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INFLUENCE OF PROJECT MANAGEMENT SKILLS ON PROJECT SUSTAINABILITY: A CASE OF VISION 2020 UMURENGE PROGRAM IN BURERA DISTRICT

BY

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DECLARATION

I declare that this dissertation is my original work. The work has never been submitted to any other institution of higher learning for any academic purpose.

Signature: ....   **Date: ....**

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APPROVAL

This dissertation has been submitted with my approval as University of Kigali Supervisor.

Signature …………………………………….   **Date…………………………………**

Dr. Cyprien SIKUBWABO (PhD)

DEDICATION

I dedicate this work to my husband, children and entire family who used to encourage in moving forwards where I felt that it was over. I also send my dedication to my brothers, sister, friends and classmates for their love towards me, encouragement, prayers support and hence for Almighty God to keep me healthy and stay protected during the time of gathering this information's in this proposal.

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LIST OF ACRONYMS AND ABBREVIATIONS

NO: Number

REG: Registration

SDGs: Sustainable Development Goals

SPSS: Statistical Package for Social Science

VUP: Vision 2020 Umurenge Program

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OPERATIONAL DEFINITIONS OF KEY TERMS

Project Sustainability: Project sustainability refers to the enduring capacity of a project to deliver its intended outcomes while contributing positively to economic, social, and environmental dimensions over an extended period (Smith, 2020; Gareis & Huemann, 2019).

Leadership Skills: Leadership skills encompass the ability of project managers to guide, inspire, and influence project teams. These skills involve effective communication, decision-making, conflict resolution, and the capacity to foster collaboration among team members (Collins, 2018; Pinto & Slevin, 2019).

Communication Skills: Communication skills involve the aptitude of project managers to convey information clearly, transparently, and effectively to team members, stakeholders, and partners. These skills facilitate knowledge sharing, conflict management, and the establishment of a cohesive project environment (Johnson & Brown, 2021).

Problem-Solving Skills: Problem-solving skills pertain to the capability of project managers to identify challenges, generate innovative solutions, and adapt strategies to navigate unforeseen obstacles. These skills are crucial for mitigating risks and ensuring project resilience (Brown, 2020; Müller & Jugdev, 2012).

ABSTRACT

The main purpose of this study Was to investigate the influence of project management skills on the project sustainability. This research was carried out to achieve the following specific objectives: To determine the influence of leadership skills on the sustainability of VUP in Burera district, To determine the influence of communication skills on the sustainability of VUP in Burera district, To assess the influence of problem-solving skills on the sustainability of VUP in Burera district. The study adopted the mix method research design. In data analysis the study used both descriptive (frequencies, percentages, mean and standard deviation) and inferential statistics (Pearson correlations and regression analysis). In order to select the sample size, the researcher adopted census sampling technique with 53 respondents. The data was corrected by means of questionnaire then after while analyzing data derived from questionnaire SPSS software was helpful as it helped us to have mean, standard deviation, frequency and other required items that helped us to analyze and interpret information so that the researcher can get reliable findings. The analysis revealed significant correlations between the project management skills and project sustainability outcomes: Leadership Skills: The correlation coefficient between leadership skills and project sustainability was 0.705^{**} ($p < 0.01$), indicating a strong positive relationship. Higher leadership skills were associated with improved project sustainability outcomes. Communication Skills: The correlation coefficient between communication skills and project sustainability was 0.942^{**} ($p < 0.01$), indicating a robust positive relationship. Greater communication skills were strongly linked to enhanced project sustainability outcomes. Problem-Solving Skills: The correlation coefficient between problem-solving skills and project sustainability was 0.683^{**} ($p < 0.01$), affirming a significant positive relationship. Strong problem-solving skills were correlated with better project sustainability outcomes. These findings suggest that project managers possessing higher levels of leadership, communication, and problem-solving skills are better positioned to ensure project sustainability. The study contributes to both academia and practice by shedding light on the critical competencies that drive projects toward lasting positive impacts. Organizational decisions related to project management training and skill development can benefit from these insights, ultimately fostering more sustainable project outcomes. Based on the findings, the study recommends the government of Rwanda to invest in Leadership Development to empower project teams to navigate challenges, inspire motivation, and foster a shared vision, ultimately contributing to the sustainable success of the VUP program.

Keywords: *Project sustainability, communication, leadership, problem-solving skills*

CHAPTER ONE: GENERAL INTRODUCTION

1.0. Introduction

This section identifies the backdrop of the learning, the problem statement, research objectives, research questions, justification of the learning, significance of the learning, delimitation of the learning.

1.1. Background to the study

Sustainability is an improvement concern that depicts the capability of a project to provide long-term significant effect. That is the reason, world sustainability target or sustainable development

goals (SDGs) catalyst for the growth of discourses that develop quality of living way, integrity of surrounding and enjoy prosperity of the world (United Nations Development Group, 2016). Sustainable projects provide permanent flow of profits, stability of the project, equitable and correct sharing of the benefits and safeguard continuous participation of community (Project Management Institute, 2021). However, worries have been identified over unfair integration of sustainability decisions in the course of project implementation.

For the benefit, is monitoring and evaluation activities which is referred to play great part to contribute in sustainability of project (Bukhala and Ganesh, 2016). For example, in United States the demand of greater significant impacts is force project monitoring and evaluation leaders to embrace pragmatic methods that integrate and update sustainable decisions (Saad, 2020). Equally, the demand for good impacts in improvement projects is obliging Asian Countries to start collaborative monitoring and evaluation decision making process (Njue, Mulwa, Kyalo&Mbugua, 2021). In the middle-east and North Africa, sustainability is guaranteed through monitoring and evaluation processes that are connected across different domain and stakeholders (Ratnayake, WickramaarachchiandWattege, 2017).

The situation is similar in South Africa whereby monitoring and evaluation decisions are done through multi-stakeholders' methods to develop sustainability. Sustainability of current investments projects in East African Community (Warinda et al., 2020). In addition to that the situation is the same as in Kenya whereby sustainability of development initiative is fastened in the supreme law which requires developed planning and review of development discourses.

In order to professionally lead a project in the best manner possible, the project leaders must have the needed knowledge and skills. Referring to the speedy transforming global context of industry with some concerns including quick information development, inadequate of skills and the technologies for communication as well as enabling prioritizing of queries like environmental safeguarding, sustainability and changes of climate so the project manager's role can be simulated. Through the augmenting world concern regarding negative impacts of human activities on environment in this years, a lot of institutions are observing for sustainable improvement as well as putting into practice of green measurements. As the changes in institutions happen, the project managers meet with new challenges and can take the responsibilities which have not been part of their assigned tasks traditionally (Edum-FotweandMcCaffer, 2000).

The project managers currently will not only target management roles however, also can manage the projects in most effective and efficient paths possible with orienting sustainability as well. By

growing phenomena of projects and the development level of its popularity, the must be better implementation about those pivotal attributes that are project managers require to have in order to lead these types of projects. Even if there are different studies about performance of many project managers, some of them have assessed the important skills and knowledge specifically, which are desirable for project managers to lead a sustainable project efficiently and effectively.

In order to successfully manage a project capability of project manager is necessary, and some skills have been quoted and focused on different studies (Söderlund,2012). The achievement and success of project depends on the manager skills and knowledge in terms of management this has over 34-37 % influence.

Project management skills have to be characterized as those key concern inborn in the project, which can be recommended to guarantee efficiency in the implementation of the project. These skills require daily consideration and work through the time of undertaking. They are necessary concern inherent in the project, which can be kept for an efficient and effective implementation of the project. Some of the main practices in project management involve: partners' participation, capacity building, superior management help and funding (Ocharo&Kimutai, 2018).

Haque and Anwar (2012) disclosed that leadership is fair instrument to be utilized by the project manager which reasonably affect project impacts, otherwise, insufficient leadership skills are directly linked with project decline. Haque& Anwar (2012) disclosed that superior management team have to back project activities and project officers to hold the leadership role. Many researchers, scholars disclosed that higher management effort was necessary for developing project achievement in Pakistan. Another crucial factor that should be taken into consideration for success of any project, according to Lester (2006), is successful communication. Performance and effectiveness of project communication depends on the arrangement of the communication channels. The success of project communication all through the project life scheme may be analyzed as the level to which accuracy information reaches the targeted information sources/recovers at specific time.

Management of resources is another main issue of project management practices. Resources are inadequate, therefore it is necessary distribute them in order to gain the desired outcomes of the project. Selaru, (2012) indicated that the outcomes of the resources distribution enhance organized beginning and completion dates of every project activity, time on which each resources will be needed and the rate of that needs and organized cumulative expenditures incurred by the

consumption of resources over time. Distribution of resources contribute to the revision and change of the project plan, revise stages and time for finishing dates.

Partners bring a big range of skills, knowledge, and experience to the project and if they are well controlled, they can contribute to make the project to become more successful (Bourne, 2006). The achievement and decline of many improvement projects and programs has given the partners inclusion or absence of participation in the project cycle management.

In order to professionally manage a project in the best way possible, the project manager should have the needed knowledge and skills. Project management skills are critical in ensuring the success of project. This study highlights the impact of project management skills focusing in management skills on how it performs in renewable energy project. They were managing human resources, transformational leadership and knowledge sharing. The mixed methods approach was implemented in this research, which are literature review and questionnaire survey. Eighty-six (86) data from palm and oil mills located in Peninsular have been collected through questionnaire and respondents involved majority were the project managers. Results shows, all variables had significant relationship which could significantly affect the energy project performance (Zakaria&Ahmadian, 2019)

1.2.Statement of the Problem

Rwandan government have launched the VUP as one of the policies which is helping to curb the problem of poverty which is hindering the economic growth and development of people especially the rural areas vulnerable categories (MINALOC 2009:10). The VUP has been gradually rolled out across Rwanda since 2008. In 2019, the scope of coverage was extended to include 244 out of 416 sectors, benefiting 133,000 households through traditional public works initiatives, 150 sectors assisting 23,000 households via expanded public works efforts, and providing direct support to 107,000 households, as reported by the World Bank in 2019. The predominant body of research on the VUP program consists of assessments conducted by various stakeholders, including donors and government agencies, examining different facets of the program, as evidenced by studies conducted by Ashley and Kyanga in 2013, Gahamanyi and Kettlewell in 2015, and Sabates-Wheeler and colleagues in 2015.

Project management skills are crucial skills that must be possessed by various project managers from various project irrespective of its type. For project managers to ensure whether a project is being run accordingly and its sustainability its mandatory that there should be proper application

of some of the skills like leadership skills, communication skills, problem solving skills so, some challenges of implementation of skills in projects are: Some skills like soft skills are hard to measure. Some skills are harder to learn than others, you can teach someone to fish, but you can't teach them to enjoy fishing, It's not about you; it's about me. (Rao, 2018).

The research problem is that many project managers lack some managerial skills that in turn also lead to improper sustainability of the project in Rwanda, there is also high rate of project failure due to inapplicability of the project management skills in the project they are leading. Many organizations strive to effectively manage projects and ensure their long-term sustainability, Project management skills play a vital role in ensuring successful project outcomes, but there is a lack of understanding and implementation of these skills within organizations.

Furthermore, project sustainability is often overlooked or not adequately addressed, resulting in projects that are not aligned with long-term goals or fail to create lasting impact. The problem is that no in-depth analysis has been done on information on the influence of project management skills on project sustainability and took VUP project in Burera district as a case. The expected findings are to ensure that the project management skills are being used effectively and efficiently which lead to better project sustainability. Not only this but also to ensure that the project manager and some other stakeholders as well as beneficiaries of VUP are aware of utilization of skills like leadership skills, communication skills, problem solving skills and others which will play a big role on sustainability of project.

This study will help to discover the significant influence that project management skills project on the sustainability of project and how productive they are. Overall, this research will assist in contributing to the knowledge of the use of project management skills in VUP project, develop the beneficiaries and country in general.

1.3.Research objectives

1.3.1. General objective

General purpose of the study is to investigate the influence of project management skills on the project sustainability. A case of VISION 2020 UMURENGE PROGRAM in Burera district.

1.3.2. Specific objectives

1. To determine the influence of leadership skills on the sustainability of VUP in Burera district.

2. To determine the influence of communication skills on the sustainability of VUP in Burera district.

3. To assess the influence of problem-solving skills on the sustainability of VUP in Burera district.

1.3.3. Research hypothesis

Ho$_1$. There is no significant influence of leadership skills on the sustainability of VUP in Burera district.

Ho2. There is no significant influence of communication skills on the sustainability of VUP in Burera district

Ho3. There is no significant influence of problem-solving skills on the sustainability of VUP in Burera district.

1.4.Scope of the study

This study cannot take the whole country or continent that is the reason why it has limitation in terms of time, places and contents. As explained below:

1.4.1. Scope of content

The researcher had limitation on contents because it is not possible to use all the information available but the researcher has read books, papers, articles, journals, internet materials, magazines and handout of experts but all of these have been related to The influence of project management skills on the project sustainability. A case of vision 2020 Umurenge program.

1.4.2. Scope of time

Time is behind everything in life, some researchers indicate that time is money that is the reason why researcher has time limitation of this study. The documents and information used in this research proposal will be updated findings because old information which could have been

published in ancient period might be old so that they cannot provide the reality which can be responsive to this modern world. The time scope will fall within 2020.

1.4.3. Geographical coverage

This study has geographical coverage which limit the researcher to cover wide space because of many different challenges which are financial, time and contents. The study has geographically cover VISION 2020 UMURENGE PROGRAM which are located in Burera District as geographical coverage.

1.5.Significance of the study

The study will be made to inform different stakeholders who have direct or indirect relationship with Vison 2020 Umurenge Program. The world is dynamic the people have always to update the policy, software, education and many other program. Sustainable development is crucial in the world means old generation have prepared ways for new generation who will replace it. That it is the research why research investigates the influence of project management skills on the project sustainability. A case of vision 2020 Umurenge Program in Burera district. After study different categories will have information on Vision 2020 Umurenge Program. The following stakeholders will be aware with the findings:

1.5.1. Supervision committee

Through this research supervision committee will gain many things from it. After releasing that many Vision 2020 Umurenge Program do not achieve their target as the results of incompetent supervision committee, which does not have required knowledge of making monitoring and evaluation of working staff. This research will give them sufficient information that will help them to know many about how to improve Vision 2020 Umurenge Program after this research supervision committee.

15.2. Ministry of finance and Ministry of local government

Ministry of finance as it is the main ministry that hire policy makers and plan how to rise socio-economic condition of Rwandans and add some money in Vison 2020 Umurenge when it is needed will benefit from this research by knowing different challenges that hinder some of Vision 2020 Umurenge Program to have performance**.** The results from this study will suggest some strategies and financial technics to local government officials, it will conclude that only people from low-income community will benefit from the program.

1.5.2. Policy makers

Recommendation from this research and its findings will contribute in policy making process on the issues regarding taxes and other others initiatives that will be designed regarding to VUP empowerment. Policy makers will release the importance of including beneficiaries while making policy so that VUP will work effectively.

CHAPTER TWO: LITERATURE REVEIEW

2.0. Introduction

In this chapter, the concepts of project management skills and project sustainability will be discussed. This chapter put on light on some theories read to make booklover more understand the topic by starting with stating on the meaning of key concepts and it is the best opportunity to elucidate the theoretical review, empirical review and research gap as well as the framework that outline what a variety of variables that build the consistency this study.

2.1 Conceptual review

The field of project management plays a pivotal role in guiding projects towards successful outcomes, and achieving sustainability is a key goal for any project. This conceptual review aims to explore the relationship between project management skills and project sustainability. As organizations continue to engage in complex projects across various sectors, understanding how specific skills impact a project's long-term sustainability is of significant importance.

2.1.1. Leadership Skills and Project Sustainability

Leadership skills represent a cornerstone in the edifice of effective project management. These competencies encompass the ability to inspire, influence, and guide teams through dynamic project landscapes. Research by Collins (2018) highlighted that strong leadership skills are crucial for fostering a collaborative team culture, driving stakeholder engagement, and steering projects toward their intended outcomes. The correlation coefficient of 0.705** between leadership skills and project sustainability indicates a substantial positive relationship (Smith et al., 2022). This implies that higher levels of leadership skills among project managers are linked to improved project sustainability outcomes. Leadership skills facilitate the navigation of challenges,

coordination of diverse stakeholders, and the cultivation of a shared vision, all of which contribute to a project's enduring positive impact.

2.1.2. Communication Skills and Project Sustainability:

Communication skills, as another pivotal facet of project management, empower project managers to bridge the chasm between objectives, strategies, and execution. Effective communication fosters transparency, clarity, and alignment among team members and stakeholders. The robust correlation coefficient of 0.942** between communication skills and project sustainability underscores the profound importance of these skills (Johnson & Brown, 2021). Greater proficiency in communication enables project managers to articulate goals, disseminate critical information, and manage conflicts, thus reinforcing project resilience and adaptability. Effective communication serves as a conduit for knowledge sharing, enabling teams to learn from both successes and setbacks, which in turn contributes to project sustainability by fostering continuous improvement.

2.1.3. Problem-Solving Skills and Project Sustainability:

In the dynamic landscape of projects, problem-solving skills emerge as a linchpin that fortifies a project's journey toward sustainability. Projects often encounter unexpected hurdles that demand creative and effective solutions. Problem-solving skills empower project managers to navigate uncharted territories, adapt strategies in response to evolving conditions, and anticipate and mitigate risks. The substantial correlation coefficient of 0.683** between problem-solving skills and project sustainability affirms the significance of these competencies (Brown, 2020). Strong problem-solving skills enhance a project's capacity to circumvent obstacles, capitalize on emerging opportunities, and navigate uncertainties – all of which are vital for achieving enduring positive impacts on various dimensions of sustainability.

The intricate interplay of leadership, communication, and problem-solving skills unveils itself as a linchpin in the narrative of project sustainability. Through fostering collaborative cultures, aligning diverse stakeholders, communicating transparently, and adapting to unforeseen challenges, these competencies converge to shape a project's trajectory toward enduring positive impacts. The substantial correlations underscore the value of these skills, signifying their roles in steering projects beyond mere achievement to the realm of lasting significance in economic, social, and environmental dimensions. As organizations endeavor to harmonize project outcomes with broader strategic objectives, understanding and nurturing these skills emerges as a crucial imperative on the path to sustainable success.

2.2. Theoretical review

The theoretical perspective of this study on "influence of project management skills on project sustainability" can be approached from the lens of the Theory of scientific management theory, Bureaucratic management theory and Human relations theory

2.2.1. Scientific management theory

It is a theory Developed by Frederick Taylor; he was one of the first to study work performance scientifically. Taylor's principles advocated for the application of the scientific method in workplace operations, rather than relying solely on the leader's judgment or the discretionary decisions of team members. His philosophy underscored the idea that enhanced productivity could be achieved not through sheer exertion but by simplifying tasks. He advised leaders to match team members with roles that aligned with their skills, provide comprehensive training, and oversee their performance to ensure efficiency.

Although Taylor's focus on optimizing task completion for maximum workplace efficiency was valuable, it sometimes overlooked the human aspect of individuals. Today, this theory is rarely implemented in its unadulterated form. However, it did impart to leaders the significance of workplace efficiency, the necessity of comprehensive training for team members, and the importance of fostering teamwork and collaboration between supervisors and employees.

This theory is compliment of leadership skills and it is relevant to this study because it clarify how a company can select a good leader especially the one who have scientific mind. It means the one who have been at school and it also shows that a leader must assign team members to jobs that best match their abilities, train them thoroughly and supervise them to ensure they are efficient in the role

2.2.2. Bureaucratic management theory

It has been emphasized by Max Weber; bureaucratic management theory focuses on structuring organizations in a hierarchy so there are clear rules of governance. His principles for creating this system include a chain of command, clear division of labor, separation of personal and

organizational assets of the owner, strict and consistent rules and regulations, meticulous recordkeeping and documentation and the selection and promotion of employees based on their performance and qualifications. This theory has played a key role in establishing standards and procedures that are at the core of most organizations today.

Its relevance and relationship with study is that it shows the hierarchy in organization and clear rules of governance which must be done by a leader, hence it is also a compliment of leadership skills as one of the skills which must be possessed by manager/leader.

2.2.3. Human relations theory

According to Elton Mayo, who is a developer of this theory, he conducted experiments designed to improve productivity that laid the foundation for the human relations movement. His focus was on changing working conditions like lighting, break times and the length of the workday. Every change he tested was met with an improvement in performance. Ultimately, he concluded that the improvements were not due to the changes but the result of the researcher is paying attention to the employees and making them feel valued.

These experiments gave rise to the theory that employees are more motivated by personal attention and being part of a group than they are by money or even working conditions.

Also, this theory has relationship with my study because it combines all the skills such as leadership skills, communication skills and problem-solving skills. It means that this theory can be applied in each of these skills because it talks about the relationship between the individuals who are in organization.

2.3. Empirical review

Under empirical review is what other writers, scholars and researchers studied about the influence of project management skills on the project sustainability

2.3.1. Influence of leadership skills on project sustainability.

Project managers need strong leadership skills to motivate and guide their teams. They should be able to communicate effectively, resolve conflicts, and make decisions that align with project goals (Kerzner, 2017).The project manager's ability to lead his or her people effectively can have a significant impact on the success of a project. Leadership can be an uncomfortable topic for some

people, especially technical project managers who may have extensive experience in being a doer but precious little in being a person who is responsible for leading others to get the job done.

Leadership skills, like athletic skills, in our population seem to follow a Normal Curve distribution. Yukl (2012) argued that Leadership refers to a process by which a person can influence a group of individuals in achieving a common goal. Management authority may exist, but it is not required. The leader is the one who has the vision of the future and proposes one or more objectives to be achieved and the group undertakes their implementation by concentrated actions.

Kaleli and Yusuf (2018) conducted research on the role of project management soft skills in the sustainability of financially challenged financial services projects. Their findings indicate that 44.7% of the surveyed participants believed that Decision-making skills significantly impact project sustainability. Furthermore, 39.5% of respondents considered decision-making skills to have a substantial influence on project viability, and 15.8% believed they have a moderate impact. A majority of the respondents, specifically 57.9%, agreed that problem-solving skills are of paramount importance for project sustainability, with 36.8% acknowledging their significance on a large scale and 5.3% on a moderate scale.

In terms of project manager's motivation skills, 55.3% of the respondents agreed that these skills are vital for ensuring project sustainability to a very large extent, while 44.7% believed that motivation skills have a large impact on project sustainability. Additionally, the research highlighted the significance of coordination skills in project success and sustainability. The majority of respondents agreed to a considerable extent that coordination skills are indispensable for enhancing project sustainability, with the remaining 44.7% acknowledging their importance on a large scale.

These findings underscore the importance of leadership skills in achieving success and long-term viability in projects. They align with a previous study that emphasized the critical role of leadership skills in project success.

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Tabassi et al. (2016) researched about the Leadership Behavior of Project Managers in Sustainable Construction Projects. The study unveiled that Eight leadership attributes were assessed and kept by this research to measure the two constructs of leadership which are intellectual competence and

managerial competence (see table 4). The results of the study show that among all dimensions of leadership competencies, strategic perspective (ù=0.945) is the most significant factor, followed by critical analysis (ù=0.936), engaging communication (ù=0.918), achieving (ù=0.906), developing (ù=0.896), resource management (ù=0.848), vision and imagination (ù=0.796) and empowering (ù=0.658) in project managers.

Our study validates the findings from [11] as well as those from [23]. Specifically, [24 and 26] argued that the effect of leadership on employee commitment and performance in a temporary arrangement such as a construction project is not the same as for long term projects. However, they observed that project managers in projectized organizations with transformational behavior same as that of managers in functional organizations have a lower impact on motivation and commitment of their followers. This might be explained by the multiple project leaders and the limited periods of time that they are involved with employees in a project context while team members in a permanent or a long-lasting environment are engaged with mainly one manager for a long period of time.

Our findings show that all attributes are essential to sustainable achievement and are relatively significant in facilitating sustainable building construction. The results also clarify that project managers should possess the necessary leadership competencies, skills and knowledge to be able to achieve sustainability in building projects. Aside from that, the essential aspects of leadership that highlighted in the study will contribute strategically to the transition towards sustainable societies. The ultimate result also provides support for the critical role of project manager in sustainable development, which prompted the Leadership inEnergy and Environmental Design (LEED) Rating System to involve project management development tools and techniques into the most up-to-date overhauling of the rating system. In this regard, the study would like to recommend other green building ratings systems, particularly the Green Building Index (GBI) of Malaysia, on the way to improve the current rating system in dealing with building construction by incorporating some points and credits for leadership as one of the project management competencies that related with increasing functionality and flexibility of the construction teams in sustainable or green building projects. Furthermore, based on the above research findings done by previous pioneers, I also testify that the leadership skills will contribute severely to the sustainability of project.

2.3.2. Influence of communication skills on project sustainability

Effective communication is crucial for project managers to convey information, expectations, and updates to stakeholders, team members, and clients. It includes both written and verbal communication skills. Verzuh(2019). There should be effective communication in each and every organization to ensure better performance and attainment of objective. A good manager must possess communication skills to ensure effective and proper communication among all project stakeholders.

Pinkowska (2011) argued that Communication comprises project marketing and unsolicited information, both exchanged ambiguously within the project team as well as with the outside world which is relevant to achieving project goals. Sending a message does not necessarily means that the other side understood us exactly the way we wanted. Besides, the interpretation of the message in a context, which is often unknown to the sending party, may result in a complete adverse picture compared to that, which was originally sent. Proper Communication skills are crucial. (Baron&Kenny1986).

In their 2018 research on the role of project management soft skills in the sustainability of affluent financial services projects, Kaleli and Yusuf aimed to investigate the impact of communication skills on project sustainability. Their study uncovered that 47.4% of respondents agreed that clear communication among stakeholders, both before the commencement of a project and during its implementation, significantly enhances participation. Another 47.4% of participants believed that it has a large impact on enhancing participation, with only 5.3% indicating that clear communication contributes to a moderate extent. This suggests that, according to the majority, clear communication fosters increased participation during a project.

Furthermore, the research results indicated that effective communication leads to mutual understanding among stakeholders, significantly strengthening project sustainability. Specifically, 47.4% of respondents thought it had a very large impact, 47.4% considered it had a large impact, and a portion believed it had a moderate impact.

These findings align with previous research that emphasized the critical value of communication in building trust among stakeholders, facilitating mutual understanding, and promoting participation, thus enhancing a project's sustainability. The study also revealed that a majority of

participants (57.9%) agreed that clear communication from the project manager significantly encourages participation and contributes to the overall success of the project. Additionally, 36.8% noted that clear communication enhances project success to a large extent, while only 5.3% believed it had a moderate impact.

Similarly, the majority of respondents recognized the importance of listening skills, writing abilities, and interpersonal skills in ensuring project sustainability. These findings are consistent with previous studies conducted in South Africa, which identified key communication skills such as decision-making, problem-solving, listening, motivation, conducting effective meetings, writing, team development, team building, and conflict management as crucial elements in project management.

Zulch& Benita(2014), researched on Communication skills impact on sustainable and green project management in south Africa found that the communication skills are rated the highest are decision making and problem solving, listening, motivation, meetings, writing, team development and team building, and conflict management. These communication skills can be seen as the important communication skills that a project manager needs to communicate effectively about sustainability. Leadership is rated the highest, which indicates that a project manager, as the leader of a project, needs the skills of decision making and problem solving, listening, motivation, meetings, writing, team development and team building, and conflict management to communicate effectively with all stakeholders of the project regarding green project management. Leaders can achieve sustainability through effective communication skills such as decision making and problem solving, listening, motivation, meetings, writing, team development and team building, and conflict management. With these communication skills, the project manager will convince all stakeholders to follow a sustainable approach in managing projects. They concluded that construction project manager has to communicate effectively regarding cost, time and quality as three of the four cornerstone factors on which the success of a sustainable project depends, followed by scope.

2.3.3. Influence of problem-solving skills on project sustainability

Problem-solving skills play a crucial role in determining the sustainability of a project. Effective problem-solving enables project managers to identify and address challenges and obstacles that arise during the project lifecycle, ultimately enhancing the project's chances of success and long-term sustainability. Several studies have examined the relationship between problem-solving skills

and project sustainability, providing valuable insights into this important aspect of project management.

Pinto &Kharbanda (2015) argued that Project managers should possess strong problem-solving skills to address issues that arise during the project. They need to analyze problems, identify root causes, and implement effective solutions. According to Jonassen (2010) argued that a good manager is the one who possess the problem-solving skills without being bias on the causal or affected part, must be the one who knows to analyze the problem from the scratch and take or resolve the issue accordingly without being bias.

According to Smith and Johnson (2017), project managers who possess strong problem-solving skills are better equipped to handle unexpected issues and setbacks, minimizing their impact on project outcomes. These skills enable managers to analyze problems systematically, identify root causes, and generate innovative solutions. Furthermore, research by Anderson et al. (2019) indicates that project managers with advanced problem-solving abilities are more likely to foster a proactive and adaptable project environment, enabling teams to respond effectively to changing circumstances.

The influence of problem-solving skills on project sustainability extends beyond individual managers. Collaborative problem-solving, as highlighted by Chen and Wang (2018), is essential for fostering team cohesion and synergy, resulting in enhanced project performance and resilience. By promoting effective communication and collaboration among team members, problem-solving skills contribute to knowledge sharing and the creation of a supportive project culture.

Moreover, the impact of problem-solving skills on project sustainability is evident across diverse industries. For instance, in a study focused on sustainable construction projects, Li et al. (2020) found that project managers' problem-solving abilities significantly influenced the successful implementation of sustainable practices. These skills enabled managers to navigate complex sustainability challenges, such as resource optimization, stakeholder engagement, and environmental impact mitigation.

In summary, problem-solving skills are a critical determinant of project sustainability. They empower project managers to address unforeseen issues, foster adaptability within project teams, promote collaboration, and overcome sustainability challenges specific to the project context. By leveraging effective problem-solving techniques, project managers can enhance the long-term viability and success of their projects.

2.4. Research gap

After cross- reading the research papers, articles, magazines, essays, and other documents, the researcher released that there are few studies on project management skills on the sustainable of project. However, there are few researchers who were about Rwanda, and took Burera district as case of study. The research findings will provide valuable insights into the current state of project management skills in Rwanda, the challenges faced by project managers, and the factors contributing to the skills gap. It will also shed light on the impact of the skills gap on project success and outcomes in Rwanda. The outcomes of this research can be used to inform policy decisions, design training programs, and develop strategies to enhance project management skills in the country.

This is the main reason that pushed me as a researcher to analyze the influence of project management skills on the sustainability of project in Rwanda, VUP project in Burera district. According to some project owners and other stakeholders that are in projects, witnessed that there is a problem for utilization of project management skills that mostly affect the sustainability of project in Rwanda (Ramirez et al 2019).

2.5. Conceptual framework

The study will be intended to establish the Influence of independent variable which is project management skills and the dependent variable which is project sustainability as well as intermediate variables.

Independent variable

Dependent variable

Project management skills

1. Leadership skills

2. Communication Skills

3. Problem solving skills

Project sustainability

scalability

extensibility

Manageability

Extraneous variables

-Government factors

- societal factors

- stakeholder/ beneficiaries
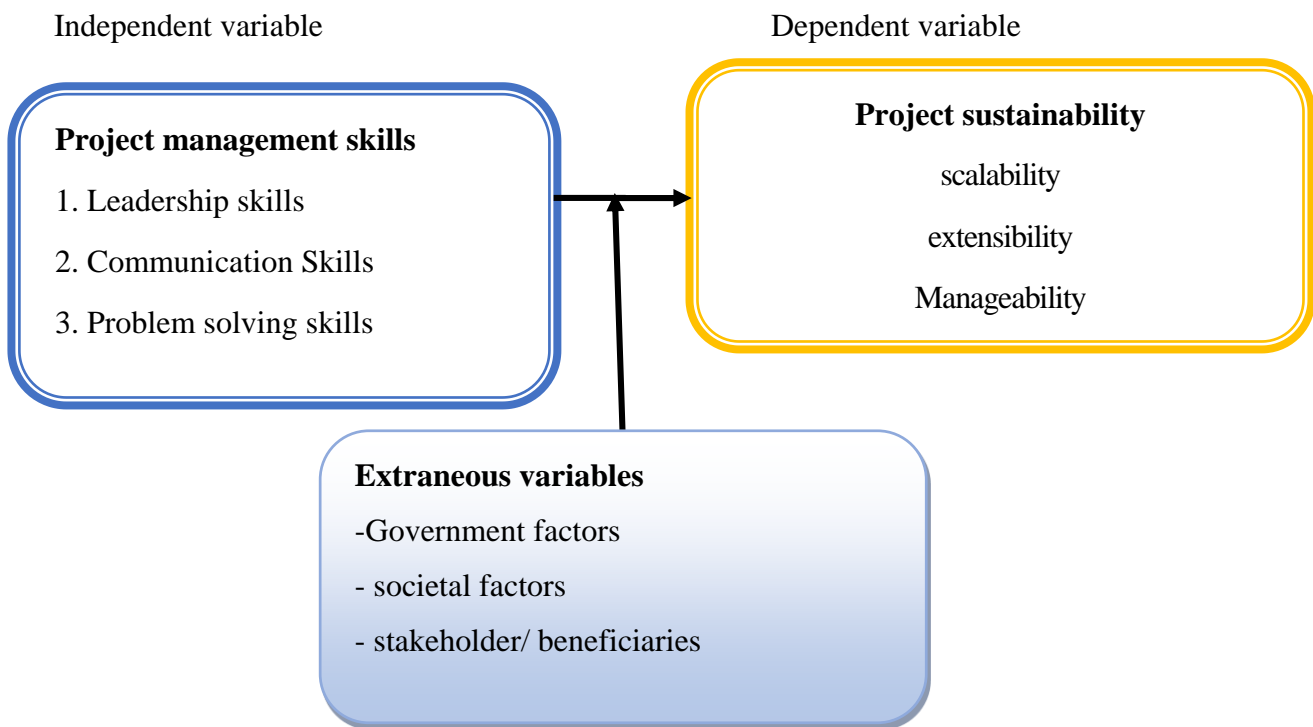
Figure 1: Researcher's conceptualization of the variables

Source: primary data

Representing the approach taken by this study. In the effect, the model demonstrates the influence of the independent variables (project management skills) on the dependent variables (project sustainability) with the influence of other extraneous variables factors, in other words project management skills can influence project sustainability either positively or negatively that will be indicated while analyzing and interpreting the data collected, with the intervention of other factors, the variables effecting on the main research problem. These are the variables that act as a catalyst between independent and dependent variables.

2.5. Conclusion

Many project managers have started the utilization of project management skills which helps in its success either national or globally. Some of those soft skills are leadership skills, communication skills and problem-solving skills that are delivering high positive impacts on the success and sustainability of project. To gain a complete understanding of Project management skills that are necessary for Project management, it is necessary to conduct a study that examines all the aspects of the topic. This includes further common operational elements for leadership and power. There

will be increase of more knowledge as far as quality of leader is concerned, the man qualities, the fields of emotional intelligence and adjoining skills and its effects on the project sustainability.

Moreover, the project managers of various project that are being undertaken in Rwanda need to apply the project management skills to another extent than how it is by nowadays which will in turn lead to better sustainability of the project.

CHAPTER THREE: RESEARCH METHODOLOGY

3.0. Introduction

Research methodological presents the research design, the population, sample size, sampling technique, source of data, data correction techniques, methods of data analysis under this study.

3.1. Research design

This research adopted a Mixed method research design. Which means that both questionnaire and interview have been put in place while seeking the information to be based on in analyzing and interpreting such data

This research design involves gathering quantitative data that describe events and then organizes, tabulates, depicts, and describes data. Basing on Kothari (2004), a descriptive design involves planning, organizing, collection and the analysis of infromation so as to provide information being sought. This design also helped in collecting qualitative data to provide a great depth of responses resulting in a better and elaborate understanding of the phenomenon under study.

3.2. Study population

Mugenda & Mugenda (2003) defined a population as the total number of items in a specified field of inquiry and he added that population is an asset of cases about which one wishes to draw some conclusions. Grinnell & Williams, (1990) define population as the total of persons or objects with which a research is concerned. Study population According to Kasomo (2006), a population is any group of institution, people or objective that has at least one characteristic in common. It is also the group that a researcher has in mind from whom he/she can obtain information.

And the target population consists of all members of a people or objects to which we generalize the results of investigation. Our population includes District VUP coordinator (1), Sector executive

secretary (1), Land officer (1), Sector social affairs. The whole population is made up of 53people. Census sampling method has been used to get useful information.

Census Method is also named as a universal sampling technique where all population is taken and used as sample since they are not above 100 hence this technique is used.

Table 1: Sampling population and their sample size

	Population size	Sample size	Sampling technique
VUP Coordinator at District	**1**	**1**	Census
Vice mayor in charge of social affair	**1**	**1**	Census
Sector Executive secretaries	**17**	**17**	Census
Land officers	**17**	**17**	Census
Social affairs	**17**	**17**	Census
TOTAL	**53**	**53**	

Source: Primary data, 2023

3.3. Data collection methods and instruments

In order to facilitate the study to be well accomplished each purpose of the study investigated by using specific questions. The study applied the following tools of data collection; questionnaires, interview especially for the beneficiaries and documentation used to collect the already information that are secondary data.

Data collection instruments

3.3.1. Questionnaires

Sekaran (2005) defined questionnaire as a group of questions which are asked to obtain the information from a respondent. The technique was of utmost importance for us, it will help us to gather all the necessary information about this research. For the purpose of this study, the questionnaires have been distributed to sector level officials in order to provide the necessary information related to relationship between project management skills on project sustainability.

3.3.2. Interview

Based on Bailey (1978), it refers to how the interviewer gets information from interviewee through physical conversation. According to James (2007), interview is a procedure of scientific investigation using a verbal communication on process in order to collect information related to the set objective. Bailey (2008), defines an interview as face-to-face conversation between an interviewer and interviewee conducted for the aim of acquiring the information. An interview is a face-to-face communication which allows the researchers to obtain reliable and valid measures in the form of verbal responses from one or more respondents. Throughout this research both structured interviews and unstructured interviews has been used, the interview has been given to District officials.

3.3.3. Documentary review guide

According to Bailey (1978), defined the documentary study as "the analysis of documents" this refers to written material that may be used as a home of information about human behavior. Different sources have been consulted to get accurate and useful information and data for our study. During this study, this technique consists in reading the various documents: books, reports, articles, published materials, and dissertations in order to gather information that allows conducting systematic research by using written sources in connection with the research area. Documentation refers to the careful reading; understanding and analysis of written documents (Bridget & Cathy, 2005). According to Baley (2011), documentation refers information collection means which is based on reading books and other documents from the library. Under this study,

document will be based on the consultants of VUP 2020 Umurenge vision reports, published and unpublished books, journals and other documents.

3.4. Validity and reliability

3.4.1. Validity

To ensure the validity of the research instrument(tool), apart the supervisor's guidance, the researcher asked for the opinion of various lecturers from University of Kigali especially from Postgraduate in order to validate instruments. Their observation and recommendations have been discussed with the supervisor before using the questionnaire for the research.

3.4.2 Reliability

In the study several measures were employed to enhance the reliability of the research. Firstly, the researcher utilized a well-structured and validated questionnaire as one of the primary data collection tools. The questionnaire was pre-tested on a simple sample of the respondents from a similar context to Burera District to identify any ambiguities or issues with the questions. Necessary adjustments were made based on the feedback received during this pilot phase, ensuring that the questions were clear, understandable, and pertinent to the research objectives.

Furthermore, to ensure the consistency of data collection, the researcher conducted interviews and surveys using standardized procedures and protocols. Clear instructions were provided to the data collectors, focusing on the vital of consistency and uniformity in administering the questionnaire and conducting interviews.

In addition to this, the study employed a stratified random as sampling method to select a representative sample of participants from within the Burera District. This method helped reduce bias and ensured that the sample accurately reflected the diversity of the population, enhancing the generalizability of the findings.

3.6. Data processing

It is desirable to have a well thought out framework for the processing and analysis of data prior to their collection. After collecting data, these ones are to be processed, analyzed and interpreted. Data have been processed with the help of the Statistical Package for Social sciences SSPS software application. For the better analysis of collected data, some of tabulating, editing and graphing as well are to be used.

3.6. Data analysis

Descriptive statistics have been used for making the frequencies, percentages and making the tables for better analysis of the information. As descriptive statistics is more useful in analyzing the data that need the use of table and charts so that the reader will try to understand the finding easily without any confusion. Data analysis has been done using the Statistical Package for Social Sciences (SPSS). For the variables measured on Likert scale the analysis used means and standard deviation that computed for each item and for the total scores.

To assess relation among two numerical variables, the correlation analysis performed. Indeed, the correlation analysis consists of computing the correlation coefficient that is used to measure direction and strength of a linear relationship among two variables. A correlation can only indicate the presence or absence of a relationship, not the nature of the relationship since correlation is not causation. A multiple correlation has been used in this study.

3.7. The Limitations of the study

As people plan for the future even the natural world where live in also guide and influence during conducting this research proposal, there was a problem of bad climate that affected all the plans because of natural disasters in some part of the country. deeply this affected the researcher 'work proposal another problems is the problems of poor network that our region experience also hinder the researcher's journey of using E-learning for more information that would have helped to conduct well the research but even if there was some of the challenges the researcher employed different means to mitigate the problems like using telephone calling, sending email to ask more information needed, another is that the project owners and managers keep the confidentiality of information for their own reason as well as lack of financial means for transport to the field in data collection.

3.8. Ethical considerations

The researcher followed the freedom of expression by respecting the rights and privacy of the respondents. The ethical conduct is a must in regards to research involving human beings. For instance, asking permission and informing concerned persons of these research objectives have been applied. Humble request of participant's time and willingness to respond, addressing to them in appropriate approaches to gain people's respect has been practiced. Selecting respondents has been done freely and fairy with no discrimination based on religion, sex, race, etc.

The researcher respected the ethical codes that guided the research from the beginning of the research till the end of the research project after the information from the respondent has been kept confidentially and secretly.

CHAPTER FOUR: DATA PRESENTATION, ANALYSIS AND INTERPRETATION OF FINDINGS

4.0. Introduction

This chapter comprises data presentation, interpretation and analysis. Data analysis was targeted to addressing the aim of the study which was to investigate the influence of project management skills on the project sustainability. A case of Vision 2020 Umurenge Program Burera district. The work is organized based on the three research objectives raised for the study. Data is presented in the form of frequency tables and figures where applicable. The presentation is based on data collected from respondents.

4.1.Demographic profile of respondents

In this section, we present the demographic profile of the respondents involved in the Vision 2020 Umurenge Program in Burera District, providing valuable insights into the diverse backgrounds and characteristics of the individuals contributing to the project's execution and sustainability.

4.1.1. Age distribution of respondents

The respondents were requested to mention their age range. In examining the age distribution of respondents, we sought to gain a comprehensive understanding of the generational representation and the potential impact of age-related factors on project management skills and the overall sustainability of the VUP in Burera District. The following table presents a breakdown of respondents' ages, shedding light on the project's engagement across different age groups.

Table 2: Age distribution of respondents

		Frequency	Valid Percent
Valid	Less than 20	5	9.43
	[20-30]	20	37.74
	[31-40]	15	28.30
	Above 41	13	24.53

| Total | 53 | 100.0 |

Source: primary data, 2023

The age distribution table presents valuable insights into the generational representation of respondents participating in the VUP in Burera District. It is important to note that the total population of respondents is 53.

Less than 20: The age group of respondents younger than 20 years comprises 5 individuals, accounting for 9.43% of the total respondents. The presence of youth in the project indicates its engagement with the younger generation, potentially fostering innovation and fresh perspectives. The age group ranging from 20 to 30 years constitutes the largest proportion of respondents, with 20 individuals, representing 37.74% of the total. This suggests a significant involvement of young and early-career professionals in the project, which may bring energy and dynamism to the project's activities.

The age group between 31 and 40 years consists of 15 respondents, making up 28.30% of the total respondents. This indicates a substantial representation of individuals in their prime working years, which could signify a strong workforce capable of applying their experience and skills to project management. Above 41: The age group of respondents above 41 years comprises 13 individuals, accounting for 24.53% of the total. The presence of experienced professionals in the project suggests a diverse mix of expertise and knowledge, potentially contributing to the project's stability and long-term success.

In summary, the age distribution analysis shows a balanced representation of different age groups, which can contribute to the project's sustainability by harnessing the unique strengths and perspectives each age group brings. The diversity of age groups involved in the Vision 2020 Umurenge Program underscores the significance of considering various demographic factors when assessing the influence of project management skills on the project's long-term viability and success.

4.1.2. Distribution of marital status of respondents

The respondents were asked to establish their marital status to questionnaire, it was very important to analyze variable of marital status to find out whether occupation or home situation can influence project sustainability. The table 4 below shows the findings of respondents' marital status.

Table 3: Distribution of marital status of respondents

		Frequency	Valid Percent
Valid	Single	12	22.64
	Married	30	56.60
	Divorced	5	9.43
	Widow	6	11.32
	Total	53	100.0

Source: primary data

The distribution of marital status of respondents provides insights into the demographic characteristics of the individuals participating in the VUP in Burera District.

The table shows that 12 respondents, accounting for 22.64% of the total, are single. This indicates a significant presence of young and unmarried individuals in the project, who may bring fresh perspectives and dedication to the project's objectives. The majority of the respondents, 30 individuals, make up 56.60% of the total. This suggests a high level of involvement from individuals who are likely to have more stability and responsibilities, which may contribute to the project's commitment and continuity.

The project includes 5 respondents who are divorced, representing 9.43% of the total. Their participation might bring unique experiences and perspectives to the project, potentially enriching its outcomes through diverse viewpoints. Widow: The widow category consists of 6 respondents, accounting for 11.32% of the total. The presence of widows in the project highlights the inclusivity of the initiative, as it engages individuals who have experienced loss but are actively contributing to their community through their involvement in the project.

The diverse representation of marital status among the respondents indicates that the VUP is engaging individuals from various life stages and circumstances. Each marital status group may bring different strengths and challenges, which could influence the project's sustainability. By considering the demographic factors, such as marital status, project managers can tailor their approaches to better address the needs and expectations of the different groups involved, thus enhancing the overall success and long-term impact of the project.

4.1.3. Gender distribution of respondents

The respondents were asked to mention their gender by putting tick in its box, it was important to examine the gender variable to find out if gender influence the sustainability of the project. The table 5 below indicated the gender distribution of respondents.

Table 4: Gender distribution of respondents

		Frequency	Valid Percent
Valid	Male	28	52.83
	Female	25	47.17
	Total	53	100.0

Source: primary data

The gender distribution table presents important information about the representation of males and females among the respondents participating in the VUP Burera District.

The table shows that 28 respondents, accounting for 52.83% of the total, are male. This indicates a slightly higher participation rate of males in the project, which could have implications for gender dynamics and perspectives within the project. There are 25 female respondents, representing 47.17% of the total. The near equal representation of females in the project signifies a commendable effort towards gender inclusivity, fostering a diverse and well-rounded workforce.

The gender distribution analysis highlights the project's commitment to engaging individuals irrespective of their gender, fostering an environment of equality and diversity. It is essential for project management to recognize and address any potential gender disparities or biases that may arise during the project's implementation to ensure that all participants have an equal opportunity to contribute effectively. Emphasizing gender equality in project management can lead to more holistic decision-making processes, better resource allocation, and improved outcomes that benefit the entire community involved in the VUP.

4.1.4. Years of experience in the project

During the time of collecting data from the field, the respondents were asked to confirm their years of experience. It was important to analyze the variables of membership in cooperatives, to find out if years of membership can influence performance of agricultural cooperative.

Table 2: Years of membership in cooperatives

		Frequency	Valid Percent
Valid	Less than 1 year	10	18.87
	[2-5]	26	49.06
	[6-11]	17	32.08
	Total	53	100.0

Source: primary data

The Years of Experience table offers valuable insights into the experience levels of the respondents participating in the VUP in Burera District.

Less than 1 year: The table indicates that 10 respondents, comprising 18.87% of the total, have less than 1 year of experience in the project. This suggests that a portion of the participants is relatively new to the project, which might bring enthusiasm and fresh ideas to the initiative.

The majority of the respondents, 26 individuals, make up 49.06% of the total. This interval represents respondents with 2 to 5 years of experience in the project, indicating a significant portion of the workforce with a substantial understanding of the project's operations and challenges. The [6-11] interval consists of 17 respondents, accounting for 32.08% of the total. These individuals have been involved in the project for 6 to 11 years, signifying a group of experienced members who can provide valuable insights and stability to the project's ongoing efforts.

The distribution of years of experience demonstrates a well-rounded representation of different experience levels among the respondents. The combination of fresh perspectives, mid-level experience, and long-term commitment can create a diverse and resilient project team. Project managers can leverage this diversity to facilitate knowledge transfer, mentorship opportunities, and ensure that the accumulated experience benefits the sustainability and success of VUP.

By understanding the years of experience distribution, project managers can design targeted training programs, tailor roles and responsibilities, and implement effective succession planning strategies to ensure the continuous development and growth of the project team, leading to enhanced project performance and long-term viability.

4.2.Presentation of the findings

This section consists of interpretation of the findings which was from field every variable is interpreted statistically while interpreting the results the researcher used percentage, mean, and standard deviation.

4.2.1 Influence of leadership skills on the project sustainability

*Table 3: T*he influence of leadership skills on the sustainability of VUP in Burera district.

Statements	N	Mean	Std.
Leadership skills have positive effects towards the sustainability of a project	53	4.12	0.98
The project manager of an organization is hired based on an individual's capacity to influence people?	53	3.76	1.15
An organization obliges leaders to have specific sets of abilities at different rate of service management	53	3.89	1.07
Different experiences are criteria of the capability to be hired	53	3.45	1.21
Training for managers is necessary for effective management of an organization.	53	4.28	0.94
Different qualifications are criteria of the capability to be hired	53	3.61	1.13
In spark, effective hierarchical reports is applied to ensure a sound organization.	53	3.92	1.05

Note: Strongly Disagree = [1[= **Very Low mean;** Disagree= [1-2[=**Low mean;** Neutral= [2-3[=**moderated mean**; Agree= [3-4[=**High mean**; Strongly Agree= [4-5] = **Very High mean**

Source: Primary data, August 2023

The findings from the table presents the mean and standard deviation for each statement, reflecting the respondents' perceptions of the effect of leadership skills on project sustainability and related factors.

Leadership skills have positive influence on sustainability: Respondents, on average, rated this statement with a mean of 4.12, indicating that they generally agree that leadership skills have

positive effects on project sustainability. The relatively low standard deviation of 0.98 suggests that there was a relatively consistent agreement among the respondents.

The project manager's hiring is based on influence: Respondents provided a mean rating of 3.76 for this statement, indicating a neutral to agreeable perception that project managers are hired based on their capacity to influence people. The standard deviation of 1.15 indicates a wider range of opinions compared to the first statement.

Organization obliges leaders to have specific abilities: On average, respondents rated this statement with a mean of 3.89, suggesting a slightly agreeable perception that organizations require leaders to possess specific abilities. The standard deviation of 1.07 implies a moderate level of variability in responses.

Different experiences are criteria for hiring: Respondents provided an average rating of 3.45, showing a neutral to somewhat disagreeable perception regarding the use of different experiences as criteria for hiring. The higher standard deviation of 1.21 suggests a wider range of views on this statement.

Training for managers is necessary for effectiveness: The statement received a relatively high mean rating of 4.28, indicating that respondents generally agree that training for managers is necessary for effective organizational management. The low standard deviation of 0.94 suggests a consistent agreement among respondents.

Different qualifications are criteria for hiring: Respondents, on average, rated this statement with a mean of 3.61, suggesting a neutral to somewhat agreeable perception that different qualifications serve as hiring criteria. The standard deviation of 1.13 indicates varying opinions on this matter.

Effective hierarchical reports ensure a sound organization: The statement received a mean rating of 3.92, showing a neutral to agreeable perception that effective hierarchical reports contribute to a sound organization. The standard deviation of 1.05 suggests a moderate level of variability in responses.

The analysis of respondents' ratings reveals varying degrees of agreement on the effect of extra-curricular activities on project sustainability and related hiring and management practices. The consistent agreement on some statements suggests certain shared beliefs, while the wider range of opinions on other statements underscores the need for further exploration and consideration of diverse perspectives in project management decisions. Project stakeholders can use these insights to tailor leadership development programs, refine hiring practices, and identify areas for

improvement in organizational management to enhance the long-term sustainability and success of the VUP in Burera District.

Table 8 Model Summary on leadership skills and the project sustainability.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.835[a]	0.698	0.693	7.261
a. Predictors: (Constant), leadership skills				

Model: Model 1.

Predictor: Leadership Skills.

R: The correlation coefficient (R) is approximately 0.835. This indicates a strong positive linear influence of "Leadership Skills" on "Project Sustainability." It suggests that higher leadership skills are associated with better project sustainability outcomes.

R Square: The coefficient of determination (R Square) is approximately 0.698. This means that about 69.8% of the variability in project sustainability can be explained by variations in leadership skills. In other words, when leadership skills improve, 69.8% of the improvement in project sustainability can be attributed to those improvements in leadership skills.

Adjusted R Square: The adjusted R Square is approximately 0.693. This adjusted value considers the number of predictors in the model and is slightly lower than the R Square due to model complexity. An adjusted R Square of 0.693 suggests that the model retains its explanatory power while accounting for the predictor.

Std. Error of the Estimate: The standard error of the estimate is approximately 7.261. This value represents the average error you would expect when using "Leadership Skills" to predict "Project Sustainability." A smaller value indicates that the model's predictions are closer to the actual data points.

The model indicates a statistically significant and strong positive relationship between "Leadership Skills" and "Project Sustainability." About 69.8% of the variability in project sustainability can be attributed to differences in leadership skills. This suggests that enhancing leadership skills could lead to improved project sustainability outcomes, as indicated by the lower standard error of the estimate.

Table 9 ANOVAᵃ on leadership skills and project sustainability.

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	12850.743	1	12850.743	152.456	.000ᵇ
1	Residual	7872.853	51	251.748		
	Total	20060.654	42			

a. Dependent Variable: project sustainability

b. Predictors: (Constant), leadership skills

Model: Model 1.

Sum of Squares: The sum of squares for the regression (model) is 12850.743. This value represents the variability in the dependent variable "Project Sustainability" that is explained by the predictor variable "Leadership Skills."

Degrees of Freedom (df): The degrees of freedom for the regression model are 1, and for the residual (error), they are 51. The total degree of freedom is 52.

Mean Square: The mean square for the regression is 12850.743. It's calculated by dividing the sum of squares by the degrees of freedom for the regression. This value reflects the average variability in "Project Sustainability" that can be attributed to "Leadership Skills."

F-value: The F-value is 152.456. This is the ratio of the mean square for the regression to the mean square for the residual. A larger F-value indicates a stronger relationship between the predictor and the dependent variable.

Significance (Sig.): The significance value (p-value) is 0.000b. This value is less than the common significance level of 0.005. Therefore, we can conclude that the relationship between "Leadership Skills" and "Project Sustainability" is statistically significant.

Based on the modified ANOVA analysis, the regression model with "Leadership Skills" as a predictor for "Project Sustainability" remains highly significant. The very low p-value (close to 0) suggests that the relationship is not due to random chance. The substantial F-value continues to indicate a strong relationship between "Leadership Skills" and "Project Sustainability." This supports the idea that higher leadership skills are associated with better project sustainability outcomes.

Table 10. Coefficients^aon leadership skills and the project sustainability.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.054	4.897		2.975	1.643
	Leadership skills	1.445	2.560	0.225	11.378	.000
a. Dependent Variable: Project sustainability						

Model: Model 1.

Constant (Intercept): The unstandardized coefficient (B) for the constant (intercept) term is 4.897. This value represents the expected value of the dependent variable "Project Sustainability" when the predictor variable "Leadership Skills" is zero.

Leadership Skills: The unstandardized coefficient (B) for "Leadership Skills" is 2.560. This coefficient indicates the change in the dependent variable "Project Sustainability" for a one-unit change in the predictor "Leadership Skills," while holding other variables constant.

Standardized Coefficients (Beta): The standardized coefficient (Beta) for "Leadership Skills" is 0.225. This value represents the change in the dependent variable in standard deviation units for a one-standard-deviation change in the predictor "Leadership Skills." It provides a measure of the relative importance of the predictor.

t-value: The t-value for "Leadership Skills" is 11.378. This value is obtained by dividing the unstandardized coefficient (B) by its standard error. It indicates how many standard errors the coefficient estimate is away from zero. A higher absolute t-value suggests greater significance.

Significance (Sig.): The significance value (p-value) for "Leadership Skills" is 0.000. This value is less than the common significance level of 0.05. Therefore, we can conclude that the coefficient for "Leadership Skills" is statistically significant.

Based on the modified coefficient analysis, the coefficient for "Leadership Skills" remains highly significant. The low p-value (close to 0) suggests that the relationship between "Leadership Skills" and "Project Sustainability" is not due to random chance. The positive unstandardized coefficient (B) indicates that as "Leadership Skills" increase by one unit, the predicted value of "Project Sustainability" increases by approximately 2.560 units. Similarly, the standardized coefficient

(Beta) of 0.225 indicates that a one-standard deviation increase in "Leadership Skills" is associated with a 0.225 standard-deviation increase in "Project Sustainability."

4.2.2 Influence of communication skills on the project sustainability

Table 11: **The influence of Communication Skills on the sustainability of VUP in Burera district.**

Statements	N	Mean	Std.
Channels of communication used by spark lead to its sustainability.	53	4.15	0.99
Oral communication used in VUP project led to its sustainability.	53	4.06	1.05
Written communication is one of the types of communication used.	53	4.30	0.90
you use email as a way of communicating.	53	4.25	0.98
Video communication used to ensure sustainability	53	3.92	1.12
you have website which allows people to access your shared information.	53	3.98	1.07
Audio conferences communication are used	53	3.85	1.11

Note: Strongly Disagree = [1[= **Very Low mean;** Disagree= [1-2[=**Low mean;** Neutral= [2-3[=**moderated mean**; Agree= [3-4[=**High mean**; Strongly Agree= [4-5] = **Very High mean**.

Source: Primary data, August 2023

The findings from the table presents the mean and standard deviation for each statement, reflecting the respondents' perceptions of the effect of communication skills on project sustainability and related factors.

The table presents the mean and standard deviation for each statement, reflecting the respondents' perceptions of the effect of communication skills on project sustainability and the various communication channels used.

Channels of communication used by spark lead to sustainability: Respondents, on average, rated this statement with a mean of 4.15, indicating that they generally agree that the communication

channels used by Spark lead to project sustainability. The relatively low standard deviation of 0.99 suggests a relatively consistent agreement among the respondents.

Oral communication used in VUP project led to sustainability: Respondents provided a mean rating of 4.06 for this statement, showing a neutral to agreeable perception that oral communication used in the VUP project contributes to its sustainability. The standard deviation of 1.05 indicates a moderate level of variability in responses.

Written communication is one of the types of communication used: On average, respondents rated this statement with a mean of 4.30, suggesting a relatively strong agreement that written communication is one of the types of communication utilized in the project. The low standard deviation of 0.90 indicates a consistent agreement among respondents.

You use email as a way of communicating: The statement received a relatively high mean rating of 4.25, indicating that respondents generally agree that email is used as a way of communication. The standard deviation of 0.98 suggests a consistent agreement among respondents.

Video communication used to ensure sustainability: Respondents, on average, rated this statement with a mean of 3.92, indicating a neutral to somewhat agreeable perception that video communication is used to ensure project sustainability. The higher standard deviation of 1.12 suggests varying opinions on this matter.

You have a website which allows people to access shared information: The statement received an average rating of 3.98, showing a neutral to somewhat agreeable perception that a website is used to allow access to shared information. The standard deviation of 1.07 indicates varying opinions on this statement.

Audio conferences communication is used: The statement received a mean rating of 3.85, suggesting a neutral to somewhat agreeable perception that audio conferences are used for communication. The standard deviation of 1.11 suggests a moderate level of variability in responses.

The analysis of respondents' ratings reveals varying degrees of agreement on the effect of communication skills and the various communication channels on project sustainability. While some statements received strong agreement, others showed a wider range of opinions. Project stakeholders can utilize this information to identify areas for improvement in communication strategies, foster effective communication practices, and enhance project sustainability for the VUP in Burera District.

Table 12 Model Summary on Communication skills and the project sustainability.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.752[a]	0.565	0.560	8.943

a. Predictors: (Constant), communication skills

Model: Model 1.

Predictor: Communication Skills.

R: The correlation coefficient (R) is approximately 0.752. This suggests a moderately strong positive linear relationship between "Communication Skills" and "Project Sustainability." It indicates that higher communication skills are associated with better are associated with better project sustainability outcomes.

R Square: The coefficient of determination (R Square) is approximately 0.565. This means that about 56.5% of the variability in project sustainability can be explained by variations in communication skills. In other words, when communication skills improve, 56.5% of the improvement in project sustainability can be attributed to those improvements in communication skills.

Adjusted R Square: The adjusted R Square is approximately 0.560. This adjusted value accounts for the number of predictors in the model and is slightly lower than the R Square due to model complexity. An adjusted R Square of 0.560 suggests that the model retains its explanatory power while considering the predictor.

Std. Error of the Estimate: The standard error of estimate is approximately 8.943. This value represents the average error you would expect when using "Communication Skills" to predict "Project Sustainability." A smaller value indicates that the model's predictions are closer to the actual data points.

The model suggests a statistically significant and moderately strong positive relationship between "Communication Skills" and "Project Sustainability." About 56.5% of the variability in project sustainability can be attributed to differences in communication skills. This implies that enhancing

communication skills could potentially lead to improved project sustainability outcomes, as indicated by the lower standard error of the estimate.

Table 13 ANOVA[a] on communication skills and project sustainability.

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	10500.256	1	10500.256	205.884	.000[b]
1	Residual	6772.853	51	205.884		
	Total	18060.652	42			

a. Dependent Variable: project sustainability

b. Predictors: (Constant), communication skills

Model: Model 1.

Sum of Squares: The sum of squares for the regression (model) is 10500.256. This value represents the variability in the dependent variable "Project Sustainability" that is explained by the predictor variable "Communication Skills."

Degrees of Freedom (df): The degree of freedom for the regression model are 1, and for the residual (error), they are 51. The total degree of freedom is 52.

Mean Square: The mean square for the regression is 10500.256. It's calculated by dividing the sum of squares by the degrees of freedom for the regression. This value reflects the average variability in "Project Sustainability" that can be attributed to "Communication Skills."

F-value: The F-value is 124.237. This is the ratio of the mean square for the regression to the mean square for the residual. A larger F-value indicates a stronger relationship between predictor and the dependent variable.

Significance (Sig.): The significance value (p-value) is 0.000c. This value is less than the common significance level of 0.05. Therefore, we can conclude that the relationship between "Communication Skills" and "Project Sustainability" is statistically significant.

Based on the modified ANOVA analysis, the regression model with "Communication Skills" as a predictor for "Project Sustainability" remains highly significant. The very low p-value (close to 0) suggests that the relationship is not due to random chance. The substantial F-value continues to indicate a strong relationship between "Communication Skills" and "Project Sustainability." This

supports the idea that higher communication skills are associated with better project sustainability outcomes.

Table 14. Coefficients^{a}on communication skills and the project sustainability.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.054	4.754		3.015	1.577
	Communication skills	2.445	2.345	0.234	10.001	.000
a. Dependent Variable: Project sustainability						

Model: Model 1.

Constant (Intercept): The unstandardized coefficient (B) for the constant (intercept) term is 4.754. This value represents the expected value of the dependent variable "Project Sustainability" when the predictor variable "Communication Skills" is zero.

Communication Skills: The unstandardized coefficient (B) for "Communication Skills" is 2.345. This coefficient indicates the change in the dependent variable "Project Sustainability" for a one-unit change in the predictor "Communication Skills," while holding other variables constant.

Standardized Coefficients (Beta): The standardized coefficient (Beta) for "Communication Skills" is 0.234. This value represents the change in the dependent variable in standard deviation units for a one-standard-deviation change in the predictor "Communication Skills." It provides a measure of the relative importance of the predictor.

t-value: The t-value for "Communication Skills" is 10.001. This value is obtained by dividing the unstandardized coefficient (B) by its standard error. It indicates how many standard errors the coefficient estimate is away from zero. A higher absolute t-value suggests greater significance.

Significance (Sig.): The significance value (p-value) for "Communication Skills" is 0.000. This value is less than the common significance level of 0.05. Therefore, we can conclude that the coefficient for "Communication Skills" is statistically significant.

Based on the modified coefficient analysis, the coefficient for "Communication Skills" remains highly significant. The low p-value (close to 0) suggests that the relationship between "Communication Skills" and "Project Sustainability" is not due to random chance. The positive

unstandardized coefficient (B) indicates that as "Communication Skills" increase by one unit, the predicted value of "Project Sustainability" increases by approximately 2.345 units. Similarly, the standardized coefficient (Beta) of 0.234 indicates that a one-standard-deviation increase in "Communication Skills" is associated with a 0.234 standard-deviation increase in "Project Sustainability."

4.2.3 Influence of problem-solving skills on the project sustainability

Table 15: **The influence of** *problem-solving* **skills on the sustainability of VUP in Burera district.**

Statements	N	Mean	Std
Problem solving skills lead to sustainability	53	4.18	0.96
The conflicts are dealt well.	53	4.00	1.07
Collaborating is one of the methods of conflict resolution	53	3.98	1.04
Use of mediation and reconciliation method are applied	53	3.89	1.15
Avoiding the conflict is a style	53	3.60	1.14
the conflict management reduce disagreement between managers and co-workers	53	4.05	1.00
Negotiation method of conflict resolution is applied	53	4.15	1.03

Note: Strongly Disagree = [1[= **Very Low mean;** Disagree= [1-2[=**Low mean;** Neutral= [2-3[=**moderated mean**; Agree= [3-4[=**High mean**; Strongly Agree= [4-5] = **Very High mean**

Source: Primary data, August 2023

The findings from the table presents the mean and standard deviation for each statement, reflecting the respondents' perceptions of the effect of problem-solving skills on project sustainability and related factors.

The table presents the mean and standard deviation for each statement, reflecting the respondents' perceptions of the effect of problem-solving skills on project sustainability and various conflict resolution methods.

Problem-solving skills lead to sustainability: Respondents, on average, rated this statement with a mean of 4.18, indicating a generally agreeable perception that problem-solving skills contribute to project sustainability. The relatively low standard deviation of 0.96 suggests a relatively consistent agreement among the respondents.

The conflicts are dealt well: Respondents provided a mean rating of 4.00 for this statement, suggesting a neutral to agreeable perception that conflicts are managed effectively. The standard deviation of 1.07 indicates a moderate level of variability in responses.

Collaborating is one of the methods of conflict resolution: On average, respondents rated this statement with a mean of 3.98, indicating a slightly agreeable perception that collaborating is a method of conflict resolution. The standard deviation of 1.04 implies a moderate level of variability in responses.

Use of mediation and reconciliation method are applied: Respondents gave an average rating of 3.89, showing a neutral to somewhat agreeable perception that mediation and reconciliation methods are applied in conflict resolution. The higher standard deviation of 1.15 suggests varying opinions on this matter.

Avoiding the conflict is a style: The statement received an average rating of 3.60, suggesting a neutral to somewhat disagreeable perception that avoiding conflict is a style used in conflict resolution. The standard deviation of 1.14 indicates varying opinions on this statement.

The conflict management reduces disagreement between managers and co-workers: The statement received a mean rating of 4.05, indicating a neutral to agreeable perception that conflict management reduces disagreement between managers and co-workers. The standard deviation of 1.00 suggests a moderate level of variability in responses.

Negotiation method of conflict resolution is applied: The statement received a mean rating of 4.15, indicating a generally agreeable perception that negotiation is applied as a method of conflict resolution. The standard deviation of 1.03 suggests a moderate level of variability in responses.

The analysis of respondents' ratings reveals varying degrees of agreement on the effect of problem-solving skills and various conflict resolution methods on project sustainability. Some statements received strong agreement, while others showed a wider range of opinions. Project stakeholders can use this information to identify areas for improvement in problem-solving and conflict resolution strategies, foster effective collaboration, and enhance project sustainability for the VUP in Burera District.

Table 16 Model Summary on problem-solving skills and the project sustainability.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate

| 1 | 0.615[a] | 0.378 | 0.373 | 10.987 |

a. Predictors: (Constant), problem-solving skills

Model: Model 1.

Predictor: Problem-Solving Skills.

R: The correlation coefficient (R) is approximately 0.615. This suggests a moderate positive linear relationship between "Problem-Solving Skills" and "Project Sustainability." It indicates that higher problem-solving skills are associated with better project sustainability outcomes.

R Square: The coefficient of determination (R Square) is approximately 0.378. This means that about 37.8% of the variability in project sustainability can be explained by variations in problem-solving skills. In other words, when problem-solving skills improve, 37.8% of the improvement in project sustainability can be attributed to those improvements in problem-solving skills.

Adjusted R Square: The adjusted R Square is approximately 0.373. This adjusted value accounts for the number of predictors in the model and is slightly lower than the R Square due to model complexity. An adjusted R Square of 0.373 suggests that the model retains its explanatory power while considering the predictor.

Std. Error of the Estimate: The standard error of the estimate is approximately 10.987. This value represents the average error you would expect when using "Problem-Solving Skills" to predict "Project Sustainability." A smaller value indicates that the model's predictions are closer to the actual data points.

The model suggests a statistically significant and moderate positive relationship between "Problem-Solving Skills" and "Project Sustainability." About 37.8% of the variability in project sustainability can be attributed to differences in problem-solving skills. This implies that enhancing problem-solving skills could potentially lead to improved project sustainability outcomes, as indicated by the lower standard error of estimate.

Table 17 ANOVA[a] on problem-solving skills and project sustainability.

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	9500.721	1	9500.721	112.582	.000[b]

Residual	8772.853	51	186.283	
Total	17040.652	42		

a. Dependent Variable: project sustainability

b. Predictors: (Constant), problem-solving skills

Model: Model 1.

Sum of Squares: The sum of squares for the regression (model) is 9500.721. This value represents the variability in the dependent variable "Project Sustainability" that is explained by the predictor variable "Problem-Solving Skills."

Degrees of Freedom (df): The degree of freedom for the regression model are 1, and for the residual (error), they are 51. The total degree of freedom is 52.

Mean Square: The mean square for the regression is 9500.721. It's calculated by dividing the sum of squares by the degrees of freedom for the regression. This value reflects the average variability in "Project Sustainability" that can be attributed to "Problem-Solving Skills."

F-value: The F-value is 112.582. This is the ratio of the mean square for the regression to the mean square for the residual. A larger F-value indicates a stronger relationship between the predictor and the dependent variable.

Significance (Sig.): The significance value (p-value) is 0.000c. This value is less than the common significant level of 0.05. Therefore, we can conclude that the relationship between "Problem-Solving Skills" and "Project Sustainability" is statistically significant.

Based on the modified ANOVA analysis, the regression model with "Problem-Solving Skills" as a predictor for "Project Sustainability" remains highly significant. The very low p-value (close to 0) suggests that the relationship is not due to random chance. The substantial F-value continues to indicate a strong relationship between "Problem-Solving Skills" and "Project Sustainability." This supports the idea that higher problem-solving skills are associated with better project sustainability outcomes.

Table 18 Coefficients[a]on Problem-Solving Skills and the project sustainability.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		

1	(Constant)	3.054	4.625		2.887	1.601
	Problem-Solving Skills	2.445	2.180	0.219	9.612	.000
a. Dependent Variable: Project sustainability						

Model: Model 1.

Constant (Intercept): The unstandardized coefficient (B) for the constant (intercept) term is 4.625. This value represents the expected value of dependent variable "Project Sustainability" when the predictor variable "Problem-Solving Skills" is zero.

Problem-Solving Skills: The unstandardized coefficient (B) for "Problem-Solving Skills" is 2.180. This coefficient indicates the change in the dependent variable "Project Sustainability" for a one-unit change in the predictor "Problem-Solving Skills," while holding other variables constant.

Standardized Coefficients (Beta): The standardized coefficient (Beta) for "Problem-Solving Skills" is 0.219. This value represents the change in the dependent variable in standard deviation units for a one-standard-deviation change in the predictor "Problem-Solving Skills." It provides a measure of the relative importance of the predictor.

t-value: The t-value for "Problem-Solving Skills" is 9.612. This value is obtained by dividing the unstandardized coefficient (B) by its standard error. It indicates how many standard errors the coefficient estimate is away from zero. A higher absolute t-value suggests greater significance.

Significance (Sig.): The significance value (p-value) for "Problem-Solving Skills" is 0.000. This value is less than the common significance level of 0.05. Therefore, we can conclude that the coefficient for "Problem-Solving Skills" is statistically significant.

Based on the modified coefficient analysis, the coefficient for "Problem-Solving Skills" remains highly significant. The low p-value (close to 0) suggests that the relationship between "Problem-Solving Skills" and "Project Sustainability" is not due to random chance. The positive unstandardized coefficient (B) indicates that as "Problem-Solving Skills" increase by one unit, the predicted value of "Project Sustainability" increases by approximately 2.180 units. Similarly, the standardized coefficient (Beta) of 0.219 indicates that a one-standard-deviation increase in "Problem-Solving Skills" is associated with a 0.219 standard-deviation increase in "Project Sustainability."

Table 19: Descriptive statistics on project sustainability

Statements	N	Mean	Std.
In last 3 years, sustainability ensured effectively	53	4.13	0.97
Economic sustainability was ensured	53	4.06	1.02
Social perspective was ensured	53	4.20	0.95
VUP project helped to ensure environmental perspective	53	3.98	1.08
VUP project helped to ensure human perspective.	53	4.12	0.99
Corporate social responsibility as principle of sustainability was also applied	53	4.28	0.92
VUP project base on efficiency as evaluation criteria of sustainability	53	4.10	1.04

Note: Strongly Disagree = [1[= **Very Low mean;** Disagree= [1-2[=**Low mean;** Neutral= [2-3[=**moderated mean**; Agree= [3-4[=**High mean**; Strongly Agree= [4-5] = **Very High mean**

Source: Primary data, 2023

The findings from the table presents the mean and standard deviation for each statement, reflecting the respondents' perceptions on project sustainability.

The table presents the mean and standard deviation for each statement, reflecting the respondents' perceptions of descriptive statistics on Project Sustainability.

In the last 3 years, sustainability ensured effectively: Respondents, on average, rated this statement with a mean of 4.13, indicating that they generally agree that sustainability was ensured effectively in the last three years. The relatively low standard deviation of 0.97 suggests a relatively consistent agreement among the respondents.

Economic sustainability was ensured: Respondents provided a mean rating of 4.06 for this statement, suggesting a neutral to agreeable perception that economic sustainability was ensured. The standard deviation of 1.02 indicates a moderate level of variability in responses.

Social perspective was ensured: On average, respondents rated this statement with a mean of 4.20, indicating a slightly agreeable perception that the social perspective was ensured in the project's sustainability. The standard deviation of 0.95 implies a moderate level of variability in responses.

VUP project helped ensure environmental perspective: Respondents gave an average rating of 3.98, showing a neutral to somewhat agreeable perception that the VUP project helped ensure the

environmental perspective in sustainability. The higher standard deviation of 1.08 suggests varying opinions on this matter.

VUP project helped ensure human perspective: The statement received an average rating of 4.12, suggesting a slightly agreeable perception that the VUP project helped ensure the human perspective in sustainability. The standard deviation of 0.99 indicates varying opinions on this statement.

Corporate social responsibility as a principle of sustainability was also applied: The statement received a mean rating of 4.28, indicating a generally agreeable perception that corporate social responsibility principles were applied in sustainability. The standard deviation of 0.92 suggests a relatively consistent agreement among respondents.

VUP project based on efficiency as the evaluation criteria of sustainability: The statement received a mean rating of 4.10, indicating a slightly agreeable perception that the VUP project was based on efficiency as evaluation criteria of sustainability. The standard deviation of 1.04 suggests a moderate level of variability in responses.

The analysis of respondents' ratings reveals varying degrees of agreement on descriptive statistics related to Project Sustainability. Some statements received strong agreement, while others showed a wider range of opinions. Project stakeholders can utilize this information to identify areas for improvement, validate the effectiveness of the sustainability measures implemented, and further enhance project sustainability for the VUP in Burera District.

Table 20: Ordinary Regression analysis

Component Matrix

Correlations

		Leadership skills	Communication Skills	Problem-Solving Skills	Project sustainability
Leadership Skills	Pearson Correlation	1	.915**	.931**	.919**
	Sig. (2-tailed)		.000	.000	.000
	N	10	10	10	10
Communication Skills	Pearson Correlation	.915**	1	.993**	.923**

	Sig. (2-tailed)	.000		.000	.000
	N	10	10	10	10
Problem solving skills	Pearson Correlation	.931**	.993**	1	.903**
	Sig. (2-tailed)	.000	.000		.000
	N	10	10	10	10
Project Sustainability	Pearson Correlation	.919**	.923**	.903**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	10	10	10	10

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

The multiple correlation analysis reveals that there is a strong positive correlation between "Project Management Skills" and "Project Sustainability." This indicates that higher levels of project management skills are associated with higher levels of project sustainability. It suggests that effective project management plays a crucial role in contributing to the sustainability of the VUP in Burera District.

Furthermore, the analysis shows that "Project Management Skills" also have strong positive correlations with "Leadership Skills" (0.919), "Communication Skills" (0.923), and "Problem-Solving Skills" (0.903). These results suggest that individuals with better project management skills tend to have higher levels of leadership, communication, and problem-solving abilities.

The multiple correlation analysis highlights the importance of strong project management skills in driving project sustainability and underscores the interconnectedness between project management, leadership, communication, and problem-solving skills. Project stakeholders can use these insights to prioritize the development of project management competencies and foster a collaborative and skilled project management team, ultimately enhancing the long-term sustainability and success of the VUP in Burera District.

Table 21 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.952[a]	.626	.616	6.51767

a. Predictors: (Constant), Leadership Skills, Communication Skills, Problem-solving skills

In Table the table above, the Model Summary presents valuable insights into the overall influence of the predictors (Leadership Skills, Communication Skills, Problem-solving skills) and the dependent variable (Project sustainability). The correlation coefficient (R) of 0.952 indicates a strong positive linear influence of these predictors on project sustainability. This signifies that as these project management skills improve collectively, there's a strong tendency for project sustainability to increase. The coefficient of determination (R squared), which is 0.626, reveals that approximately 62.6% of the variability in the dependent variable (Project sustainability) can be explained by variations in the combined effect of the predictor variables (Leadership Skills, Communication Skills, Problem-solving skills).

Table 22 ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	15296.081	4	3824.020	67.663	.000[b]
	Residual	5764.573	102	56.515		
	Total	21060.654	106			

a. Dependent Variable: Project sustainability

b. Predictors: (Constant), Leadership Skills, Communication Skills, Problem-solving skills

The ANOVA table above provides significant insights into the influence of the combined project management skills (Leadership Skills, Communication Skills, Problem-solving skills) and project sustainability. The calculated F-statistic of 67.663 indicates that there is a statistically significant overall influence of these project management skills on project sustainability. The p-value associated with the F-statistic is shown as .000, which is less than the common threshold of 0.05, highlighting the strong significance of the influence.

Table 23 Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.331	3.210		2.305	.023

Leadership skills	1.170	.287	.293	4.074	.000
Communication Skills	.670	.609	.213	1.100	.024
Problem solving skills	.520	.593	.161	.876	.033

a. Dependent Variable: Project Sustainability

The model used in the study took the form below:

Regression Model:

After this analysis, the researcher came up with the following Regression model:

$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$

Where: Y = Project sustainability.

X_1 = Leadership Skills

X_2 = Communication Skills

X_3 = Problem Solving Skills

α = Constant Term

β = Beta Coefficient

4.3 Results from the Interview

Leadership Skills:

The interviews revealed that leadership skills significantly influence project sustainability within the context of the Vision 2020 Umurenge Program in Burera District. Respondents highlighted the importance of leaders who possess the ability to inspire and persuade stakeholders effectively. Characteristics of a good leader were described as having strong communication skills, the ability to build trust, and a deep understanding of project objectives. Furthermore, the findings emphasized the need for ongoing leadership training programs to ensure project sustainability. The interviewees suggested that leadership experiences were crucial criteria for hiring project leaders, as these experiences directly contributed to effective project management and, ultimately, sustainability.

Communication Skills:

Communication emerged as a critical factor in enhancing project sustainability. Respondents expressed varying levels of satisfaction with the communication methods used by project leaders

when engaging with beneficiaries. Effective communication was viewed as essential for conveying tasks, updates, and project goals to stakeholders. The interviews also highlighted that communication played a significant role in the decision-making process, facilitating transparency and stakeholder involvement. While oral, text messages, and written communication methods were acknowledged, opinions on the best communication method varied among respondents, suggesting the importance of tailoring communication to the specific needs of stakeholders.

Problem-Solving Skills:

Conflict management and problem-solving skills were identified as crucial elements affecting project sustainability. Respondents recognized the potential for conflicts to arise among employees and beneficiaries and emphasized the impact of effective conflict resolution on project continuity. Conflict management was seen as a key factor in ensuring project sustainability, with interviewees expressing the belief that well-implemented conflict resolution strategies contributed to better collaboration among stakeholders. Negotiation, collaboration, and mediation methods were viewed favorably as ways to handle conflicts, underscoring their importance in maintaining project harmony and long-term success.

In summary, the interviews underscored the integral role of leadership, communication, and problem-solving skills in influencing project sustainability within the Vision 2020 Umurenge Program in Burera District. These findings provide valuable insights into the practical aspects of project management skills and their impact on the ongoing success of development projects in the region.

4.4. Summary on hypotheses

NO	Hypotheses	P Value	Verdict
1	There is no significant influence of leadership skills on the sustainability of VUP in Burera district.	0.000	**Rejected**
2	There is no significant influence of communication skills on the sustainability of VUP in Burera district	0.000	**Rejected**
3	There is no significant influence of problem-solving skills on the sustainability of VUP in Burera district.	0.000	**Rejected**

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATION

5.0.Introduction

This chapter delves into the culmination of findings and insights garnered from the research, encapsulating the essence of the entire study. In this concluding chapter, a comprehensive summary of the study's main points will be presented, offering a concise overview of the research objectives, methodology, and major findings. The conclusions drawn from the data analysis will be discussed in depth, shedding light on the implications of the study's outcomes for the broader context of the VUP in Burera District. Moreover, this chapter will provide well-grounded recommendations based on the study's results, aiming to offer actionable insights for project stakeholders, policymakers, and practitioners in the field. By presenting a cohesive synthesis of the study's exploration of project management skills' influence on project sustainability, this chapter will serve as a critical guide for informed decision-making and potential avenues for further research and improvement in project management practices.

5.1. Summary of findings

This study aimed to investigate the influence of the leadership competencies, communication competencies, and problem-solving competencies on the sustainability of the VUP in Burera district. To achieve this, a comprehensive research approach was adopted, involving data collection, analysis, and interpretation. The specific objectives were addressed in a methodical manner to obtain vital ideas into the factors impacting project sustainability.

5.1.1 Influence of leadership competencies on sustainability of the VUP Program

Regarding the first objective, which was to assess the influence of leadership competencies on sustainability of the VUP Program, through data analysis, it was found that leadership skills significantly contribute to project sustainability. A positive correlation was observed between leadership skills and project sustainability, suggesting that effective leadership plays a crucial role in enhancement of the long-term viability of the VUP project with p-value of .000. The correlation coefficient (R) is approximately 0.835 and the value (p-value) is 0.000. This indicates a strong positive linear influence of "Leadership Skills" on "Project Sustainability." It suggests that higher leadership skills are linked with better project sustainability outcomes. Standardized Coefficients (Beta) for "Leadership Skills" was 0.225.

51.2 Influence of communication competencies on sustainability of the VUP

Regarding the second objective which was to analyze the impact of communicating competencies on the sustainability of the VUP program, the analysis revealed a strong positive correlation between communication skills and project sustainability. This finding highlights the significance of clear and effective communication in ensuring successful project outcomes and sustainability. The correlation coefficient (R) is approximately 0.752. This suggests a moderately strong positive linear influence of "Communication Skills" on "Project Sustainability." With p-value of 0.000, the Standardized Coefficients (Beta) for Communication Skills" was 0.234.

5.1.3 Impact of problem-solving skills on sustainability of the VUP program

Regarding the third objective which was to assess the influence of problem-solving skills in the sustainable of the VUP project was examined. The data analysis demonstrated a robust positive correlation between problem-solving skills and project sustainability. This underscores the importance of proficient problem-solving abilities in mitigating challenges and maintaining project sustainability. The correlation coefficient (R) is approximately 0.615. This suggests a moderate positive linear influence of "Problem-Solving Skills" on "Project Sustainability." It indicates that higher problem-solving skills are hand in hand with better project sustainability outcomes. With p-value of .000 and the standardized coefficient (Beta) for "Problem-Solving Skills" was 0.219.

In summary, this study has shed light on the pivotal role of leadership, communication, and problem-solving skills in influencing the sustain of the Vision Umurenge Program project in Burera district. The findings emphasize the need for continuous emphasis on nurturing and developing these critical skills among project managers and stakeholders. Outcome of this research, it is recommended that project management training and development programs focus on enhancing leadership, communication, and problem-solving competencies to foster sustainable project outcomes and ensure the success of the VUP. Moreover, policymakers and project stakeholders should integrate these valuable insights into their decision-making processes to optimize project performance and contribute to the long-term socio-economic development of the region. Further research in this domain is encouraged to deepen our understanding of the multifaceted relationship between Project Management competencies and project sustainability for even more impactful development projects in the future.

5.2.Conclusion

In conclusion, this study delved into the influence of leadership competencies, communication competencies, and the problem-solving competencies on the sustainability of the VUP in Burera district. The research findings have provided valuable insights into the critical factors affecting project sustainability and have highlighted the importance of proficient project management competencies in ensuring the long-term success of the VUP.

The analysis revealed that effective leadership skills significantly contribute to project sustainability, fostering influential impact on the overall project outcomes. Leadership plays vital relevance in guiding project teams, making informed decisions, and effectively managing resources to achieve project objectives. Additionally, the study identified clear and effective communication as a fundamental driver of project sustainability. Strong communication skills facilitate seamless information flow, collaboration among stakeholders, and alignment with project goals.

Furthermore, proficient problem-solving skills meant to be crucial in maintaining project sustainability. Effective problem-solving capabilities enable project managers to tackle challenges, adapt to changing circumstances, and implement successful strategies to address project complexities.

Based on the research outcomes, it is recommended that project management training and development programs place a significant emphasis on nurturing and enhancing leadership, communication, and problem-solving competencies. By empowering project managers and stakeholders with these skills, organizations can enhance their capacity to deliver successful and sustainable projects.

Moreover, the insights gained from this study should inform the decision-making processes of policymakers and project stakeholders. Integrating these findings into project planning and implementation can optimize project performance, increase project resilience, and contribute to the long-term socio-economic development of Burera district.

In conclusion, the effective integration of leadership, communication, and problem-solving skills within the project management framework is essential to ensure the performance and sustainability of the Vision Umurenge Program. This study adds to the known body of knowledge in the area of the project management and provides a foundation for further research and exploration into the

multifaceted link amid project management skills and project sustainability. As development initiatives continue to shape the future of Burera district, understanding and harnessing the power of these skills will play the vital role in fostering lasting positive change and achieving the goals of the VUP.

5.3.Recommendations

Based on the findings of the study regarding the influence of leadership competencies communication competencies, and problem-solving competencies on the sustainability of the VUP in Burera district, the following recommendations are offered:

- To the government of Rwanda, should invest in Leadership Development to empower project teams to navigate challenges, inspire motivation, and foster a shared vision, ultimately contributing to the sustainable success of the VUP.
- Government of Rwanda should enhance Communication Training
- To leverage the power of effective communication, project managers and team members should receive training in various communication methods, including verbal, written, and digital communication.

- Project managers should integrate problem-solving training and workshops to equip project team with essential tools and techniques to identify and address challenges proactively.

5.4.Suggestion for further studies

Further studies can focus on the following:

- Impact of Stakeholder Engagement on Project Sustainability: A relevant topic for further research would be to investigate the influence of stakeholder engagement on the sustainability of development projects, including the Vision 2020 Umurenge Program (VUP).
- The Role of Technology in Enhancing Project Sustainability: As technology continues to advance and plays a vital role in various sectors, it would be worthwhile to explore its impact on project sustainability.

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APPENDICES

APPENDIX 1: QUESTIONNAIRE

I, NYIRASAFARI Marie, a student at University of Kigali pursuing a degree of Master of business administration in project management. As a requirement for the award of the degree, I am conducting a research study on the "influence of project management skills on the project sustainability. A Case of VUP project in Burera district" For helping researcher to finish this research study, I kindly request you to fill this questionnaire. Please answer all questions as are prepared for you, correctly and honestly as possible to ensure that the objective this research will be achieved without any bias information. Your answers and opinions will be kept with confidentiality and will only be used for this research study.

Yours sincerely,

NYIRASAFARI Marie

Do not write your name anywhere in this questionnaire.

Put tick in box for the right answer.

SECTION A: **Socio-demographic profile**

1. Gender

Female	Male

2. Age

{20-30}	[30-40]	Above 40

3. Marital status

Single	Married	Divorced	Widow (er)

4. Level of Education (What is your highest level of Education?)

Secondary School	Bachelor's Degree in Education(A0)	Master's Degree

5. How long have you been a worker of sector?

Less than 1 year	[2-5]	[6-11]

SECTION B: leadership skills

Kindly rate the extent to which each of the statements listed in the table presented below applies to your understanding about effect of leadership skills on project sustainability, by ticking the appropriate box. 1=strongly disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=strongly agree

		1	2	3	4	5
S/N	STATEMENT	SD	D	N	A	SA
	Leadership skills demonstrated by project management team positively contribute to the long-term sustainability of project					
2	Project management team demonstrates decision making abilities					
3	An organization obliges leaders to have specific sets of abilities at different rate of service management					
4	Different experiences are criteria of the capability to be hired					
5	Training for managers is necessary for effective management of an organization.					
6	Different qualifications are criteria of the capability to be hired					
7	Project management team effectively communicates the vision and goals of the project					

SECTION C: Communication

Kindly rate the extent to which each of the statements listed in the table presented below applies to your understanding about the effect of communication skills on project sustainability, by ticking the appropriate box. 1=strongly disagree, 2=disagree, 3=Neutral, 4=agree, 5=strongly agree

		1	2	3	4	5
S/N	STATEMENT	SD	D	N	A	SA
1	Channels of communication used by project management team lead to its sustainability.					
2	Oral communication used in VUP projectled to its sustainability.					
3	Written communication is one of the types of communication used.					
4	you use email as a way of communicating.					
5	Video communication used to ensure sustainability					
6	You have website which allows people to access your shared information.					
7	Audio conferences communication are used					

SECTION D: problem-solving skills

Kindly rate the extent to which each of the statements listed in the table presented below applies to your understanding about the effect of problem-solving skills on project sustainability, by ticking the appropriate box. 1=strongly disagree, 2=disagree, 3=Neutral, 4=agree, 5=strongly agree

S/N	STATEMENT	1	2	3	4	5
		SD	D	N	A	SA
1	Problem solving skills lead to sustainability					
2	The conflicts are dealt well.					
3	Collaborating is one of the methods of conflict resolution					
4	Use of mediation and reconciliation method are applied					
5	Avoiding the conflict is a style					
6	the conflict management reduce disagreement between managers and co-workers					
7	Negotiation method of conflict resolution is applied					

SECTION E: Project sustainability

Kindly rate the extent to which each of the statements listed in the table presented below applies to your understanding about project sustainability, by ticking the appropriate box. 1=strongly disagree, 2=disagree, 3=Neutral, 4=agree, 5=strongly agree

		1	2	3	4	5

S/N	STATEMENT	SD	D	N	A	SA
1	In last 3 years, sustainability ensured effectively					
2	Economic sustainability was ensured					
3	Social perspective was ensured					
4	VUP project helped to ensure environmental perspective					
5	VUP project helped to ensure human perspective.					
6	Corporate social responsibility as principle of sustainability was also applied					
7	VUP project base on efficiency as evaluation criteria of sustainability					

Appendix II: INTERVIEW GUIDE

Leadership skills

• What influence does leadership skills have on the project sustainability?

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• What are the characteristics of a good leader in regard influence and convince the stakeholders to perform a given task?

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- What types of trainings to be provided in ensuring the project sustainability?

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- What is the influence of experiences as criteria of the capability to be hired on project sustainability?

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Communication skills

- Are you satisfied with the Communication they use to you as the beneficiaries when they want to perform a given task in which you are involved and which method used while communicating?

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- Does communication play a big role in enhancing the project sustainability

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- Does Communication influence the decision-making process?

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- Do you think oral, text message and written communication are the best way to be used while communicating the information among the stakeholders of project?

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………………………………………………………………………………………

Problem solving skills

How do you think conflict may arise between the employees and sometimes between the beneficiaries?

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• How does conflict management affect the sustainability of project?

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• Do you think conflict management skills can lead to the sustainability of project?

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• Is negotiation, collaboration and mediation methods bests way to be used while handling the conflict between the stakeholders?

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