF THE FGP IN THE FIELD OF REGENERATIVE AND SUSTAINABLE DEVELOPMENT

In recent years, there has been a growing interest in the development of curricula that incorporate regenerative and sustainable practices in various fields, including physical education. Regenerative and sustainable development refers to the promotion of practices that focus on the restoration and regeneration of natural systems, as well as the reduction of human impact on the environment.

To validate the development of the lower secondary school physical education curriculum that incorporates regenerative and sustainable development, the following factors were considered:

Alignment with educational goals: The curriculum should align with the educational goals of the institution or organization. The curriculum should also be aligned with the principles of regenerative and sustainable development, including the promotion of environmental sustainability and social responsibility.

Incorporation of best practices: The curriculum should incorporate best practices in physical education that promote health and wellness while minimizing environmental impact. For example, incorporating activities that promote outdoor education, such as hiking and camping, can encourage students to appreciate and respect the natural environment.

Integration of interdisciplinary perspectives: The curriculum should integrate interdisciplinary perspectives, including environmental science, ecology, and social justice,

to provide a comprehensive understanding of the principles of regenerative and sustainable development.

Assessment and evaluation: The curriculum should include assessment and evaluation strategies to measure the effectiveness of the curriculum in achieving its goals. This can include student feedback, academic performance, and other indicators of success.

Continual improvement: The curriculum should be regularly reviewed and updated to reflect changing trends and best practices in regenerative and sustainable development. This can ensure that the curriculum remains relevant and effective in achieving its goals.

The lower secondary school physical education curriculum developed for Saint Lucia that incorporates regenerative and sustainable development can provide students with a holistic understanding of the principles of environmental sustainability and social responsibility. It is important to ensure that the curriculum aligns with educational goals, incorporates best practices, integrates interdisciplinary perspectives, includes assessment and evaluation strategies, and is continually reviewed and updated.

BIBLIOGRAPHY

Assumption vs. Constraint: Definitions, Types and Differences. (n.d.). Indeed Career Guide. https://www.indeed.com/career-advice/career-development/assumption-vs-constraint

Alex, M., May 1, er in C. on, 2018, & Pst, 1:30 P. (2018, May 1). Why planning is the most critical step in project management. TechRepublic. https://www.techrepublic.com/article/why-planning-is-the-most-critical-step-in-project-management/#:~:text=Project%20planning%20plays%20an%20essential

Baxter, Laraine; Hughes, C. & Tight, Maleolm (1999). How to research. New Delhi: Viva Books. 263p.

Bhat, A. (2018). Qualitative Research: Definition, Types, Methods and Examples. QuestionPro. https://www.questionpro.com/blog/qualitative-research-methods/

Booth, D. (2018). LibGuides: Research Methods: What are research methods? Libguides.newcastle.edu.au. https://libguides.newcastle.edu.au/researchmethods#:~:text=Research%20methods%20are%20the%20strategies

Bolghari, M.S. & Hajimaghsoodi, A., 2017. Action research as a bottom-up approach to foster teacher involvement in language curriculum change. Journal of Language Teaching and Research, Vol. 8, No. 2, pp. 362-369. http://www.academypublication.com/issues2/jltr/vol08/02/20.pdf

Burns, Robert B. (2000). Introduction to research methods. London: Sage Publications. ix,613p.

Calibey, S. (2021, June 29). *12 Tips for Creating a Successful Project Implementation Plan - Nifty Blog*. Niftypm.com. https://niftypm.com/blog/12-tips-for-creating-a-successful-project-implementation-plan/#

CHAPTER 7 Project Implementation Arrangement. (n.d.). Retrieved July 25, 2022, from https://openjicareport.jica.go.jp/pdf/11681731_03.pdf

Chronologically structured approach controlling closing process. (n.d.). www.pmi.org. https://www.pmi.org/learning/library/chronologically-structured-approach-controlling-closing-process-7931

Eby, K. (2019, January 16). *Demystifying the 5 Phases of Project Management*. Smartsheet. https://www.smartsheet.com/blog/demystifying-5-phases-project-management

Challenges and opportunities in the education system of Saint Lucia country review. (n.d.). Retrieved December 23, 2022, from https://www.summaedu.org/wp-content/uploads/2022/04/Country_review-ST-Luci%CC%81a_OK.pdf

Creswell, John W. (2009). Research design: Qualitative, quantitative and mixed method approaches. (3rd ed.). London: Sage Publications. xxxiv,260p.

Jones, R. (2022). The PDCA cycle for quality improvement in education. Journal of Educational Quality, 10(2), 45-58.

Nevenglosky, E.A. et al. (2019). Barriers to effective curriculum implementation. Research in Higher Education Journal, 36 (Jan. 2019). https://files.eric.ed.gov/fulltext/EJ1203958.pdf

Gido, J., & Clements, J. P. (2018). Successful project management. Cengage Learning.

GOVERNMENT OF SAINT LUCIA Transforming Education Transforming Lives. (2015). https://assets.globalpartnership.org/s3fs-public/2016-st-lucia-education-sector-plan-2015-2020.pdf?VersionId=ti8fV1p8SwJPrUrZ3I1c84sXKgtV7APl

Heagney, J. (2012). Fundamentals of Project Management. AMACOM

Kerzner, H. (2017). Project Management: A Systems Approach to Planning, Scheduling, and Controlling. John Wiley & Sons

Lewis, J. P. (2017). Fundamentals of Project Management. Routledge.

Malsam, W. (2019, December 30). *What is an Implementation Plan & How Do I Create One?* ProjectManager.com. https://www.projectmanager.com/blog/implementation-plan

New Senior Secondary Curriculum - Physical Education

OECS Education Sector Strategy 2012 to 2026. (n.d.). OECS. Retrieved July 25, 2022, from https://www.oecs.org/en/our-work/knowledge/library/education/oecs-education-strategy

OECS Launches New Program to Enhance Educational Advancement in the Region. (n.d.). Pressroom.oecs.org. Retrieved July 25, 2022, from https://pressroom.oecs.org/oecs-launches-new-program-to-enhance-educational-advancement-in-the-region#:~:text=The%20USD%20%2410%20million%20OECS

Project Management Institute. (2017). *A guide to the Project Management Body of Knowledge (PMBOK guide)* (6th ed.). Project Management Institute.

Project Management Institute. (2021). A Guide to the Project Management Body of Knowledge, (*PMBOK*® Guide) - Seventh Edition, Project Management Institute, Inc., 2021.

Project Quality Management, Third Edition: Why, What and How: 9781604271935: Rose, Kenneth H.: Books. (2022). Amazon.com. https://www.amazon.com/Project-Quality-Management-Third-What-dp-1604271930/dp/1604271930/ref=dp_ob_image_bk?asin=1604271930&revisionId=&format=4&depth=1

Rahman, S. (2017). The advantages and disadvantages of using qualitative and quantitative approaches and methods in language "Testing and Assessment" Research: A literature review. Journal of Education and Learning, 6(1), 102–112. eric.

Rose, M. (2014). Project quality management: Why, what and how. International Journal of Economics, Commerce and Management, 2(11), 1-12.

Saint Lucia - Access Government. (n.d.). Saint Lucia - Access Government. Retrieved December 15, 2022, from https://www.govt.lc/media.govt.lc/education/resources/publications/educational-statistical-digest-20200.pdf

Shape America - School and district physical education curriculum

6 Best Practices on How to Manage Quality Learn How Fostering a Culture of Continuous Improvement Advances Design and Business Results Whitepaper. (n.d.). Retrieved July 25, 2022, from https://campusuci2.com/REP/152/1523/07KAPMI/U5/00.pdf

Smith, J. (2020). Importance of quality assurance in curriculum development. Journal of Education and Curriculum Development, 25(2), 45-60.

Smith, J. (2021). Quality control and quality improvement in curriculum development. Journal of Education and Curriculum Development, 26(3), 78-92.

Sources of Information. (2018, October 16). Library & Information Science Network. https://www.lisedunetwork.com/sources-of-information/#:~:text=An%20Information%20Source%20is%20a

The Physical Educator - Physical Education Curriculum Mapping

The University for International Cooperation (n.d). Graduation Seminar-Applied Research Final Graduation Project (FGP) [PowerPoint slides]. https://gspm.campusuci2.com/mod/book/view.php?id=8540

APPENDIX 1: FGP Charter

CHARTER OF THE PROPOSED
FINAL GRADUATION PROJECT (FGP)

1. Student name

Erasmus Wayne Benti

2. FGP name

Project management plan to develop a lower secondary school physical education curriculum and strengthen teachers' capacity to deliver and assess the lower secondary school physical education curriculum in Saint Lucia.

3. Application Area (Sector or activity)

Education

4. Student signature

5. Name of the Graduation Seminar facilitator

Carlos Brenes

6. Signature of the facilitator

7. Date of charter approval

February 26th, 2023

8. Project start and finish date.

January 15th, 2023	May, 31,2023

9. Research question

What strategies and processes can be implemented in a project management plan to develop a comprehensive and effective lower secondary school physical education curriculum, and how can teacher capacity be strengthened to deliver and assess this curriculum in Saint Lucia?

10. Research hypothesis

Is it possible to develop a project management plan to improve student success by developing and implementing a lower secondary school physical education curriculum and strengthen teachers' capacity to deliver and assess the lower secondary school physical education curriculum?

11. General objective

Design a project management plan to enhance the curriculum and assessment of physical education at the lower secondary school level and strengthen teacher capacity in Saint Lucia.

12. Specific objectives

1. To develop a project charter that will be used in the elaboration of the project deliverables.
2. To develop a scope management plan to determine work to be done on the project and that the project is successfully completed.
3. To develop a schedule management plan to determine the project life cycle and the successful completion within the time period.
4. To develop a risk management plan to mitigate against risk and respond to risk within the project.
5. To develop a cost management plan to manage the finances and budget within the finances available.
6. To develop a quality management plan to manage and control the project to meet stakeholders' expectations.
7. To develop a resource management plan that identifies the resources required, how to acquire them, and how to manage them.
8. To develop a communication plan to communicate with stakeholders on the project effectively.
9. To develop a procurement plan to procure resources for implementing the project.
10. To develop a stakeholder management plan to manage stakeholders within the project.
11. To effectively allocate and utilize all available resources in support of achieving the project goals and objectives, while minimizing efficiency.
12. To design and implement a curriculum that effectively integrates principles of regenerative and sustainable development, and aligns with current key issues and trends in the field, while reflecting a K-12 program philosophy and defining program, grade-level, and course goals, with the aim of improving teaching and learning outcomes and better preparing students for a sustainable future.

13. FGP purpose or justification

The final graduation project (FGP) is a requirement for the completion of the Master's in Project Management Degree at the University of International Cooperation. The FGP required the development of a project management plan for an identified project at the regional level involving several member states. The purpose of the project management plan is to provide some form of guiding structure at the regional level in order to accomplish the underlined objectives of the project. As a result, separate work plans were derived from the project management plan to suit the context of each member state at the national level. Another reason for the elaboration of the project management plan was to ensure the success of the project. Working from a project management plan fosters pre-planning, managing and monitoring various aspects of the life of the project from start to end.

14. Work breakdown structure (WBS). In table form, describing the main deliverable as well as secondary, products or services to be created by the FGP.

1. Final Graduation Seminar
    1.1 Final Graduation Project Deliverables
        1.1.1 Charter
        1.1.2 Work Breakdown Structure
        1.1.3 Chapter 1
        1.1.4 Chapter II: Theoretical Framework
        1.1.5 Chapter III: Methodological Framework
        1.1.6 Annexes
2. Tutoring Process
    2.1 Tutor
    2.1.1 Assignment of Tutor
    2.1.2 Communication with Tutor
    2.2 Adjustments of deliverables based on feedback
    2.3 Chapter IV: Development (Results)

2.4 Chapter IV: Final Project Management Plan Deliverables
2.5 Chapter V: Conclusion
2.6 Chapter VI. Recommendations
2.7 Bibliography and Annexes

3. Reading by Reviewers
   3.1 Reviewer's Appointment Request
   3.2 Appointment of Reviewers
   3.3 Reviews of draft plan
4. Adjustments
   4.1 Adjustments based on feedback from reviewers
   4.2 Update of Final Graduation Project
5. Defense to Board of Examiners
   5.1 Final Review by Board
   5.2 FGP Grade Report

15. FGP budget

Software licensing: PMI, Project Management Software	US$150
Printing	US$100
Binding	US$200
Shipping	US$100
TOTAL	**US$550**

16. FGP planning and development assumptions.

The FGP planning and development was based on the following assumptions:

1. The availability of information regarding the project.
2. There will be no limitation to the use of the information regarding the enhancement of the primary curriculum.
3. Research time for the FGP will be at least 10 hours per week during its development process.
4. The researcher will meet all deadlines.

17. FGP constraints

There are several factors which may impact the successful completion of the project. These constraints include:

1. The limited time frame of twelve (12) weeks within which the FGP had to be completed.
2. The possible increase of the cost of completing the FGP brought about by the recession which has resulted in the continued increase in the price of goods and services.
3. The limited scope of the FGP. As per the research question, it is clear that the scope of such an undertaking goes beyond the scope of the FGP, therefore in accordance with the requirements of the FGP, the entire project cannot be integrated into the project management plan. As a result, only one component of the project was developed and executed in the FGP.
4. The quality of work is dependent on the time frame and access to the available materials.

.

18. FGP development risks

There are several risk factors which may affect the project. They are as follows:

1. A strong hurricane season might delay the work tours and the data collection in the field, which in turn, may delay the development of the deliverables.
2. Within country lockdown due to the pandemic may restrict access to data collection.
3. The illness of the researcher may affect the completion of the task.

19. FGP main milestones

Deliverable	**Finish estimated date**
1.1 FGP profile	15th January
1.1.1 Delivery No.1: Student FPG Charter and FGP WBS.	15th January
1.2 FGP Deliverable 2: FGP Charter (11 to 12), FGP-WBS	Sunday, 22 January 2023
1.2.1 Deliverable 3: FGP Charter (13 to 19) and preliminary bibliographical research	Sunday, 29 January 2023
1.2.2 Deliverable 4: Theoretical framework chapter	Sunday, 5 February 2023

1.2.3 Completion of graduation seminar	February 26,2023
1.3 Readers review	July 31, 2023
1.4 Board of examiners evaluation	September 2023

20. Theoretical framework

20.1 Estate of the "matter"

Curriculum development, enhancement and implementation is of topical interest. The issue lies in remaining updated as learning is ever-changing. The COVID-19 pandemic and technological advancement have had an even greater influence on this field.

The problem with developing a lower secondary physical education curriculum is the absence of a standardized program for physical activity in schools. The lack of physical education programs in schools creates an opportunity to increase physical activity opportunities for students, as schools are the ideal place to implement such programs due to their ability to reach a large number of children. A project management plan would assist in the realization of the successful implementation of the project in obtaining the project objectives. The FGP seeks to establish the possibility of increasing success with the use of a management plan as advocated by PMI.

20.2 Basic conceptual framework

Project management, curriculum development, learners, activities, teacher training, assessment, technology

21. Methodological Framework

Objective	**Name of deliverable**	**Information sources**	**Research method**	**Tools**	**Restrictions**
To develop an integration management plan to create, manage and control the project.	Integration management plan	Secondary: PMBOK 2017 Primary: field interviews, document review.	Mixed methodology	Project charter Semi-structured interviews, expert judgment.	Document release will not be timely.
To develop a scope management plan to determine work to be done on the project and to ensure that the project is successfully completed.	Scope management plan	Secondary: PMBOK 2017 Primary: field interviews, document review.	Mixed methodology	Scope management plan, semi-structured interviews, expert judgment.	Agreements and standards restrict scope development.
To develop a schedule management plan to determine the project life cycle and the successful completion within the time period.	Schedule management plan	Secondary: PMBOK 2017 Primary: field interviews, document review	Mixed methodology	Schedule management plan, semi-structured interviews, expert judgment.	Project funds are accessible.

Objective	Name of deliverable	Information sources	Research method	Tools	Restrictions
To develop a risk management plan to mitigate against risk and respond to risk within the project.	Risk management plan	Secondary: PMBOK 2017 Primary: field interviews, document review.	Mixed methodology	Risk management plan, semi-structured interviews, expert judgment.	Changes in school schedule.
To develop a cost management plan to manage the finances and budget within the finances available.	Cost management plan	Secondary: PMBOK 2017 Primary field interviews, document review.	Mixed methodology	Semi-structured interviews, expert judgment.	Taxes and inflated prices.
To develop a procurement plan to procure resources for the implementation of the project.	Procurement management plan	Secondary: PMBOK 2017 Primary: field interviews, document review.	Mixed methodology	Semi-structured interviews, expert judgment.	Timely access and available resources.
To develop a stakeholder management plan to manage stakeholders within the project.	Stakeholder management plan	Secondary: PMBOK 2017 Primary field interviews, document review.	Mixed methodology	Semi-structured interviews, expert judgment.	Stakeholders are working on other tasks.

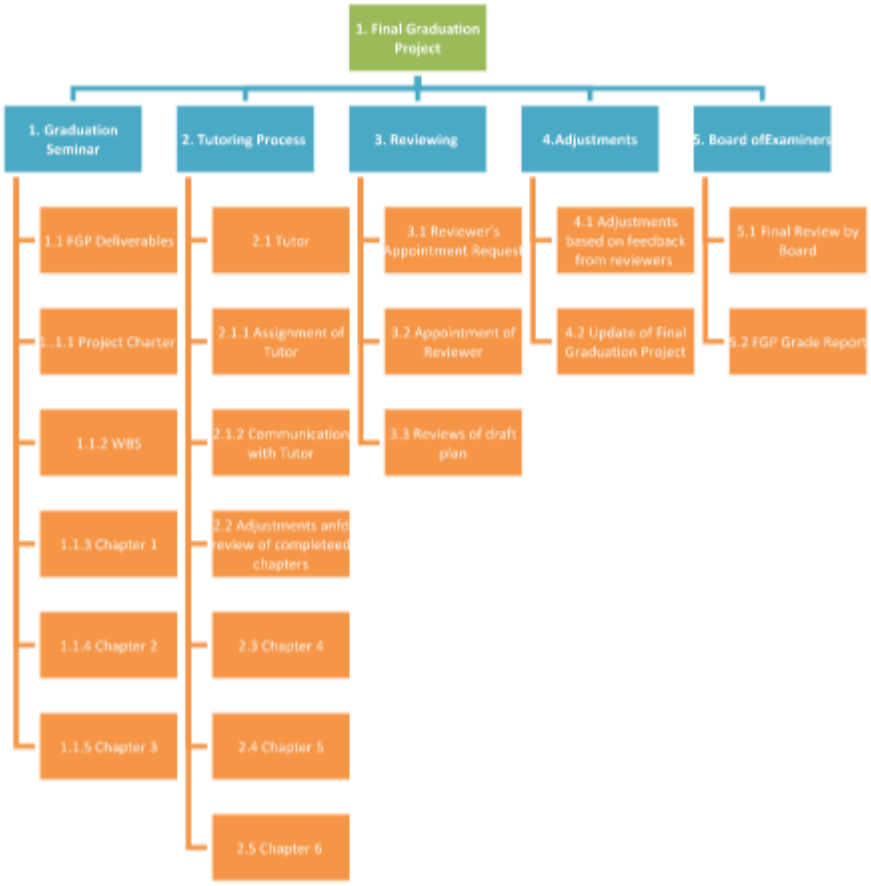
Objective	**Name of deliverable**	**Information sources**	**Research method**	**Tools**	**Restrictions**
To develop a communication plan to effectively communicate with stakeholders on the project.	Communication management plan	Secondary: PMBOK 2017 Primary field interviews, document review.	Mixed methodology	Semi-structured interviews, expert judgment.	Various communication strategies.
To design and implement a curriculum that effectively integrates principles of regenerative and sustainable development, and aligns with current key issues and trends in the field, while reflecting a K-12 program philosophy and defining program, grade-level, and course goals, with the aim of improving teaching and learning outcomes and better-preparing students for a sustainable future.	Regenerative management plan	Secondary: PMBOK 2017 Primary field interviews, document review.	Mixed methodology	Semi-structured interviews, expert judgment.	Timely access and available resources.

22. Validation of the work in the field of regenerative and sustainable development.

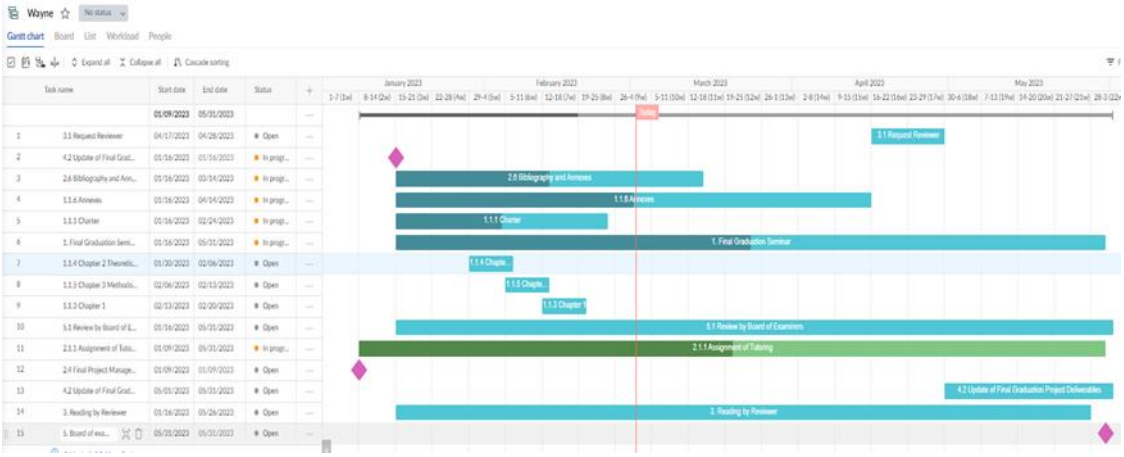
Quality education is the central sustainable goal in the creation of the FGP. The FGP sharpens the skills used in the project management Master's program and therefore the FGP allows for the opportunity to apply what the student has learned and therefore allows for application of the process as it relates to concepts in regenerative and sustainable development.

APPENDIX 2: FGP WBS

Figure 1: Organizational Structure



APPENDIX 3: FGP Schedule



APPENDIX 4 BIBLIOGRAPHY

Assumption vs. Constraint: Definitions, Types and Differences. (n.d.). Indeed Career Guide. https://www.indeed.com/career-advice/career-development/assumption-vs-constraint

Alex, M., May 1, er in C. on, 2018, & Pst, 1:30 P. (2018, May 1). Why planning is the most critical step in project management. TechRepublic. https://www.techrepublic.com/article/why-planning-is-the-most-critical-step-in-project-management/#:~:text=Project%20planning%20plays%20an%20essential

Bhat, A. (2018). Qualitative Research: Definition, Types, Methods and Examples. QuestionPro. https://www.questionpro.com/blog/qualitative-research-methods/

Booth, D. (2018). LibGuides: Research Methods: What are research methods? Libguides.newcastle.edu.au. https://libguides.newcastle.edu.au/researchmethods#:~:text=Research%20methods%20are%20the%20strategies

Bolghari, M.S. & Hajimaghsoodi, A., 2017. Action research as a bottom-up approach to foster teacher involvement in language curriculum change. Journal of Language Teaching and Research, Vol. 8, No. 2, pp. 362-369. http://www.academypublication.com/issues2/jltr/vol08/02/20.pdf

Calibey, S. (2021, June 29). *12 Tips for Creating a Successful Project Implementation Plan - Nifty Blog*. Niftypm.com. https://niftypm.com/blog/12-tips-for-creating-a-successful-project-implementation-plan/#

CHAPTER 7 Project Implementation Arrangement. (n.d.). Retrieved July 25, 2022, from https://openjicareport.jica.go.jp/pdf/11681731_03.pdf

Chronologically structured approach controlling closing process. (n.d.). www.pmi.org. https://www.pmi.org/learning/library/chronologically-structured-approach-controlling-closing-process-7931

Eby, K. (2019, January 16). *Demystifying the 5 Phases of Project Management*. Smartsheet. https://www.smartsheet.com/blog/demystifying-5-phases-project-management

Challenges and opportunities in the education system of Saint Lucia country review. (n.d.). Retrieved December 23, 2022, from https://www.summaedu.org/wp-content/uploads/2022/04/Country_review-ST-Luci%CC%81a_OK.pdf

Nevenglosky, E.A. et al. (2019). Barriers to effective curriculum implementation. Research in Higher Education Journal, 36 (Jan. 2019). https://files.eric.ed.gov/fulltext/EJ1203958.pdf

GOVERNMENT OF SAINT LUCIA Transforming Education Transforming Lives. (2015). https://assets.globalpartnership.org/s3fs-public/2016-st-lucia-education-sector-plan-2015-2020.pdf?VersionId=ti8fV1p8SwJPrUrZ3I1c84sXKgtV7APl

Heagney, J. (2012). Fundamentals of Project Management. AMACOM

Kerzner, H. (2017). Project Management: A Systems Approach to Planning, Scheduling, and Controlling. John Wiley & Sons

Lewis, J. P. (2017). Fundamentals of Project Management. Routledge.

Malsam, W. (2019, December 30). *What is an Implementation Plan & How Do I Create One?* ProjectManager.com. https://www.projectmanager.com/blog/implementation-plan

New Senior Secondary Curriculum - Physical Education

OECS Education Sector Strategy 2012 to 2026. (n.d.). OECS. Retrieved July 25, 2022, from https://www.oecs.org/en/our-work/knowledge/library/education/oecs-education-strategy

OECS Launches New Program to Enhance Educational Advancement in the Region. (n.d.). Pressroom.oecs.org. Retrieved July 25, 2022, from https://pressroom.oecs.org/oecs-launches-new-program-to-enhance-educational-advancement-in-the-region#:~:text=The%20USD%20%2410%20million%20OECS

Project Management Institute. (2017). *A guide to the Project Management Body of Knowledge (PMBOK guide)* (6th ed.). Project Management Institute.

Project Management Institute. (2021). A Guide to the Project Management Body of Knowledge, (*PMBOK*® Guide) - Seventh Edition, Project Management Institute, Inc., 2021.

Project Quality Management, Third Edition: Why, What and How: 9781604271935: Rose, Kenneth H.: Books. (2022). Amazon.com. https://www.amazon.com/Project-Quality-Management-Third-What-dp-1604271930/dp/1604271930/ref=dp_ob_image_bk?asin=1604271930&revisionId=&format=4&depth=1

Rahman, S. (2017). The advantages and disadvantages of using qualitative and quantitative approaches and methods in language "Testing and Assessment" Research: A literature review. Journal of Education and Learning, 6(1), 102–112. eric.

Saint Lucia - Access Government. (n.d.). Saint Lucia - Access Government. Retrieved December 15, 2022, from https://www.govt.lc/media.govt.lc/education/resources/publications/educational-statistical-digest-20200.pdf

Shape America - School and district physical education curriculum

6 Best Practices on How to Manage Quality Learn How Fostering a Culture of Continuous Improvement Advances Design and Business Results Whitepaper. (n.d.). Retrieved July 25, 2022, from https://campusuci2.com/REP/152/1523/07KAPMI/U5/00.pdf

Sources of Information. (2018, October 16). Library & Information Science Network. https://www.lisedunetwork.com/sources-of-information/#:~:text=An%20Information%20Source%20is%20a

The Physical Educator - Physical Education Curriculum Mapping

The University for International Cooperation (n.d). Graduation Seminar-Applied Research Final Graduation Project (FGP) [PowerPoint slides]. https://gspm.campusuci2.com/mod/book/view.php?id=8540

APPENDIX 5: PHILOLOGICAL DICTUM

Academic Advisor
Master's Degree in Project Management
University for International Cooperation (UCI)
San Jose
Costa Rica

Dear Academic Advisor,

Re: Thorough review and proof-reading of Final Graduation Project submitted by Erasmus W. Benti in partial fulfillment of the requirements for the Master's in Project Management.

I hereby confirm that Erasmus W. Benti has made all necessary corrections to the Final Graduation Project document: A Project Management Plan to Develop a Lower Secondary School Physical Education Curriculum and Strengthen Teachers' Capacity to Deliver and Assess the Lower Secondary School Physical Education Curriculum in Saint Lucia, as I have advised. In my opinion, the document meets the literary and linguistic standards expected of a student at that academic level.

I hold a Bachelor's degree in Linguistics from the Universidad Autonoma Metropolitana in Mexico City, Mexico and a Postgraduate Diploma in Methodologies in Teaching Spanish as a Second Language from the Universidad Metropolitana de Ciencias de la Educación in Santiago, Chile with more than a decade of experience as an educator. I believe this suitably qualifies me to make the above assessment.

Sincerely,

Johan Annerville