DETERMINANTS OF EFFECTIVE IMPLEMENTATION OF LEARNING AGILITY STRATEGY IN KENYA ELECTRICITY GENERATING COMPANY (OLKARIA), KENYA

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A Research Project submitted to the Graduate School in Partial Fulfillment of Requirement for the Conferment of Master of Business Administration Degree of Laikipia University

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DECLARATION AND RECOMMENDATION

Declaration

This research project is my original work and has not been presented for award to any other college or University.

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Recommendation

This research project has been presented for examination with our approval as University Supervisors.

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DEDICATION

This project is dedicated to my wife and children, whose inspiration has been the driving force behind my quest for knowledge.

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First, I acknowledge God for providing me with the abilities and understanding to finalize this research project. I am deeply thankful to my supervisors, Prof. Peter Mwaura and Dr. Florence Opondo, for their encouragement, valuable guidance, and constructive feedback to this research work. I also want to show appreciation to my family for their ongoing moral support during my academic pursuit.

ABSTRACT

Organizations operate in a constantly changing and unpredictable competitive environment. This necessitates a concentrated effort on sustaining and enhancing their competitive edge. Successful strategy execution plays a pivotal role in efficiently utilizing resources to attain long-term performance. KenGen is one of the companies that has implemented various strategies to maintain competitiveness. These include annual seminars and workshops focused on innovation, subscribing to industry best practices websites, and acquiring multiple software programs. Despite these efforts, the intended results have not been realized, and the barriers to effective strategy implementation remains unexplored. The present study delved into assessing the determinants of implementation of the learning agility strategy within KenGen. Specific objectives involved examining the effect of resource adequacy, information technology adoption, and the employees' skills and competencies on the learning agility strategy implementation. The study was anchored on IT complementarities, dynamic capability, resource based view, and experiential learning theories. The study utilized a descriptive research design and targeted a population of 467 employees across senior, middle, and technical staff levels. Using a stratified sampling method, a sample of 171 individuals from diverse staff tiers was selected. Primary data was collected through a self-administered questionnaire, validated via a pilot study conducted at Geothermal Development Company-Nakuru. Data analysis encompassed both descriptive and inferential statistical methodologies, using Statistical Packages for Social Sciences (SPSS) version 24. Descriptive findings ascertained that resource adequacy, information technology adoption, and employee skills significantly influence the implementation of learning agility at KenGen. Correlational analysis results indicated a significant relationship between resource sufficiency, IT adoption, employee skills, and the learning agility strategy's implementation. Additionally, the results of regression analysis indicated R^2 value of 0.553, implying that 55.3% of the variation in implementing the learning agility strategy was accounted for by resource adequacy, IT adoption, and employee skills. Further analysis indicated that resource sufficiency (β=0.189; p=0.034), IT adoption (β=0.168; p=0.001), and employee skills (β=0.324; p=0.000) significantly contributed to the results, leading to the rejection of the first, second, and third hypotheses. Consequently, the implementation of the learning agility strategy within KenGen relies significantly on resource adequacy, IT adoption, and employee skills. The study concludes that resource sufficiency aids in planning activities related to implementing the learning agility strategy, while IT adoption drives efficiency, effectiveness, and productivity at KenGen. A direct link was observed between IT adoption and the implementation of the learning agility strategy. Employee skills and competencies emerged as pivotal in determining the effectiveness of implementing the learning agility strategy, facilitating quick adaptation to new knowledge and situations. Drawing from the findings, the study recommends that KenGen establishes policies guiding the integration of learning agility into performance management, provides robust support for learning and development initiatives, and recognizes and rewards innovation. These measures are expected to enhance adaptability within the organization.

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ACRONYMS AND ABBREVIATIONS

GDC: Geothermal Development Company

IPPs: Independent Power Producer

IT: Information Technology

KenGen: Kenya Electricity Generating Company Limited

KPLC: Kenya Power and Lighting Company

RBV: Resource Based View

SPSS: Statistical Package for Social Science

IoT: Internet of Things

OPERATIONAL DEFINITION OF TERMS

Competitive Advantage: In this study, competitive advantage pertains to the position of superiority that sets an organization apart from others. For KenGen to acquire and sustain a competitive advantage, they need to exhibit a more significant differential value compared to their competitors.

Employees' Skills: Employee skills are the distinct abilities, expertise, and proficiencies an individual has that enable them to perform their role effectively and support organizational objectives. These skills are evaluated through their practical application, the achievement of performance goals, and their adaptability to changing work conditions.

Employee Competencies: Employee competencies encompass the integration of knowledge, behaviors, and attitudes that allow individuals to effectively fulfill their job responsibilities. These competencies are evident through their actions and the outcomes they achieve, reflecting alignment with job expectations and contributing to overall performance. Evaluation of these competencies is based on performance reviews, feedback, and the ability to manage job-related challenges successfully.

Information Technology: Information technology involves the creation, maintenance, and utilization of computer networks, software, hardware, and systems. Agility in information technology assesses how effectively an organization's IT infrastructure can respond to emerging issues.

Learning Agility: Learning agility denotes the practices enabling organizational managers to continuously develop, grow, and employ new strategies to tackle the increasingly intricate issues in the operational environment. Learning agility serves as a strategy leading to a competitive advantage, allowing organizations to outpace the market in terms of capabilities and decision-making.

Resource Allocation: Resource allocation is the process of assigning and managing assets in a way that supports an organization's strategic objectives. It involves managing an organization's resources to bolster learning agility.

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

In the current evolving and globally interconnected business realm, virtually no organization remains immune to competition (Kinako, 2016). Most organizations function within uncertain and constantly changing competitive environment. These shifts are dynamic and arise from factors like heightened global competition, shortened product life cycles, diversified consumer demands, and advancements in technology (Kim, 2021). Strategic management holds a pivotal role in effectively deploying a company's resources to ensure the firm's long-term performance in competitive environments. Zhang, Liu, Shi, and Chen (2020) opine that a certain level of competition is commonly seen as necessary for enhancing the efficiency of service provision.

Development of agility, rapid responsiveness, and adaptation to environmental changes are the vital tools for gaining a competitive advantage (Khoshnood & Nematizadeh, 2017). Agility not only emphasizes swift responses but also focuses on strategic aspects and forecasting environmental changes before they occur. In the present-day business environment influenced by global interconnectedness, rapid technological progress, and dynamic shifts in consumer preferences, the imperative skill of navigating unpredictable changes has taken center stage. Agility, defined by the ability to promptly and efficiently respond to unexpected shifts in the business environment, emerges as a pivotal advantage in the fiercely competitive market (De-Meuse, 2019). Organizations strategically observe and forecast the trajectory of the business environment, empowering them to adeptly adjust to its continually evolving nature. Consequently, successful enterprises consistently lead the way in implementing inventive competitive strategies, striving for ongoing enhancement and customization on a broad scale through a resilient framework of adaptable processes (Ulrich & Yeung, 2019).

Managers play a vital role in evaluating their firm's competitive position, envisioning the future, and crafting transformation strategies for the firm's performance (Martin, Franc, & Zounková, 2017). Understanding the fundamental forces at play in the competitive environment and identifying the macro-environmental influences driving competition are crucial for industry success. Kavale (2012) asserts that strategy is concerned with long-term direction and decisions and leads to a competitive advantage by configuring resources and competencies to meet stakeholder expectations (Liu, Song, Xing, Zhu, & Qu, 2021). Key components of a learning agility strategy encompass resource adequacy, information

technology, and employee skills. Companies need to invest resources to enable employees to learn skills vital for adapting to operational changes (Liu, Song, Xing, Zhu, & Qu, 2021). Resource adequacy, especially financial resources, plays a crucial role in responding to dynamic and uncertain environments (Kim, 2021). Technological resources such as IT infrastructure and analytics support decision-making and innovation (Ulrich & Yeung, 2019). Physical resources, including production facilities, are vital for meeting operational needs. Information technology enhances organizational efficiency, reduces time and costs, and supports operational optimization, empowering managers to make informed decisions (Jermsittiparsert & Pithuk, 2019; Nkuda, 2017). It promotes innovation in sectors like power generation through the use of smart grids and energy storage solutions that contribute to efficiency.

Employee skills are pivotal in implementing a learning agility strategy (Rossignoli & Lionzo, 2018). New skills and knowledge are utilized in decision-making, addressing emerging challenges within the organization. Continuous learning is essential to bridge skill gaps and align with the organization's evolving needs. Employee competencies play a key role in learning agility by providing the necessary knowledge, behaviors, and expertise required to address new and evolving challenges (Liu et al., 2021). These competencies enable individuals to leverage their capabilities effectively, fostering rapid adaptation and innovative solutions in dynamic settings. Consequently, strong competencies enhance an organization's flexibility and responsiveness to shifting demands and opportunities.

Implementing learning agility strategies within energy-generating companies in the United States is imperative for navigating the dynamic landscape of the energy sector (Cyfert, Szumowski, Dyduch, Zastempowski, & Chudziński, 2022). The industry's policy shifts and evolving consumer preferences encourage a culture of adaptability and continuous learning. The strategies for learning agility involve the creation of responsive frameworks that empower employees to acquire new skills, embrace innovation, and adeptly respond to emerging challenges (Milani, Setti, & Argentero, 2021). This comprehensive approach integrates advanced technologies, extensive training programs, and adaptive management practices. Given the frequent occurrence of rapid economic, technological, and infrastructural transformations in South Africa, energy sector firms in the country are fostering a culture of adaptability and ongoing learning (Arokodare, 2021). In this particular context, learning agility strategies extend beyond the incorporation of innovative technologies and practices to address specific socio-economic and environmental considerations. These encompass customized

training initiatives, skill development programs, and flexible management approaches, empowering employees to effectively respond to the constantly evolving energy demands and regulatory frameworks in developing nations.

Kenya's energy sector remains a thriving industry, characterized by various distinct divisions, each with specific responsibilities overseen by the Ministry of Energy & Petroleum (MOEP) (Musembi, Guyo, Kyalo, & Mbuthia, 2018). Key entities within Kenya's energy landscape include the Geothermal Development Company (GDC), Kenya Electricity Transmission Company (KETRACO), Kenya Pipeline Company (KPC), Kenya Power (KPLC), National Oil Corporation of Kenya (NOCK), and the primary electricity producer, Kenya Electricity Generating Company (KenGen). KenGen, playing a crucial role in the country's power generation, commands an impressive 70% market share in electricity production, boasting a current installed capacity of 1904MW as of 2022 (Kibaara, Murage, Musau, & Saulo, 2020). Operating as a public-private partnership, the company is structured with 30% ownership by private sector shareholders and 70% by the Government of Kenya.

Aligned with other energy sector corporations, KenGen has a core mandate of diversifying Kenya's economy by meeting the rising energy demands (Kibaara et al, 2020). To fulfill this objective, the company engages in various projects aimed at expanding energy generation capacity. Notable initiatives include the completion of the Ngong I project in 2014, contributing 5.1MW to the grid, along with the ongoing developments of Ngong phase III and IV to add a further 50MW to the national grid according to KenGen's integrated annual report for 2019. Additionally, KenGen plans to upgrade the Olkaria 1 geothermal power plant from 45MW to 50MW. Other ongoing projects by KenGen encompass the Seven Falls 40MW Solar PhotoVoltaic (PV) project, Olkaria V (172MW) project, and Olkaria I addition unit 6 (83.3MW).

Although KenGen experienced a 4% decline in revenue from Shs.45.966 billion in 2019 to Shs.44.11 billion in 2020, additional revenue of Shs.440 million was contributed by drilling services in Tulu Moye, Ethiopia during the same period (KenGen's integrated annual report for 2019). Over the years, the total electricity installed capacity has increased, while KenGen's capacity has also shown growth. However, the company's market share in terms of total electricity installed capacity witnessed a decrease from 70% to 62% between 2017 and 2022, despite an overall growth in installed capacity by 16.7% during this period (KenGen's

integrated annual report, 2022). Embracing learning agility is crucial for enhancing the performance of the Kenya Electricity Generating Company in the domain of energy production.

Karanja and Mwaura (2017) explored the influence of knowledge management enablers on KenGen's performance, focusing on geothermal development in Naivasha. The study revealed that 43.7% of the performance variations in KenGen could be attributed to leadership, organizational culture, information technology, and employee involvement, leaving 56.3% unexplained. As a result, there is a need for further research to identify the other factors contributing to the unexplained 56.3% of performance variations. Additionally, the study noted a lack of comprehensive exploration into how knowledge management enablers affect the performance of organizations within the electricity sector. Rotich and Wanyoike (2018) explored the effects of organizational transformation on KenGen Company PLC's performance. They discovered that operational improvements, corporate self-renewal, and cultural changes collectively explained 31.0% of the performance variation.

The limited success of learning agility at KenGen, can partly be attributable to the information technology and resource allocation that could be possibly inadequate (Wakajummah & Kimaku, 2023). While IT plays a crucial role in enabling real-time information exchange, data analysis, and virtual collaboration, KenGen has encountered difficulties in fully incorporating these technologies into their learning and development initiatives. This technological shortfall, combined with insufficient investment in training programs and human resources, has impeded the organization's ability to adapt swiftly to evolving market conditions and technological advancements (Mugo & Omondi, 2024). Consequently, this limits the KenGen's overall agility and innovative potential. Such circumstances underscore the need for a stronger focus on resource adequacy, IT utilization, and human capital development to enhance organizational learning and adaptability, ultimately providing a comparative advantage.

1.2 Statement of the Problem

The adaptability of organizations to a changing business environment determines competitiveness within their respective industries. Conversely, companies lacking agility to respond to environmental changes often encounter difficultness in trying to attain a competitive edge. Effective resource management and the embrace of creativity and innovation enable organizations to adapt and thrive within dynamic business environments. KenGen, for instance, has incorporated learning, technology, and innovation to streamline operations, reduce costs, and enhance efficiency. Nevertheless, the outcomes of these efforts in terms of implementing

a robust learning agility strategy and overall performance remain undesirable. KenGen's integrated annual report for 2019 indicates a 4% reduction in revenue, declining from Shs. 45.966 billion in 2019 to Shs. 44.11 billion in 2020, despite the company's initiatives in fostering learning, innovation, and creativity. This decline in earnings impedes organizational development, which is a direct outcome of a successful implementation of a learning agility strategy. Additionally, KenGen's market share in terms of total installed electricity capacity decreased from 70% to 62% between 2017 and 2022, potentially due to inefficient allocation of resources, utilization of information technology, and employee skills. Limited research information exists concerning the efficacy of implementing a learning agility strategy specific to KenGen in previous studies. This unveiled significant research gaps, prompting the current study on the determinants of effective implementation of a learning agility strategy within KenGen, Kenya.

1.3 General Objective of the Study

The general objective of the study was to examine determinants of effective implementation of learning agility strategy in KenGen, Kenya.

1.4 Specific Objectives of the Study

i. To establish the influence of resource adequacy on effective implementation of learning agility strategy KenGen, Kenya
ii. To assess the influence of information technology adoption on effective implementation of learning agility strategy KenGen, Kenya
iii. To examine the influence of employee skills and competencies on effective implementation of learning agility strategy in KenGen, Kenya

1.5 Research Hypotheses

H_{01}: Resource adequacy has no statistical significant influence on effective implementation of learning agility strategy in KenGen, Kenya.

H_{02}: Information technology adoption has no statistical significant influence on effective implementation of learning agility strategy in KenGen, Kenya.

H_{03}: Employee skills and competencies has no statistical significant influence on effective implementation of learning agility strategy in KenGen, Kenya.

1.6 Significance of the Study

This study provides policy recommendations for public institutions on an effective implementation strategy framework. These recommendations are intended to guide KenGen's management in reevaluating their internal policies to ensure alignment with their intended objectives. Within KenGen, management will identify the most suitable strategies for engaging employees in company programs, benefiting both the organization and its stakeholders. Employees will receive training and skills that will boost their confidence in pursuing employment opportunities, alleviating concerns about lacking the necessary experience for suitable roles within the organization. With enhanced skills, they will utilize available resources more effectively, facilitating successful strategy implementation. The research suggests potential directions for further investigation, offering valuable insights for scholars and researchers studying similar topics. The integration of the learning agility strategy into strategic management will aid in formulating and implementing strategies and policies related to resource allocation, thereby contributing to the achievement of organizational objectives.

1.7 Scope of the Study

The research was conducted at the KenGen Olkaria branch located in Naivasha. The primary focus of this study centered on assessing the factors influencing the learning agility strategy, encompassing various aspects such as resource adequacy, adoption of information technology, and the skills and competencies of employees. The managerial staff at KenGen were involved in this research. The data pertaining to the implementation of the learning agility strategy was collected from these managers through the questionnaires. This research was done for a period between April and November of the year 2023.

1.8 Limitations of the Study

The researcher encountered several challenges. Initially, the respondents displayed hesitancy in responding to the questionnaires due to concerns regarding privacy and confidentiality. To overcome this obstacle, the researcher implemented measures to assure the respondents that the information gathered was strictly for academic purposes and that their privacy would be meticulously safeguarded. Additionally, a few managers at KenGen mentioned facing time constraints, resulting in surpassing the agreed-upon duration for completing the questionnaires. This, in turn, disrupted the scheduled timeline for initiating data processing and analysis. To mitigate delays in questionnaire completion, the researcher employed strategic reminders, including follow-up messages directed to the respondents, urging prompt responses. Addressing the time limitations, the researcher streamlined the processes involved in data

analysis, interpretation, and report writing to expedite the completion of the study. These adjustments were instrumental in navigating the challenges encountered throughout the research process.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

The chapter outlines empirical literature and theoretical framework. Additionally, a conceptual framework has been introduced towards the conclusion of the chapter, aiming to demonstrate the interconnectedness among the variables being studied.

2.2 Empirical Review of Literature

This section provides an overview of empirical research related to the concepts of learning agility and its influence on learning agility strategy's implementation. Karanja and Mwaura's (2017) research explored how knowledge management enablers, including leadership support, organizational culture, information technology, and employee involvement, influenced KenGen's performance. The study found a strong association between these enablers and KenGen's overall performance, accounting for 43.7% of the variation. Leadership support, organizational culture, information technology, and employee involvement were deemed crucial in determining KenGen's organizational performance.

While their findings highlighted significant factors contributing to overall performance, they did not explore the direct relationship between resource adequacy and learning agility implementation. The present study addresses this gap by explicitly examining how various aspects of resource adequacy affect the execution of learning agility strategies at KenGen, offering a more nuanced understanding of these dynamics.

Kinako (2016) investigated agility strategies in insurance companies in Kenya, focusing on organizational innovativeness, operational dexterity, total quality management, and resource fluidity. The study revealed that these agility strategies, especially innovativeness, operational dexterity, and total quality management, strengthened the competitive advantage of insurance companies. Proactivity and adaptability were identified as key components of agility strategies, playing a pivotal role in shaping the competitive advantage of insurance companies in Kenya. The study identified proactivity and adaptability as essential for agility but overlooked how these factors relate to learning agility. The present study addresses this gap by focusing on the impact of employee skills and competences on the effective implementation of learning agility, providing a deeper understanding of how these elements influence organizational flexibility.

Rotich and Wanyoike (2018) studied the impact of organizational transformation on KenGen Company PLC's performance. The findings indicated significant correlations between

operational improvement, corporate self-renewal, corporate cultural change, and organizational performance. Corporate culture change, operational improvement, and corporate self-renewal collectively explained 31.0% of the variation in KenGen Company PLC's performance. Jo and Hong (2022) conducted a study on the effect of agile learning on innovative behavior. The research revealed a direct relationship between learning agility and innovative behavior, with employee engagement playing a significant moderating role. Kabeyi (2019) focused on geothermal electricity generation, emphasizing challenges and opportunities. The study highlighted the role of technology in mitigating risks and costs and identified factors like power plant conversion technologies and improved reservoir management as enhancers of resource output and exploitation efficiency.

The research conducted by Rotich and Wanyoike (2018); Jo and Hong (2022); and Kabeyi (2019) offers insights into organizational transformation, agile learning, and technological advancements in the energy sector. However, these studies do not fully address the impact of different elements of resource adequacy on the implementation of learning agility. The current study addresses this gap by exploring how various aspects of resource adequacy including financial, physical, and technological resources influence execution of learning agility strategy, thereby providing a more detailed understanding of how these resources enhance organizational adaptability.

Warui (2015) examined the challenges of implementing strategic alliances at Kenya Power PLC, uncovering the substantial impact of management control on power cost strategies, power distribution and transmission loss, and the strategic fit between partners. Musembi et al. (2018) investigated the effect of employees' soft skills on the performance of public energy sector projects in Kenya, demonstrating a positive impact, accounting for 63.3% of the variation. Oginda (2022) explored the effect of technology innovation strategy on strategic project completion in Kenya's electric power subsector. The research found a significant influence of technology innovation strategy on project completion. Mwangi (2016) delved into the adoption of information communication technology and its impact on supply chain performance in Kenya's energy sector, identifying staff adaptability and management support as key factors.

The studies by Warui (2015); Musembi et al. (2018); Oginda (2022); Mwangi (2016) provide valuable insights into various aspects of management control, employee soft skills, technology innovation, and ICT adoption in Kenya's energy sector. However, they fall short in explicitly linking employee competences and comprehensive technology adoption with the

implementation of learning agility. The present study addresses these gaps by clearly articulating how employee competences and technology adoption, affect the implementation of learning agility strategies, thereby offering a more integrated view of these critical factors.

Matonda and Wanyoike (2022) researched techno-structural interventions and their effect on the organizational performance of Geothermal Development Companies in Kenya, confirming a significant relationship. Ngara (2018) explored the influence of organizational culture on the performance of Kenya Power and Lighting Company PLC, emphasizing the adoption of learning organization dimensions and the use of suitable rewards as impactful dimensions. Matonda and Wanyoike (2022) focused primarily on techno-structural interventions without adequately addressing the role of technology adoption and organizational learning. Ngara (2018) similarly emphasized organizational culture and reward systems, but did not delve deeply into the impact of technology adoption on performance. The current study addresses this gap by examining how information technology adoption, including connectivity and innovations, contributes to organizational learning agility's implementation at KenGen.

Ghosh, Muduli, and Pingle (2021) assessed the role of e-learning technology and culture in promoting learning agility, demonstrating that e-learning technology fosters learning agility, ultimately making the workforce and businesses more agile and capable of managing the complex business environment, resulting in better performance. The research fell short in addressing how specific IT aspects, such as connectivity and innovations, impact learning agility. By concentrating on general e-learning technology and culture, it neglected the crucial role of these IT elements in boosting organizational agility and performance. The current study, however, focuses on IT adoption, including equipment, connectivity, and innovations.

Gitongah and Macharia (2020) explored the strategic management and performance of Kenya Electricity Generating Company. The study findings revealed that IT adoption and strategic partnerships have strong and statistically significant positive effects, with coefficients of 0.644 and 0.665, respectively, and p-values of 0.000. Strategic team management also has a notable positive impact, with a coefficient of 0.456 and a p-value of 0.000. Although strategic customer experience management has a smaller yet statistically significant effect, with a coefficient of 0.181 and a p-value of 0.015, it still contributes positively. The study concluded that while IT adoption is highly valued, it can yield both positive and negative outcomes due to challenges such as limited infrastructure and skill gaps. Furthermore, strategic partnerships, customer-

focused approaches, and effective team management were identified as crucial factors that positively impact the performance of commercial parastatals in Kenya.

Orina and Nyangáu (2018) assessed the effect of resource planning on project implementation in the KenGen Company. The regression analysis indicated that resource technology accounted for 30.5% of the variance in project implementation, financial planning contributed 31.9%, project time planning contributed 86.3%, and human resource planning contributed 76.5% at KenGen's Murangá County branch. Thus, the study confirmed a positive relationship between resource technology, financial planning, project time planning, and human resource planning with project implementation at the KenGen Murangá branch.

Butali and David (2019) assessed the effect of Training and Development on Organizational Performance. The study's findings revealed that training and development significantly impact the organizational performance of Kenya Power and KenGen. Specifically, implementing comprehensive training programs equips employees with the necessary skills and knowledge to perform their roles more effectively. This leads to improved job performance, higher productivity, and greater organizational efficiency. Additionally, ongoing development opportunities foster employee engagement and motivation, which can enhance job satisfaction and reduce turnover rates. For both Kenya Power and KenGen, investing in employee training and development translates into better operational outcomes, as well-trained employees are better prepared to tackle challenges, adapt to changes, and contribute to the achievement of organizational goals.

Mugo and Omondi (2024) examined the training practices and employee performance of Kenya Electricity Generating Company Limited. As per the findings, it was established that training content and training delivery methods explained 57.6% of the variation in employee performance. Specifically, a one-unit increase in training content results in a 0.326-unit improvement in employee performance. In contrast, a one-unit increase in training delivery methods leads to a 0.225-unit increase in employee performance. Ombongi (2020) conducted a study on the strategies employed by KenGen Company to achieve a competitive advantage, revealing that KenGen's strategies are influenced by unique resources and attributes within the organization, leading to cost leadership and differentiation. However, the study did not clearly define how specific elements of resource adequacy influence learning agility, instead concentrating on general organizational attributes and competitive advantage. In contrast, the

current study addresses resource adequacy by detailing the role of financial and physical resources in implementing learning agility.

2.2.1 Resource Adequacy and Implementation of Learning Agility Strategy

Firm resources typically encompass various aspects, including organizational processes, attributes, assets, information, knowledge, and competencies (Liu, Song, Xing, Zhu, & Qu, 2021). The relationship between resources and organizational learning agility is direct. Organizational learning involves the transfer of knowledge within an organization, leading to continuous improvement over time. Organizations leverage their human and information resources to enhance learning agility in serving their customers and optimizing their processes (Wong, Wong, & Boon-itt, 2020).

Adequacy of resources pertains to the sufficiency of vital resources necessary for the seamless and effective generation of energy. For energy-generating entities, the significance lies in maintaining a sufficiently skilled and well-managed workforce, allocating financial resources for infrastructure and operational support, ensuring reliable physical assets for energy production, and implementing advanced information systems for monitoring and decision-making. The concept of resource adequacy is pivotal in guaranteeing that the organization can fulfill the requirements of energy production, tackle unforeseen challenges, and uphold a steady and dependable energy supply to meet consumer needs (Liu et al., 2021).

In the context of energy organizations, learning agility entails the acquisition of complex skills necessary to adapt to new ways of conducting various organizational processes and the application of these newly acquired skills in diverse situations (Mengmeng, Honghui, & Junxian, 2019). Consequently, learning agility denotes an organization's capacity to learn, adapt, apply, unlearn, and relearn processes to effectively navigate the ever-evolving conditions of the operational environment. The pursuit of learning agility necessitates organizations to allocate sufficient resources, ensuring a competitive advantage (Wong et al., 2020). Crucial catalysts for fostering learning agility within energy organizations encompass the integration of advanced production technology, enhanced information systems, the growing influence of customer empowerment, and the rapid pace of innovation (Liu et al., 2021). These elements emphasize the imperative for companies employing strategic acceleration to harmonize their competitive capacities with both customer satisfaction and innovative educational perspectives.

Consequently, customers' perceptions of products and services, timeliness, adaptability, value, and various facets of learning and innovation emerge as pivotal competitive dimensions (Mengmeng et al., 2019). The competitive prowess of an organization hinges on its capability to meet customer expectations relative to its competitors. Hence, organizations must leverage disparities in their resource allocations, capabilities, and proficiencies to devise strategies that yield competitive advantage. Competitive strategy primarily revolves around exploiting these differences (Wong et al., 2020). The extent of competitive advantage attributable to a specific resource depends on its capacity to reduce the firm's cost structure, differentiate the organization's offerings in the market, and establish uniqueness compared to competitors (Mengmeng et al., 2019).

Identifying the necessary resources for harnessing market opportunities requires a thorough assessment of the organization's existing resources (resource development) and a potential decision to acquire resources from the external environment (Liu et al., 2021). According to Sajdak (2015), organizations create strategic partnerships through the utilization of the knowledge and competencies of suppliers, distributors, manufacturers, and logistics operators. This approach helps organizations discover innovation opportunities and execute competitive actions. Reactive actions alone are insufficient in generating the same added value as organizations that combine them with a level of strategic agility (Wong et al., 2020). The resource allocation determine the operational efficiency of energy organizations.

The allocation of involves a complex decision-making, particularly concerning investments in diverse energy sources such as fossil fuels, renewable energies, and nuclear power (Mastepanov, 2020). This planning strategy goes beyond financial considerations, incorporating factors like cost-efficiency, environmental implications, and the long-term sustainability of these choices into the decision-making framework. Organizations are required to meticulously evaluate the merits and drawbacks of each energy source, taking into account aspects such as economic viability, environmental impact, and the potential to meet present and future energy demands. Resource allocation thus becomes a multifaceted undertaking, demanding a comprehensive understanding of both immediate and long-term implications associated with various energy sources (Wong et al., 2020). This strategic approach enables them make well-informed decisions aligned with economic, environmental, and societal considerations.

Moreover, the allocation of resources involves the optimization of skilled personnel and technological infrastructure allocation to oversee and uphold energy generation facilities effectively (Mastepanov, 2020). This dynamic resource distribution plays a pivotal role in addressing energy demand, complying with regulatory prerequisites, and maintaining competitiveness in an ever-evolving energy landscape. It necessitates striking a harmonious equilibrium between short-term operational imperatives and long-term sustainability objectives, rendering it a multifaceted and strategic facet of energy generation organizations' administration (Mastepanov, 2020).

2.2.2 Information Technology Adoption and Implementation of Learning Agility Strategy

Organizations are significantly investing in information technology to align their business strategies, enable innovative functional operations, and expand their extended enterprise networks (Jermsittiparsert & Pithuk, 2019). Organizations have embraced information technology to drive transformations in the management of customer relationships, manufacturing, procurement, the supply chain, and other essential activities, thereby enhancing their competitive capabilities. The implementation of information technology is geared towards expanding the range of products and services, with numerous innovation initiatives focused on introducing novel services, improving existing ones, or enhancing the efficiency of processes of service delivery processes (Chae, Koh, & Prybutok, 2014). In the sector of electrical power generation, technology plays a vital role. Power generation companies utilize automation technologies to reduce costs, save time, and improve operational efficiency.

Additionally, technology is instrumental in addressing optimization challenges in the power generation process (Chege, Wang, & Suntu, 2020). Furthermore, effective adoption of information technology enhances geothermal development by increasing productivity and enhancing drilling performance (Jermsittiparsert & Pithuk, 2019). Information technology infrastructure encompasses elements such as networks, large-scale computing management and provisioning, electronic data interchange, shared databases, and research and development to identify emerging technologies (Mastepanov, 2020).

A substantial segment of an organization's budget dedicated to information technology is directed towards its infrastructure, facilitating the seamless exchange of information across various departments and offering adaptability to respond to shifts in the business strategy. Strategic alignment, as opined by Chae et al. (2014), highlights that the influence of information technology on performance depends on the degree to which the information

technology strategy aligns with the overarching corporate strategy. Achieving successful alignment necessitates a delicate balance between internal and external factors, as well as the domains of both business and information technology (Jermsittiparsert & Pithuk, 2019). Numerous studies have emphasized the critical role of aligning information technology and business strategies in achieving successful information technology adoption, which, in turn, is positively associated with effective organizational performance. Information technology enables modularization and integration of business processes, allowing for their configuration and reconfiguration to create new processes. Operational agility facilitates the reduction of information asymmetry between buyers and sellers through the immediate provision of comprehensive information, often through electronic distribution channels (Jermsittiparsert & Pithuk, 2019).

According to Nkuda (2017), business organizations operate in complex, dynamic, and uncertain environments, necessitating the ability to adapt and reshape their operational environment based on the latest changes. Organizations can be likened to social organisms relying on knowledge systems to function efficiently amid change and uncertainty (Chae, Koh, & Prybutok, 2014). By adopting a learning organization approach, organizations enhance their resilience against environmental challenges and deploy their knowledge offensively to align with the operational environment. Learning organizations replace rigid top-down hierarchies with horizontally organized and interactive structures that promote strategic flexibility and competitiveness in a complex and dynamic environment driven by global competition and liberalization forces (Chege et al., 2020).

2.2.3 Employee Skills and Competencies and Implementation of Learning Agility Strategy

According to O'Reilly (2017), organizations are evolving their practices to focus on skills that enable them to deliver results faster, more intelligently, and more effectively. Successful businesses continuously experiment to determine what works and what doesn't, all in the pursuit of meeting customer needs. They emphasize clear goal-setting, shorter feedback loops, and performance measurement based on results rather than mere outputs (Rossignoli & Lionzo, 2018). High-performing organizations cultivate the capability to adapt, adjust, and innovate continually. Training and development play a pivotal role in reinforcing the culture of ongoing learning, described as an attribute that leads to a higher level of agility (Potnuru, Sahoo, & Sharma, 2019).

Cross-functional training enables teams to become more agile by equipping them with the skills to perform various projects (Sabuhari, Sudiro, Irawanto, & Rahayu, 2020). These well-rounded teams can expedite work execution due to their wide skill set, allowing them to engage where and when needed. Thus, continuous learning is paramount to a team's agility, enabling them to tackle a variety of projects and execute them with greater speed (Vogel, 2014). Training and development serve as tools for enhancing continuous learning.

Vogel (2014) suggests a positive correlation between the level of training and development and the level of team agility within an organization. For an organization to undergo change, it is imperative that individual behavior changes as well; otherwise, change is challenging to achieve (Piwowar-Sulej, 2021). Team members must unlearn skills that hinder progress and relearn skills that align with the organization's objectives. This entails making time for reflection, retrospection, and deciding on the next steps or corrective actions instead of engaging in busywork. The importance of team collaboration becomes evident when tackling complex, interdependent initiatives in an organization (Sabuhari, Sudiro, Irawanto, & Rahayu, 2020). Management should allocate time and resources for planned and unplanned training to enhance speed, alignment, and flexibility.

Organizations often encounter barriers that impede the training process toward higher levels of agility, including unsupportive leadership, poor communication, slow decision-making, inflexible culture, and a lack of a clear vision or strategy. Overcoming these obstacles requires a willingness to empower employees and design effective processes (O'Reilly, 2017). According to Piwowar-Sulej (2021), an agile organization is characterized by self-managed, empowered teams that have autonomy in resource allocation, rapid decision-making, and access to relevant information without excessive interference from managers. Empowerment in decision-making is a vital factor in enhancing team agility, as decentralized decision-making allows for faster coordination and action (Calábria, Melo, Albuquerque, Jerônimo, & Dumke de Medeiros, 2018). Empowerment enables teams to act immediately when opportunities arise (Gower, 2013). However, for empowerment to contribute to agility, teams must have access to timely and relevant information, including operating results, business goals, emerging technologies, and competitors' plans. This access to pertinent information enables teams to make rapid, informed decisions (Rossignoli & Lionzo, 2018).

2.2.4 Implementation of Learning Agility Strategy

Enhancing learning agility empowers organizations to excel in a dynamic environment by facilitating rapid knowledge absorption, and continual enhancement (O'Reilly, 2017). Consequently, crafting a learning agility strategy is imperative for organizations to sustain competitiveness and resilience in a constantly evolving landscape. A learning agility strategy nurtures a growth-oriented mindset, fostering a culture where employees readily embrace challenges and perceive failures as valuable learning experiences (Mastepanov, 2020). Adaptability ranks among the most sought-after skills, along with the capacity to swiftly and efficiently acquire new knowledge, equipping employees with the vital competencies required to adjust to new scenarios over time.

Effective execution of learning agility enables both individual employees and the entire organization to remain competitive in a swiftly changing business milieu (Jermsittiparsert & Pithuk, 2019). Given the escalating pace of environmental change, organizations that can swiftly adapt and learn are better positioned for long-term success and sustainability. Swift adaptation to shifting landscapes further empowers organizations to capitalize on novel prospects and elevate their performance. Flexible navigation through job transitions and mastering new technologies has emerged as a fundamental component of employee development and productivity (O'Reilly, 2017). Thus, implementing learning agility is indispensable for employee productivity, particularly within the public sector. It is pivotal for effective service delivery in a volatile labor market.

Public sector organizations, including KenGen, confront multifaceted challenges, making change agility pivotal for ensuring the efficient delivery of services (Piwowar-Sulej, 2021). Furthermore, public sector entities often experience shifts in government priorities and public demands, leading to policy modifications. Consequently, change-agile employees are essential for facilitating the alignment of operational frameworks with new policies and procedures. Implementing a learning agility strategy cultivates a collaborative and cooperative work environment. Agile employees, open to change, are more inclined to work together and share knowledge for superior service delivery (Ulrich & Yeung, 2019).

A commitment to ongoing learning enhances employee expertise and equips them to confront diverse challenges. The implementation of a learning agility strategy directly links to the achievement of organizational objectives (Khoshnood & Nematizadeh, 2017). As employees continuously enhance their skills, they become better equipped to fulfill their roles, ultimately

elevating individual and group performance. This aligns with the goal of optimizing operational efficiency. The development of organizations hinges on managerial receptiveness to change and the prioritization of learning agility to effectively respond to changing circumstances (Jermsittiparsert & Pithuk, 2019). Adaptability is a cornerstone of organizational development, ensuring the organization can effectively tackle both external and internal challenges, stay relevant, and capitalize on growth opportunities.

A learning agility strategy promotes continual skill development, elevates job satisfaction, and fosters a culture of learning among employees, resulting in reduced staff turnover (Ulrich & Yeung, 2019). Recognizing and rewarding innovation champions serves as positive reinforcement for their efforts, motivating employees to continue thinking and acting creatively. Organizations hold employees who contribute to growth through innovation in high regard, which, in turn, enhances the likelihood of retaining such talented personnel within the organization.

2.3 Theoretical Framework

This study is anchored on IT complementarities, dynamic capability theory, the resource-based view, and experiential learning theory. These theories collectively provide the framework for comprehending the elements that influence the implementation of the learning agility strategy within KenGen in Kenya.

2.3.1 Resource Based View

The Resource-Based View (RBV), as acknowledged by Clarke and MacDonald (2019), asserts that firms establish a sustainable competitive advantage by leveraging internal resources and capabilities. Valuable and rare resources hold the potential to create a competitive edge (Yu, Chavez, & Feng, 2017). RBV primarily focuses on a firm's resources and capabilities, which contribute to persistent performance differences among companies. Rather than viewing firms solely through their product markets, the RBV, according to Balashova and Gromova (2016), developed economic tools for analyzing and managing the relationship between a firm's resources and its profitability.

Clarke and MacDonald (2019) widely recognize the Resource-Based View as a prominent theory for describing, explaining, and predicting organizational connections, shaping the foundation for understanding a firm's competitive advantage and performance. Resources encompass tangible and intangible assets within an organization. Tangible resources include physical assets like real estate, machinery, inventory, and financial reserves, while intangible

resources comprise knowledge, reputation, culture, and patents (Clarke & MacDonald, 2019; Balashova & Gromova, 2016). These resources must possess the capacity to adapt to environmental changes to add value to an organization. The Resource-Based View premise, as presented by Owino (2015), underscores the development of distinctive capabilities that form the basis of a firm's future competitiveness. Unlike other perspectives, this theory suggests that firm performance predominantly relies on internal variables rather than external influences, emphasizing the significance of developing distinct competencies to drive competitiveness.

Dynamic capabilities act as a bridge between a firm's resources and the ever-changing business environment, thus reinforcing the sustainability of its competitive advantage (Clarke & MacDonald, 2019). Capabilities, per Yu et al. (2017), represent a firm's ability to deploy resources through organizational processes to generate desired outcomes, illustrating that the presence of capabilities allows resources to be utilized effectively. In the context of the study on learning agility at KenGen, the RBV implies that organizations must possess and allocate sufficient resources to achieve a competitive edge. Enhancing KenGen's learning agility strategy involves optimizing resources and competences, such as leveraging E-Learning platforms, learning management systems, and knowledge-sharing platforms.

Resource allocation adequacy becomes imperative as it ensures that an organization effectively distributes its resources, encompassing both tangible and intangible assets, in a manner that aligns with its strategic goals. This entails directing resources to areas where they can generate the highest value and competitive edge. On the other hand, a learning agility strategy revolves around an organization's capability to swiftly adapt and acquire knowledge in response to evolving environments and emerging opportunities or challenges. Within this strategy, the Resource-Based View (RBV) assumes a pivotal role by supporting an organization's capacity to identify, secure, and apply novel resources and insights in reaction to the dynamic conditions of the market. Companies that embrace RBV principles in their resource allocation procedures are better situated to bolster their learning agility, allowing them to efficiently reconfigure their resource foundation to confront changing obstacles and exploit emerging prospects, ultimately culminating in the long-term sustenance.

2.3.2 Dynamic Capabilities Theory

As explained by Pisano (2015), the dynamic capabilities theory articulates a company's ability to integrate, evolve, and reconfigure both internal and external knowledge to quickly adapt to a changing environment. In dynamic conditions, a company's competitive advantage is found

in its internal processes and routines that enable the revitalization and modification of its collection of organizational capabilities (Pisano, 2015). Dynamic capabilities encompass adaptation and change by constructing, integrating, or reconfiguring other resources and capabilities (Mikalef & Pateli, 2017). These dynamic capabilities do not directly concern the production of goods or services, hence they do not immediately influence a firm's output (Jiang, Mavondo, & Zhao, 2020). However, they indirectly influence the production process by integrating, reconfiguring, acquiring, and releasing resources to adapt to environmental turbulence or to drive internal and external change (Mikalef & Pateli, 2017). This perspective is an extension of the resource-based view, perceiving the firm as an accumulation of resources such as technologies, skills, and knowledge-based resources.

The dynamic capabilities view of a firm extends the evolutionary outlook of the resource-based perspective by explicitly examining how capabilities evolve and how organizations respond to environmental turbulence. Mikalef and Pateli (2017) indicate that in today's dynamic markets, competitive advantage hinges on the continual development of organizational capabilities, serving as the foundation for a firm's products and services, thereby perpetually renewing the firm's competitive advantages. Firm survival is an evident marker of an organization's adaptability to environmental turbulence (Pisano, 2015), underlining the importance of sustained organizational capability development as opposed to just securing a strong market position in the firm's strategy (Jiang et al., 2020).

Consequently, firms may differ in their demonstration of dynamic capabilities that enable reconfiguration, particularly in operational capabilities such as marketing, sales, customer relations, and service capabilities. These dynamic capabilities, through the reconfiguration of these operational capabilities, aid in forging sustainable competitive advantages and indirectly generating revenue (Jiang et al., 2020). In the 21st century, organizations are compelled to reconfigure themselves, aligning their competitive strategies with dynamic capabilities to enhance performance. KenGen can enhance its use of the Internet of Things (IoT) and data analytics to optimize energy generation and boost efficiency. By utilizing information technology as a determinant of learning agility, KenGen aims to operate in harmony with the evolving business environment.

KenGen has allocated resources for human resource development to maximize productivity, and it is imperative to investigate whether this commitment is yielding the anticipated outcomes. This theory directly indicates the relationship between how employees utilize

organizational resources to impact performance and enhance productivity through learning processes.

Applied to the realm of information technology adoption and the formulation of learning agility strategies, the Dynamic Capabilities Theory underscores the vital significance of an organization's proficiency not only in recognizing the value of emerging IT solutions but also in promptly integrating them within its preexisting processes and organizational structures. This adaptability in response to technological evolution forms the crux of successful IT adoption. Furthermore, the theory accentuates the pivotal role of learning agility in this context, emphasizing that organizations must continually acquire and cultivate fresh IT-related competencies to remain competitive.

By leveraging dynamic capabilities, organizations are empowered to identify and harness opportunities arising from the advances in information technology, seamlessly incorporating them into their overarching strategies and operational frameworks. The outcome is an amplified learning agility and the enduring ability to flexibly adapt within the perpetually changing operational environment.

2.3.3 Theory of Information Technology (IT) Complementarities

The Theory of Information Technology (IT) Complementarities suggests that the impact of IT initially manifests at the level of organizational processes utilizing IT resources (Cepeda & Arias-Pérez, 2019). This theory delineates a two-stage process wherein IT resources can enhance the quality and efficiency of the organizational processes they are integrated into, thereby augmenting organizational performance (Queiroz, Tallon, Coltman, Sharma, & Reynolds, 2020). Subsequent empirical research supports the link between IT, business processes, and its impact on firm performance. It offers insights into the nature of necessary changes and ways to align these changes with business value. The theory emphasizes the interdependence of social and technological factors, stressing that their mutual enhancement amplifies benefits (Cepeda & Arias-Pérez, 2019).

As emphasized by Samuwai, Jale, Prasad, Acklesh, and Heales, Jon (2012), complementary factors need to co-evolve in tandem, direction, and scale to maximize organizational benefits, advocating a collective adjustment in a comprehensive set of variables. This notion extends fit theories by enabling the alignment of complementary changes with associated output measures (Ghobakhloo & Azar, 2018). The theory acknowledges that synchronizing complementary changes is crucial, introducing the concept of multidimensional input levels for realizing IT-

related business value (Queiroz et al., 2020). When a complementary reengineering variable remains unchanged, the organization cannot fully realize the benefits of reengineering (Ghobakhloo & Azar, 2018). In the context of manufacturing functions, the complementarity perspective underscores the significance of firms' integrated information system (IS) capability and the complementary effects of IS capability in predicting manufacturing performance. The theory underlines that IT inputs serve as components in organizational design supporting operational objectives (Samuwai et al., 2012). It further stresses that the success of IT is contingent upon complementary investments, considerations of resources, processes, incentives, policies, and control systems.

The adaptability of an IT infrastructure stands as a firm's core competency in relation to its IT capabilities. Variations in benefits derived from IT investments are attributed to other resources and characteristics that align with the technology employed in different companies (Ghobakhloo & Azar, 2018). The full payoff from IT is achievable when other complementary factors such as decision authority, training and development, and investment policies undergo coordinated and aligned changes (Samuwai et al., 2012). In any organization, the success or failure of strategy implementation hinges on various internal and external factors. It involves designing and managing systems to optimize the integration of individuals, structure, processes, and resources in achieving organizational objectives (Murrey, 2015).

The Theory of IT Complementarities is relevant to the current study as it illustrates the role of IT in comprehending organizational design and structure that KenGen can leverage in crafting an operational strategy to attain its objectives. Thus, if KenGen incorporates IT in its learning processes, it's poised to witness shifts in its competitive advantage and performance, especially concerning human resource development and resource optimization. Information technology stands as a critical factor influencing organizational performance and serves as a benchmark for competitive advantage, as explored in this study.

2.3.4 Experiential Learning Theory

Experiential Learning Theory, conceived by David A. Kolb in the 1970s, posits that learning is a dynamic progression rooted in direct experiences, fortified by a cycle of contemplation and action. Kolb's theory is frequently depicted as a learning cycle featuring four distinctive phases such as concrete experience, reflective observation, abstract conceptualization and active experimentation. Under concrete experience, individuals immerse themselves in particular real-life situations or activities, initiating the learning process. It is in this phase that people

engage in hands-on experiences, often encountering novel and unfamiliar circumstances, which form the bedrock of learning (Dyke, 2017). Subsequent to the concrete experience, learners transition to the reflective observation phase. Here, individuals introspect upon their encounters, mulling over their emotions, thoughts, and reactions. Their aim is to discern the underlying causes and implications of these experiences by identifying patterns, contradictions, and insights. Learners derive meaning from their observations and reflections by forging overarching principles, theories, or conceptual frameworks. They elevate the concrete experience to a more abstract comprehension, necessitating analytical thinking and the development of concepts or theories associated with the experience (Ferrero, Bichai, & Rusca, 2018).

The ultimate stage in the cycle involves the application of theories and concepts engendered in the abstract conceptualization phase to novel scenarios or predicaments. Learners engage in active experimentation, subjecting their ideas to practical trials. They leverage their newfound knowledge and insights to render decisions, surmount challenges, and take action in real-world contexts (Martin, Franc, & Zounková, 2017). Experiential learning theory underscores the significance of effective learning through direct engagement in experiences, reflective analysis, and active experimentation. In the context of KenGen's efforts to embrace a learning agility strategy, employees can nurture the essential proficiencies by actively participating in hands-on activities that pertain to emerging technologies, operational procedures, and intricate problem-solving scenarios. By introspectively evaluating these experiences and distilling valuable insights, employees can cultivate a profound comprehension of how to adapt and foster innovation.

The iterative learning cycle prescribed by this theory ensures an ongoing refinement of employees' adaptability, critical thinking prowess, and decision-making skills, all of which are integral components of a prosperous learning agility strategy. Consequently, through the application of Experiential Learning Theory, KenGen can empower its workforce to exhibit greater agility and proficiency in responding to evolving challenges and seizing opportunities. Experiential learning theory places a strong emphasis on the significance of offering employees tangible, hands-on experiences and affording them the opportunity to extract valuable insights from these encounters. By engaging in this proactive learning approach, individuals are better poised to cultivate practical skills and competences through their immersion in real-world challenges, enhancing their capacity to adapt and effectively address intricate issues. When applied to learning agility strategies, the Experiential Learning Theory aligns with the concept

of perpetual and flexible learning. Learning agility demands that employees swiftly adapt to novel situations and acquire fresh skills and knowledge as circumstances dictate.

Organizations that infuse experiential learning principles into their strategies create an environment that fosters learning from genuine, on-the-job experiences, prompting employees to introspect about their actions and insights. This iterative learning process harmonizes seamlessly with the tenets of the experiential learning theory, empowering employees to evolve into agile learners who can adeptly adjust to evolving circumstances and nurture the indispensable competences required to excel in a perpetually shifting professional landscape.

Experiential learning theory advocates for reflective observation to assess the implications of these technologies. It also emphasizes facilitating abstract conceptualization to comprehend the theoretical aspects and promoting active experimentation to seamlessly integrate IT solutions into daily operational procedures. This experiential learning approach nurtures a dynamic and adaptive organizational culture, empowering energy firms to proficiently navigate the challenges associated with adopting and incorporating information technology into their systems and workflows.

2.4 Conceptual Framework

Figure 2.1 presents a conceptual framework that shows the association between the variables under study. It centered on assessing the independent variables, specifically resource adequacy, information technology adoption, and employee skills and competencies, on the organization's learning agility strategy. This study further analyzed the implementation of the dependent variable, namely learning agility strategy, in relation to the independent variables.

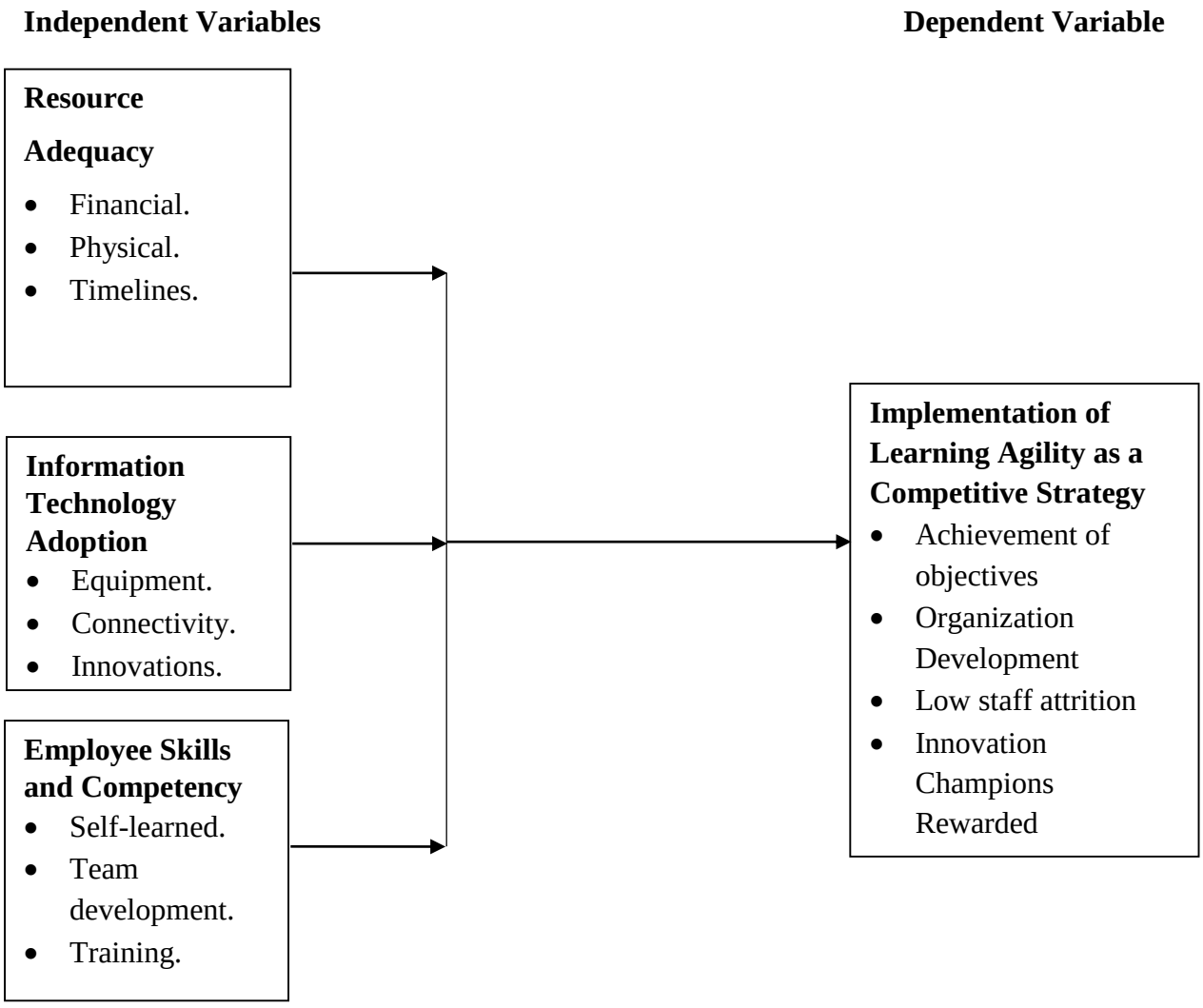

Figure 2.1: Conceptual Framework

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the research methodology employed in this study, encompassing the research design, study area, target population, sampling methods, sample selection procedures, data collection techniques, data analysis methods, and ethical considerations.

3.2 Research Design

Research design serves as the overarching framework that outlines the approach taken in conducting a study (Bell, Bryman, & Harley, 2018). It delineates how various components of the research, such as samples, groups, programs, or measures, interact to address the research questions. The research design serves as a crucial blueprint, offering a structured guide for researchers throughout the entire research process. Beyond the logistical aspects of data collection and analysis, it significantly shapes the study's overall quality and credibility.

Appropriate research design ensures that the study's outcomes are reliable and applicable beyond the specific sample or context. Therefore, researchers ought to carefully consider various components of the design, including the choice between qualitative and quantitative approaches, the selection of suitable data collection instruments, and the establishment of a sound sampling design. In this study, a descriptive research design was adopted to assess the factors influencing the effective implementation of the learning agility strategy at KenGen. Descriptive research design allows for the comprehensive examination of a phenomenon within its natural and unaltered context. This approach ensured the collection of abundant data within a relatively short timeframe.

3.3 Location of the Study

The study area refers to the specific geographic location where the research activities are carried out (Sekaran & Bougie, 2019). This is the site where data collection and other research procedures occur. The research was conducted at KenGen, Olkaria, situated in Naivasha Sub-County. Olkaria is approximately 120 kilometers northwest of Nairobi. KenGen's involvement in Olkaria dates back to the 1970s when exploratory drilling was initiated to assess geothermal potential. In 1981, KenGen established Africa's first geothermal power station, Olkaria I, with a 15 MW capacity. Subsequently, KenGen expanded its presence in Olkaria, commissioning Olkaria II in 2003, Olkaria III in 2009, and Olkaria IV in 2014, significantly enhancing Kenya's geothermal energy production capacity.

3.4 Target Population

The target population, as defined by Mugenda and Mugenda (2012), encompasses a entire set of individuals, events, or objects sharing a common observable characteristic. This study focused on top managers, middle-level managers, and lower-level managers within KenGen's Olkaria branch. The accessible population consisted of technical staff (228), middle-level managers (183), and senior managers (56), resulting in a total of 467 potential respondents.

Table 3.1: Target Population

Category	Population
Senior managers	56
Middle manager	183
Technical staff	228
Total	**467**

3.5 Sample Size and Sampling Procedures

A sample refers to a smaller subset extracted from the accessible population, and it is chosen with precision to ensure its representation of the entire population based on relevant characteristics (Mugenda & Mugenda, 2012). Sampling is a methodological process or technique for the selection of a subset from a given population to participate in the research (Sekaran & Bougie, 2019). This selection process involves choosing individuals in such a way that they accurately reflect the broader group from which they were drawn. In this study, a stratified sampling approach was employed, and the sample size was determined using Nasiuma's formula (2001). The total population was categorized into three strata, encompassing top managers, middle managers, and technical staff. The sample determination formula is presented below:

$$n = \frac{NC^2}{C^2 + (N-1)\,e^2}$$

Where;

n=Sample size

N=Population size

C=Coefficient of variation which is 50%

e= Error margin which is 0.05

Substituting the values in the equation above, the estimated sample size (n) was as shown in Table 3.2:

Table 3.2: Sample Size

Category	Population	Sample
Senior Managers	56	36
Middle Managers	183	65
Technical Staff	228	70
Total	**467**	**171**

Respondents from various categories were chosen through the utilization of a simple random sampling technique. In particular, the sample of 171 was picked from the population of 467 through use of random numbers.

3.6 Methods of Data Collection

The researcher secured formal approval from the Laikipia University Ethics Review Committee and obtained a permit from NACOSTI to carry out the study. Approval to proceed with the research was sought from KenGen management through the human resources department. Once the necessary permission was granted, the researcher enlisted the assistance of research personnel to distribute and subsequently collect the completed questionnaires in various organizational units. The questionnaires were retrieved within a seven-day timeframe in preparation for data analysis. To achieve balanced responses across the three staff categories, the researcher utilized a stratified sampling method.

Initially, the researcher categorized the staff and determined the number of questionnaires required for each category based on their proportions. The questionnaires were then randomly distributed within each category to ensure proportional representation. During the data collection phase, the researcher kept track of the response rates from each category and made necessary adjustments, including sending additional questionnaires to categories with lower response rates. This method effectively prevented any single category from being disproportionately represented in the final sample. The drop-and-pick method was utilized for distributing and collecting the questionnaires.

3.6.1 Pilot Study

A pilot study was conducted at the Nakuru office of the Geothermal Development Company to assess the reliability and validity of the data collection tools. The individuals involved in the pilot test were not part of the final study to prevent any potential bias. In order to align with the

recommendation by Mugenda and Mugenda (2012), that a pilot test should involve approximately 10 percent of the sample size, 17 managers from various categories participated, making up 10% of the total sample size (171). Reliability, as described by Gray (2019), pertains to the consistency of measurements in a test when repeated on the same subject under identical conditions. To evaluate the reliability of the instruments, Cronbach's alpha analysis was used to assess their internal consistency. This approach, as suggested by Ercan, Yazici, Sigirli, Ediz, and Kan (2007), is a reliable method for establishing internal consistency. All variables in the study achieved a Cronbach alpha value of at least 0.7, meeting the acceptable threshold.

Validity, as defined by Bell, Bryman, and Harley (2018), concerns how well the research's data collection and analysis methods accurately capture the reality being investigated. To evaluate the content validity of the research questionnaire, the researcher sought guidance and input from supervisors. Before initiating data analysis, diagnostic tests were conducted, including linearity, normality, multicollinearity, and homoscedasticity tests. Linearity tests were performed to ascertain the linear relationship between predictor variables and the response variable, as this is a fundamental assumption in multiple regression (Kadim, Sunardi, & Husain, 2020).

Normality tests were used to determine if the data followed a normal distribution, which is essential for descriptive analysis (Kadim et al., 2020). Multicollinearity, characterized by significant correlations among independent variables, was assessed using the variance inflation factor (VIF) to ensure the independence of predictors (Seo, Kim, & Kim, 2019). Lastly, homoscedasticity, which indicates constant error terms in the data, was examined to ensure consistency in regression analysis (Kadim, Sunardi, & Husain, 2020) and to avoid the problems associated with heteroscedasticity.

3.7 Research Instrument

According to Mugenda and Mugenda (2012), questionnaires are commonly used in quantitative social research to explain current issues. They were chosen for this study because they are easy to administer to individuals of varying education levels and IT expertise within the selected sample. The primary data for this study was collected using a Likert scale questionnaire, thereby limiting the research to the analysis of primary data. In particular, the questionnaire had close-ended questions. Significantly, it was designed to capture data relevant to all study variables, both independent and dependent, in alignment with the research objectives.

3.7.1 Validity and Reliability of the Research Instrument

The validity of the questionnaire was tested through the expertise of the supervisors who reviewed and approved its content, confirming its relevance and appropriateness for the study. To assess reliability, Cronbach's alpha was used, and all variables yielded values exceeding the threshold of 0.7, indicating the internal consistency. This demonstrated that the instrument was reliable for measuring the intended constructs. Overall, the questionnaire was deemed suitable for data collection in the main study, ensuring both validity and reliability in gathering accurate information.

3.8 Data Analysis and Presentation

Data analysis comprises a wide range of activities, involving both qualitative and quantitative methodologies. As per the insights of Sekaran and Bougie (2019), the process of data analysis and presentation involves the examination of organized information to unearth underlying facts and provide a means of interpretation. This facilitates a comprehensive elucidation of the true significance of the findings in line with the study's objectives. The collected data underwent editing and coding using Statistical Package for Social Sciences (SPSS) version 24 for subsequent analysis. The study employed a combination of descriptive and inferential data analyses to address its research objectives.

The findings from the descriptive analysis were succinctly presented in tables. Correlation analysis was employed to draw pertinent conclusions, while a multiple regression model was utilized to ascertain the impact of independent variables on the dependent variable. The multiple regression model of the study was;

$$Y= \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 +\varepsilon$$

Where;

Y= Implementation of Learning Agility Strategy

β_0= Constant

β_1, β_2, and β_3 are coefficients of the determinants of effective implementation of learning agility strategy in KenGen, Kenya.

ε=error term

X_1= Resource Allocation Adequacy

X_2= Information Technology Adoption

X_3= Employees skills and competency

3.9 Ethical Considerations

Adhering to ethical considerations is of paramount importance in any research endeavor. In this context, the research was meticulously guided by a set of ethical principles, with a focus on upholding research standards related to privacy, confidentiality, voluntary participation, and

anonymity. Regarding the privacy of the participants, the researcher took great care to ensure that there were no inadvertent disclosures of any identifying information. Data collection occurred in a private setting without gathering sensitive personal information.

Respondents' information was treated with the utmost confidentiality, and privacy protection measures were in place. Regarding voluntary participation, the researcher informed participants about the study's nature and purpose, clarifying the academic significance and ensuring full awareness of objectives and goals. Additionally, the researcher provided a clear explanation of the specific elements under investigation, granting participants autonomy to decide on voluntary participation. This approach emphasized the importance of informed and willing involvement in the research process, respecting participants' rights and choices.

CHAPTER FOUR
RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter presents the descriptive and inferential results and discussions pertaining to the determinants of effective implementation of a learning agility strategy within the Kenya Electricity Generating Company. The critical determinants under the study encompassed the resource sufficiency, the adoption of information technology, and employee skills and competences and the implementation of learning agility strategy. Furthermore, this chapter presents the reliability, validity, and diagnostic tests findings.

4.2 Response Rate

A response rate of 81.3% was achieved, with 139 out of the 171 distributed questionnaires being both completed and returned. Mugenda and Mugenda (2012) indicated that a response rate of 70% or higher is considered sufficient for a research study, affirming that the 81.3% response rate attained in this study was indeed deemed adequate.

4.3 Demographic Information of the Respondents

The researcher aimed to collect demographic data from the participants, which encompassed details about their work experience, management level, and educational background. The results are presented in Tables 4.1, 4.2, and 4.3.

Table 4.1: Work Experience

	Frequency	**Percent (%)**
Below 5 years	11	7.9
6-15 years	67	48.2
16-30 years	59	42.5
Above 30 years	2	1.4
Total	**139**	**100.0**

As per results in Table 4.1, 67 managers (48.2%), had a work experience ranging from 6 to 15 years. Additionally, 59 respondents (42.5%) reported having work experience spanning from 16 to 30 years, while 11 participants (7.9%) had less than 5 years of work experience. A smaller percentage, consisting of only 2 managers (1.4%), indicated having work experience exceeding 30 years. It is worth noting that employees with substantial work experience tend to possess a profound understanding of the organization's operations, the dynamics of the industry, and the challenges it encounters. This contextual insight significantly influences the implementation of learning agility strategy.

Table 4.2: Management Level

	Frequency	Percent (%)
Senior Managers (Level 0-3)	15	10.8
Middle Managers (Level 4-5)	56	40.3
Technical Staff (Level 6-7)	68	48.9
Total	**139**	**100.0**

As depicted in Table 4.2, the results indicate that a significant portion, specifically 68 respondents (48.9%), were classified as technical staff, while 56 participants (40.3%) were middle-level managers. Additionally, it's noteworthy that 15 respondents (10.8%) occupied senior managerial positions.

Table 4.3: Education Level

	Frequency	Percent (%)
Certificate	5	3.6
Diploma Level	24	17.3
Undergraduate Degree Level	92	66.2
Master's Degree Level	15	10.8
Doctorate Level	3	2.1
Total	**139**	**100.0**

As per the findings presented in Table 4.3, it is evident that the majority, specifically 92 respondents (66.2% of the total), held undergraduate degrees as their highest educational qualification. Additionally, 15 participants (10.8%) had achieved master's degrees, while only 3 individuals (2.1%) had obtained doctorate degrees. Furthermore, 24 respondents (17%) had attained diplomas, and 5 individuals (3.6%) possessed certificates as their highest level of education.

In sum, the findings highlight that a substantial percentage, amounting to 79.1% of the respondents, had at least an undergraduate degree as their highest educational attainment. It is worth noting that the level of education holds significant potential for facilitating the implementation of learning agility within KenGen, as higher education levels contribute to the development of critical thinking and problem-solving skills. Moreover, the level of education plays a pivotal role in fostering learning agility by enabling employees to identify challenges, devise effective solutions, and apply newfound insights adeptly in their roles.

4.4 Reliability and Validity Results

The research questionnaire underwent an assessment of content validity, which measures the extent to which a data collection instrument comprehensively evaluates the constructs under

investigation. In the context of this study, the constructs in question encompassed resource adequacy, information technology adoption, employee skills and competences, and the implementation of a learning agility strategy. To establish content validity, input was sought from the supervisors designated by Laikipia University. These supervisors meticulously reviewed all the questionnaire items with a focus on readability, clarity, and overall comprehensibility. After a thorough examination of the questionnaire content, the supervisors collectively affirmed that the data items were appropriately formulated to align with the study variables they were designed to measure. To assess the questionnaire's reliability, the Cronbach alpha coefficient was employed, and a summary of the reliability test results is provided in Table 4.4.

Table 4.4: Reliability Test Results

Variables	Number of Items Tested	Cronbach's Alpha Coefficient
Resource Adequacy	6	0.889
Information Technology Adoption	6	0.796
Employee Skills and Competences	6	0.811
Implementation of Learning Agility Strategy	6	0.725

The results illustrated in Table 4.4 reveal that the constructs of resource adequacy ($\alpha = 0.889$), information technology adoption ($\alpha = 0.796$), employee skills and competences ($\alpha = 0.811$), and the implementation of the learning agility strategy ($\alpha = 0.725$) all exhibited Cronbach's alpha values surpassing the minimum acceptable threshold of 0.7. It is noteworthy that researchers typically aim for reliability values of 0.7 or higher. Consequently, the research questionnaire was deemed sufficiently reliable for the data collection phase of the main study.

4.5 Descriptive Statistical Results

The study sought to examine the influence of resource adequacy, information technology adoption, and employee skills and competencies on the successful implementation of a learning agility strategy within the Kenya Electricity Generating Company. The descriptive results are presented from sections 4.5.1 to 4.5.4 are presented for further analysis.

4.5.1 Resource Adequacy

The research had the objective of assessing how resource adequacy influences the implementation of a learning agility strategy. Descriptive findings are shown in Table 4.5.

Table 4.5: Influence of Resource Adequacy on Implementation of Learning Agility Strategy

	N	SA 5	A 4	N 3	D 2	SD 1	Mean	Std. Dev.
Adequate financial resources is required to support the activities undertaken at KenGen.	139	70.5%	18.7%	9.4%	1.4%	0%	4.58	0.721
The financial resources are enough to support the activities of the organization	139	15.8%	44.6%	20.9%	15.1%	3.6%	3.54	1.044
Employees are allocated adequate space to do their activities	139	33.9%	46%	12.9%	2.9%	4.3%	4.02	0.989
Working environment is available and equipped with required tools for all the employees.	139	27.3%	48.9%	14.4%	5.8%	3.6%	3.91	0.985
The management provide adequate financial resources to employees within the good timelines.	139	21.6%	33.8%	23.7%	11.5%	9.4%	3.47	1.218
Employees are given time to present findings of their creativity and innovations to the management.	139	36%	40.2%	14.4%	6.5%	2.9%	4.00	1.014

SD=1, D=2, N=3, A=4, and SA=5

The research findings indicated that 70.5% of the managers strongly agreed (mean=4.58) that adequate financial resources are required to support the activities undertaken at KenGen. This adequacy is fundamental in ensuring the successful implementation of the learning agility strategy. Financial resources play a critical role in investing in various training and development programs, fostering a continuous learning environment among employees. It is essential in the design and delivery of learning initiatives, ensuring that employees have access to resources, thereby enhancing their skills and knowledge.

Likewise, 44.6% of the respondents agreed that the financial resources available at KenGen are sufficient to support the organizational activities. This adequate investment in learning platforms promotes self-directed learning among employees, a vital component in the successful implementation of the learning agility strategy. Furthermore, the majority (33.8%)

of the respondents concurred (mean=4.02) that the work environment provides sufficient space for employees' activities. A well-designed workspace cultivates a culture of learning and agility, facilitating collaboration and idea-sharing that can lead to innovative solutions. Moreover, the findings revealed that 48.9% of the managers agreed (mean=3.91) that the work environment is equipped with the necessary tools for all employees, aligning the learning initiatives with the strategic objectives of the organization. An effective working environment reduces obstacles to learning, like hierarchical structures, and allows employees to engage in learning activities that support the learning agility strategy.

Another notable aspect highlighted by the research is the timely provision of financial resources, agreed upon by 33.8% of managers, which enables employees to perform their tasks efficiently. Conversely, inadequate financial resources impede learning and adaptation to changes, hindering the organization's innovation and long-term sustainability. Additionally, 40.3% of the respondents concurred (mean=4.00) that employees are given time to present their creative and innovative ideas to the management. These aspects, such as creativity and innovation, play a crucial role in promoting efficiency and are therefore essential elements in the implementation of a learning agility strategy. The findings of this research agrees with Kinako's (2016) study, which investigated agility strategies and their impact on competitive advantage.

Kinako's research revealed that agility strategies, including resource fluidity, significantly influence the competitive advantage and overall performance of insurance firms. This study further demonstrates that resource adequacy has a notable influence on the implementation of the learning agility strategy at KenGen. Moreover, Orina and Nyangáu (2018) examined how resource planning impacts project implementation at KenGen. Their findings indicated that effective resource planning significantly influences project outcomes at the company. This is consistent with the current findings, which suggest that resource adequacy also plays a crucial role in the successful implementation of learning agility.

4.5.2 Information Technology Adoption

The research aimed to assess the information technology adoption’s influence on the implementation of the learning agility strategy. The results are presented in Table 4.6.

Table 4.6: Influence of Information Technology Adoption on Implementation of Learning Agility Strategy

	N	SA	A	N	D	SD	Mean	Std. Dev.
The IT equipment available are adequate to serve all employees.	139	33.1%	32.4%	19.4%	11.5%	3.6%	3.80	1.130
IT equipment are up to date to meet the demands of the industry	139	20.1%	33.8%	28.8%	11.5%	5.8%	3.51	1.112
There are relevant network connectivity and software available for the employees	139	37.4%	38.8%	14.5%	5.0%	4.3%	4.00	1.056
Employees' can access the software and any relevant source of information through these networks	139	16.5%	37.4%	20.2%	15.8%	10.1%	3.35	1.220
Employees can apply their own creativity in my company	139	18.8%	41.3%	26.2%	9.4%	4.3%	3.61	1.035
Employees are encouraged to discover and develop new approaches to improve the efficiency of the company activities.	139	36.7%	41.7%	16.5%	2.9%	2.2%	4.08	0.917

SD=1, D=2, N=3, A=4 and SA=5

Based on the findings in Table 4.6, the majority (33.1%) of the respondents agreed that the IT equipment available suffices to serve all employees, enhancing their efficiency in task performance. The adequacy of technological tools significantly contributes to fostering a learning environment, enabling both employees and the organization to explore new and innovative methods to carry out tasks. Furthermore, having adequate IT equipment facilitates the creation and monitoring of learning programs, which is essential for nurturing a culture of continual learning and implementing a learning agility strategy. Additionally, 33.8% of the respondents expressed agreement (mean=3.51) that the up-to-dateness of IT equipment meets industry demands. Updated IT equipment provides opportunities for employees to take advantage of new features and enhancements, supporting their advancement in knowledge and

skills. Staying current in terms of technology is essential for developing learning resources, ensuring that IT equipment is aligned with the latest software specifications, and supporting compatibility with contemporary learning platforms.

Among the managers of KenGen, a majority (38.8%) agreed (mean=4.00) that relevant network connectivity and software are accessible for employees. Network connectivity plays a vital role in facilitating real-time collaboration among KenGen employees, allowing the organization to gather valuable data on employee progress and engagement through learning platforms. This provides insights into individual strengths and areas that require improvement, enabling KenGen to tailor interventions effectively, promoting the implementation of learning agility. However, 37.4% expressed indifference (mean=3.35) regarding employees' access to software and relevant information sources through these networks. Additionally, 41.3% of the managers agreed that allowing employees to apply their creativity while performing their tasks is crucial for advancing learning agility at KenGen. Establishing an organizational culture that encourages and nurtures creativity is fundamental for effectively implementing a learning agility strategy.

The study also revealed that 41.7% of the managers concurred (mean=4.08) that employees are motivated to explore and develop new approaches to enhance the company's operational efficiency. Overall, the descriptive findings underscored the considerable influence of information technology adoption on implementing the learning agility strategy within KenGen. These findings are consistent with the research conducted by Ghosh, Muduli, and Pingle (2021), which highlighted that e-learning technology significantly promotes learning agility. Their study demonstrated that e-learning platforms facilitate adaptive learning by providing flexible, accessible, and interactive learning experiences. This technology enables individuals to swiftly acquire new skills and knowledge, thereby enhancing their ability to respond effectively to changing environments.

The findings also align with the study by Gitongah and Macharia (2020), who investigated the strategic management and performance of Kenya Electricity Generating Company. Their research revealed that the adoption of information technology significantly enhances both organizational performance and agility. Specifically, the integration of IT systems facilitates more efficient operations, improves decision-making processes, and allows for greater adaptability in the face of market changes.

4.5.3 Employee Skills and Competences

The study aimed to establishing how employee skills and competencies influence the implementation of the learning agility strategy. Comprehensive results are outlined in Table 4.7.

Table 4.7: Influence of Employee Skills and Competences on Implementation of Learning Agility Strategy

	N	SA	A	N	D	SD	Mean	Std. Dev.
Employees have the opportunity to learn on their own	139	33.1%	45.3%	15.9%	5.0%	0.7%	4.05	0.871
Individual employees are supported to achieve the required skills	139	35.5%	37.7%	20.3%	4.3%	2.2%	4.00	0.967
Employees are encouraged by the management to be creative and their ideas are embraced by the organization.	139	32.4%	33.8%	14.4%	7.9%	11.5%	3.68	1.314
The management encourages team work and provides supports.	139	39.6%	37.4%	12.2%	6.5%	4.3%	4.01	1.083
The management provides the necessary training, skills and benchmarks.	139	22.3%	25.8%	28.1%	13.7%	10.1%	3.37	1.252
Trainings and benchmarks are the most effective ways of learning.	139	43.9%	33.8%	14.4%	4.3%	3.6%	4.10	1.038

SD=1, D=2, N=3, A=4, and SA=5

Findings showed that 45.3% of the respondents agreed (mean=4.05) that employees are provided with the opportunity to self-learn. The skills and competencies of the employees play a crucial role in their learning abilities and overall productivity, thereby impacting the implementation of learning agility strategies within the company. Additionally, 73.2% of respondents at least agreed (mean=4.00) that individual employees are supported in acquiring necessary skills. This empowerment to self-learn and acquire essential skills is essential for the company, as it relies on employees equipped with the right expertise to effectively implement

the learning agility strategy. Moreover, 33.8% of respondents agreed that the management encourages creativity and embraces employees' innovative ideas. The encouragement of creativity among employees enhances their problem-solving abilities, enabling them to adapt more effectively, a crucial factor for implementing the learning agility strategy. Furthermore, a majority of respondents (39.6%) agreed (mean=4.01) that management supports teamwork. This support fosters an environment where knowledge and experiences are shared among employees, promoting a robust learning culture that bolsters learning agility. Furthermore, the results revealed that 54% of the participants agreed, to some extent, that the management offers essential training, skills, and benchmarks. Moreover, a significant portion of the respondents (43.9%) strongly agreed (mean=4.10) that training and benchmarks are highly effective methods of learning. Such training initiatives and benchmarks help keep employees abreast of industry changes, like evolving service quality standards, and offer new approaches to enhance work efficiency.

These findings are in line with research by Musembi, Guyo, Kyalo, and Mbuthia (2018), who explored the impact of employees' soft skills on the performance of public energy sector projects in Kenya. Their study showed a positive relationship between employees' soft skills and project performance in the Kenyan energy sector. The findings also align with Butali and David (2019), who examined the effect of training and development on organizational performance. Their study revealed that training and development have a significant impact on the performance of Kenya Power and KenGen. Comprehensive training programs provide employees with essential skills and knowledge, leading to improved job performance, increased productivity, and enhanced efficiency within the organization.

4.5.4 Implementation of Learning Agility Strategy

The researcher obtained the respondents' views concerning the implementation of the learning agility strategy. The presentation of descriptive findings is outlined in Table 4.8.

Table 4.8: Implementation of Learning Agility Strategy

	N	SA	A	N	D	SD	Mean	Std. Dev.
Organizational strategic objectives have been effectively achieved	139	20.9%	54%	18.6%	3.6%	2.9%	3.86	0.886
There are improved financial results that have been achieved by the company	139	24.5%	53.2%	21.6%	0.7%	0%	4.01	0.702
The organizational development has been enhanced over time	139	28.3%	49.3%	19.5%	2.9%	0%	4.03	0.773
In my organization, I am encouraged to experiment with new ideas	139	21.6%	42.4%	23.7%	10.1%	2.2%	3.71	0.987
In my organizations innovations champions are being rewarded	139	26.6%	30.9%	29.5%	9.4%	3.6%	3.68	1.078
There is low staff attrition rate in the organization	139	34.3%	43.8%	16.8%	2.9%	2.2%	4.05	0.910

SD=1, D=2, N=3, A=4, and SA=5

Findings indicated that 54% of the managerial staff agreed (mean=3.86) that KenGen has effectively attained organizational strategic objectives. These objectives play a pivotal role in guiding resource allocation, determining capability needs, and structuring budgeting activities to support the implementation of a learning agility strategy. This direction offers a clear sense of focus and purpose, outlining the desired outcomes. 53.2%, of respondents concurred (mean=4.01) on the achievement of improved financial results within the company. This determines the KenGen's ability to invest in employee learning and development, a crucial component for cultivating a skilled and adaptable workforce. Additionally, respondents collectively agreed (mean=4.03) on the progressive enhancement of organizational development over time.

Organizational development incorporates training and skill development initiatives, directly contributing to learning agility by equipping employees with the necessary knowledge and skills to adapt to emerging challenges. Nevertheless, managers appeared relatively neutral (mean=3.71) regarding their encouragement to experiment with novel ideas and the rewarding of innovation champions. A notable majority, approximately 43.8% of managers, concurred (mean=4.05) on the organization's low staff attrition rate. This outcome suggests that experienced employees tend to remain with the organization for longer durations, thus

enhancing the implementation of learning agility initiatives. These results align with the study conducted by Jo and Hong (2022), which explored the impact of agile learning on innovative behavior. Their findings illustrated a direct association between learning agility and innovative behavior, with noticeable moderation by employee engagement.

4.6 Diagnostic Test Results

Prior to conducting the inferential analysis of the data, a series of diagnostic tests were administered. These tests encompassed evaluations for normality, linearity, multicollinearity, and homoscedasticity.

4.6.1 Normality Test Results

The normality test assesses whether the dataset conforms to a normal or Gaussian distribution pattern. A normally distributed dataset is characterized by a symmetrical and continuous distribution, typically defined by its mean and standard deviation. To verify this, the significance value for normality, denoting adherence to a normal distribution, should surpass the 5% significance level. The normality test was performed to ascertain these characteristics, and the detailed outcomes are displayed in Table 4.9. This evaluation aims to ensure that the data adheres to the fundamental assumption of normal distribution, a crucial aspect for reliable statistical analysis and interpretation of the study's findings.

Table 4.9: Normality Test Results

	Kolmogorov-Smirnov[a]			**Shapiro-Wilk**		
	Statistic	**df**	**Sig.**	**Statistic**	**df**	**Sig.**
Implementation of Learning Agility Strategy	.072	139	.075	.982	139	.065

a. Lilliefors Significance Correction

As illustrated in Table 4.9, the Shapiro-Wilk's significance value was 0.065. This result suggests that the dataset follows a normal distribution, given that the significance value of 0.065 exceeds the significance level 0.05. Consequently, meeting this criteria indicates that the data adheres to the fundamental assumption of a normal distribution. Consequently, with this confirmation of normal distribution, the researcher proceeded with the primary analysis, ensuring the reliability of the data's foundational statistical assumption.

4.6.2 Linearity Test Results

Linearity is the connection between variables when they change proportionally or at a consistent rate. In this context, it signifies that the mean of the response variable is directly determined by a linear combination of regression coefficients and the predictor variables. A linear relationship between variables exists when the p-value indicating the connection between the predictor and the response variable exceeds the 5% significance level (P-value > 0.05). For each independent variable and the dependent variable, a linearity test was performed to ascertain this relationship, and the detailed outcomes are presented in Tables 4.10. This table showcase the evaluation of linearity between specific predictor variables and the dependent variable, providing insights into the nature of their relationship within the context of the study.

Table 4.10: Linearity Test Results

Variable	P-values
Resource Adequacy	0.634
Information Technology	0.056
Employees skills and Competences	0.125

Dependent Variable: Implementation of Learning Agility

As per the results presented in Table 4.10, an evaluation of the association between resource adequacy and the implementation of the learning agility strategy was conducted. Notably, the findings suggest a linear connection between resource adequacy and the implementation of the learning agility strategy, as indicated by the p-value for deviation from linearity, which was observed to be 0.634, surpassing the predetermined significance level of 0.05. This result implies that the anticipated values characterizing the implementation of the learning agility strategy follow a linear trend based on the level of resource adequacy. In essence, the data suggests a direct and proportional linear relationship between resource adequacy and the effective implementation of the learning agility strategy.

The findings also indicate that the significance value for the deviation from linearity was 0.056, which exceeds the significance level of 0.05. These results suggest a linear relationship between information technology adoption and the implementation of the learning agility strategy. This linear association implies that changes or variations in the level of information technology adoption are connected in a linear fashion to the alterations or progression in the implementation of the learning agility strategy. Therefore, this observation supports the notion

of a clear and direct linear relationship between the adoption of information technology and the effective implementation of the learning agility strategy within the context of the study.

The results also showed that the p-value for deviation from linearity of 0.125, surpassing the significance level of 0.05. This observation implies that the expected values for the implementation of the learning agility strategy exhibit a linear trend based on employee skills and competencies. In summary, all three independent variables; Resource adequacy, information technology, and employee skills and competences demonstrated a linear correlation with the implementation of the learning agility strategy. Thus, the assumption of linearity was reasonably established to hold true for these variables.

4.6.3 Multicollinearity Test Results

Multicollinearity denotes the presence of correlations among the predictor variables. It becomes apparent when an independent variable exhibits a high degree of correlation with one or more other independent variables within a multiple regression equation. This issue is problematic as it weakens the statistical significance of the independent variable. The assessment of multicollinearity was carried out utilizing the Variance Inflation Factor (VIF). VIF values falling between 1 and 10 suggest the absence of multicollinearity in the data. The results of the multicollinearity test are presented in Table 4.11. The absence of multicollinearity in these variables implies that their relationships did not substantially interfere with the statistical significance of each predictor variable in the regression analysis.

Table 4.11: Multicollinearity Test Results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.268	.224		5.657	.000		
	Resource Adequacy	.189	.088	.208	2.141	.034	.350	2.858
	Information technology adoption	.168	.052	.214	3.264	.001	.773	1.294
	Employees skills and competences	.324	.072	.439	4.537	.000	.354	2.826

a. Dependent Variable: Learning agility strategy

As indicated in Table 4.11, it's evident that resource adequacy (VIF = 2.858), information technology adoption (VIF = 1.294), and employee skills and competences (VIF = 2.826) exhibited Variance Inflation Factor (VIF) values that were within 1-10. This led to the conclusion that multicollinearity was minimal and insignificant among these variables. This indicates that the associated standard errors were sufficiently small, thereby not significantly influencing the t-statistic or the regression model parameters. Consequently, the variance inflation factor values suggested that the variables were not unduly correlated, which could have otherwise affected the precision of the statistical estimates or distorted the interpretation of the relationships among the variables within the regression model.

4.6.4 Homoscedasticity Test Results

Homoscedasticity entails the situation where the error term in the relationship between independent variables and the dependent variable remains constant across all values of the independent variables. On the contrary, heteroscedasticity occurs when this uniformity is not upheld. Heteroscedasticity poses an issue because ordinary least squares (OLS) regression assumes a constant variance among all residuals drawn from a population. In the case of homoscedastic data, the significance value typically exceeds 0.05, indicating the absence of issues related to variance in the dataset. The homoscedasticity test outcomes are shown in Table 4.12.

Table 4.12: Homoscedasticity Test Results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.158	.130		1.215	.227
	Resource Adequacy	.050	.051	.140	.967	.335
	Information Technology Adoption	.007	.030	.023	.241	.810
	Employee Skills and Competences	-.018	.042	-.061	-.422	.674

a. Dependent Variable: learning Agility Strategy

The results depicted in Table 4.12 reveals that each variable indicated p-values exceeding 0.05. Specifically, resource adequacy, information technology, and employee skills and competences had p-values of 0.335, 0.810, and 0.674, respectively. These results indicate the absence of any heteroscedasticity issue within the dataset.

4.7 Correlation Analysis Results

Correlation analysis was conducted to assess the association between each determinant; resource adequacy, information technology adoption, employee skills, and competences and the implementation of the learning agility strategy at Kenya Electricity Generating Company. The detailed findings can be observed in Table 4.13.

Table 4.13: Correlations Matrix

		Implementation of Learning Agility Strategy	Resource Adequacy	Information Technology Adoption	Employee Skills and Competences
Implementation of Learning Agility Strategy	Pearson Correlation	1	.657**	.505**	.701**
	Sig. (2-tailed)		.000	.000	.000
	N	139	139	139	139
Resource Adequacy	Pearson Correlation	.657**	1	.457**	.799**
	Sig. (2-tailed)	.000		.000	.000
	N	139	139	139	139
Information Technology Adoption	Pearson Correlation	.505**	.457**	1	.447**
	Sig. (2-tailed)	.000	.000		.000
	N	139	139	139	139
Employee Skills and Competences	Pearson Correlation	.701**	.799**	.447**	1
	Sig. (2-tailed)	.000	.000	.000	.000
	N	139	139	139	139

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

The correlation analysis outcomes depicted in Table 4.13 reveal a positive and statistically significant correlation coefficient (r=0.657**; p= 0.000) with a confidence level of 99%. This indicates that the relationship between resource adequacy and the implementation of the learning agility strategy at Kenya Electricity Generating Company was significant. The results implies that an enhancement in the sufficiency of financial and physical resources directly heightens the efficacy of implementing the learning agility strategy. It indicates that adequate resources not only facilitate the establishment but also the maintenance of a robust learning infrastructure, which is imperative for delivering engaging and efficient learning experiences to the workforce.

Resource adequacy significantly enhances the capacity of employees to learn and effectively apply knowledge in response to the constantly evolving work environment. Hence, the

provision of adequate financial and physical resources emerges as a crucial factor in the successful implementation of a learning agility strategy. Furthermore, these results echo the findings of Ombongi (2020), whose research highlighted that the strategies adopted by KenGen were significantly influenced by the organization's unique resources and intrinsic characteristics. The results also align with the findings of Orina and Nyangáu (2018), who investigated the impact of resource planning on project implementation within KenGen Company. Their study identified a significant relationship between effective resource planning and successful project implementation at KenGen. This reinforces the notion that meticulous resource planning is crucial for achieving positive project outcomes, confirming the importance of strategic resource management in enhancing project performance at the company.

The correlation analysis results also indicated a positive and a significant relationship (r=0.505**; p= 0.000) at a 99% confidence level between information technology adoption and the implementation of the learning agility strategy at Kenya Electricity Generating Company. This finding shows a pivotal dependency of the learning agility strategy's implementation on the adoption of information technology. Elements encompassing information technology adoption, such as IT equipment, connectivity, and innovations, provide a flexible and self-paced learning environment, nurturing a culture of continuous learning within the organization. Additionally, IT adoption facilitates real-time collaboration, fostering knowledge exchange among employees, enabling them to engage in learning endeavors when encountering novel challenges or needing specific skills for enhanced adaptability.

Consequently, these findings highlight the substantial influence of information technology on the effective implementation of the learning agility strategy. Furthermore, this aligns with Karanja and Mwaura's (2017) research on the effect of knowledge management enablers on KenGen's performance, revealing that KenGen's performance is significantly impacted by enablers, particularly information technology, explaining 43.7% of the variations. Additionally, their highly significant regression relationship underscores the strong predictive power of factors like leadership support, organizational culture, information technology, and employee involvement on KenGen's organizational performance. Similarly, the findings align with Gitongah and Macharia (2020), who assessed the strategic management and performance of Kenya Electricity Generating Company. Their study concluded that, although IT adoption is highly valued, it can produce both positive and negative results due to issues like limited infrastructure and skill gaps.

There was a positive and significant relationship (r=0.701**; p= 0.000) at a 99% confidence level between employee skills and competencies and the implementation of the learning agility strategy at KenGen. These results suggest that an increase in employee skills directly improves the implementation of the learning agility strategy. Adequate employee skills and competencies render them more receptive to new learning opportunities, providing a platform for building upon existing knowledge and fostering a continuous learning disposition. Diverse skills further promote adaptability to novel tasks and challenges within an organization. Hence, the findings underscore that employee skills and competencies exert a notable influence on the effective implementation of the learning agility strategy at KenGen.

Furthermore, these outcomes align with the research of Jo and Hong (2022) on the effect of agile learning on innovative behavior, indicating a direct association between learning agility and innovative behavior. The findings also concurs with Mugo and Omondi (2024) who examined the training practices and employee performance of Kenya Electricity Generating Company Limited. As per the findings, there existed a significant relationship between training content, training delivery methods, and employee performance. This implies that enhanced employee skills, facilitated by effective training, significantly supports the successful implementation of learning agility. The results highlight several key issues regarding the implementation of learning agility strategies at KenGen. They emphasize the importance of integrating sufficient resources, advanced information technology, and robust employee skills to ensure effective strategy execution.

While the positive correlations point to the benefits of adequate financial support, technological infrastructure, and skill development, they also reveal potential gaps in how well these elements are aligned with the organization's evolving needs. To optimize the impact of learning agility strategies, KenGen must focus on continuously refining resource allocation, upgrading IT systems, and investing in ongoing training to address these gaps and enhance the overall learning environment.

4.8 Regression Statistical Results

Regression analysis was undertaked to determine the association between the independent variables and the dependent variable, as demonstrated in tables 4.14, 4.15, and 4.16.

Table 4.14: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.743[a]	.553	.543	.39052

a. Predictors: (Constant), Resource Adequacy, Information Technology Adoption, Employee Skills and Competences

The model summary indicated a correlation coefficient of R=0.743 alongside a coefficient of determination R^2=0.553. These results shows that the relationship between resource adequacy, information technology adoption, employee skills, and competences implementation of the learning agility strategy was significant. Notably, the results revealed that changes in resource adequacy, information technology adoption, and employee skills and competences collectively explained 55.3% of the variation in the implementation of the learning agility strategy. This implies that variation in these specific determinants can be used to predict the implementation of the learning agility strategy.

These findings concurs with the findings by Karanja and Mwaura (2017) in their study on the effect of knowledge management enablers on the performance of KenGen. The study found that 43.7% of the variations in KenGen's performance can be attributed to several key factors: leadership, organizational culture, information technology, and employee involvement. Specifically, effective leadership plays a crucial role in shaping organizational direction and motivating employees, which significantly impacts performance outcomes. Similarly, a positive organizational culture fosters a supportive work environment that enhances overall productivity and efficiency. The integration and utilization of advanced information technology streamline operations and improve decision-making processes, further contributing to performance.

Additionally, active employee involvement ensures that staff are engaged and invested in their roles, leading to better performance results. Collectively, these factors account for a substantial portion of the variation in KenGen's performance, highlighting their importance in achieving organizational performance. The model summary reveals a significant connection between resource adequacy, IT adoption, and employee skills in relation to implementing the learning agility strategy, indicating these elements play a vital role in the strategy's success. Nonetheless, the fact that 44.7% of the variance remains unexplained suggests there are other influential factors not covered by the current model. This indicates a need for further exploration to identify additional variables that might affect the effectiveness of learning agility strategies at KenGen.

Table 4.15: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25.433	3	8.478	55.590	.000[b]
	Residual	20.588	135	.153		
	Total	46.021	138			

a. Dependent Variable: Learning agility strategy

b. Predictors: (Constant), Resource Adequacy, Information Technology Adoption, Employee Skills and Competences

To assess the overall model fit and significance, an Analysis of Variance (ANOVA) was conducted. The obtained F-value of 55.590 with a p-value of 0.000 signified a model that was statistically significant at a 95% confidence level. The comprehensive results revealed that resource adequacy, information technology adoption, and employee skills and competences collectively influenced the implementation of the learning agility strategy. The significant F-value and p-value demonstrate that the model effectively captures key factors influencing the implementation of the learning agility strategy. Nonetheless, the analysis primarily focuses on resource adequacy, IT adoption, and employee skills, potentially overlooking other external or internal factors that could also play a role. Additional investigation is required to identify these other variables and enhance the model's accuracy and comprehensiveness.

Table 4.16: Regression Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.268	.224		5.657	.000
	Resource Adequacy	.189	.088	.208	2.141	.034
	Information Technology Adoption	.168	.052	.214	3.264	.001
	Employee Skills and Competences	.324	.072	.439	4.537	.000

a. Dependent Variable: Implementation of Learning Agility Strategy

The regression model was formulated as $Y= 1.268 + 0.189X_1+ 0.168X_2+ 0.324X_3$. The research results revealed that the beta coefficient for resource adequacy was (β=0.189), implying that a unit increase in the resource adequacy variable led to a change in the learning agility strategy by 0.189 units. Similarly, the analysis demonstrated a beta coefficient of (β=0.168) for information technology adoption, signifying that a one-unit increase in information technology adoption resulted in a 0.168 unit change in the learning agility strategy. Of significance, an escalation of one unit in employee skills and competences resulted in a

0.324 unit change in the implementation of the learning agility strategy at Kenya Electricity Generating Company. The employees' skills and competences emerged as the most significant variable, while technology adoption came second in significance, and resource adequacy displayed the least influence on the effective implementation of learning agility strategy. These results implies that the learning agility strategy implementation was predictable from the changes in determinants comprising the resource adequacy, information technology adoption, employee skills and competences.

Hypotheses testing was done on basis of regression coefficients. The first null hypothesis was stated as **H_{01}:** Resource adequacy has no statistical significant influence on implementation of learning agility strategy in KenGen, Kenya. The beta coefficient (β=0.189; P=0.034<0.05) for resource adequacy, indicated a statistically significant relationship between the resource adequacy and the implementation of the learning agility strategy at a 95% confidence level. Consequently, the rejection of the first null hypothesis underscored the researcher's conclusion that the adequacy of resources indeed influenced the implementation of the learning agility strategy.

This finding resonates with the broader context of organizational effectiveness. Specifically, in the case of Kenya Electricity Generating Company, having ample and appropriate resources aligns with the Resource-Based View theory, which emphasizes the pivotal role of valuable, rare, and inimitable resources in influencing an organization's competitive advantage. The significance of resource adequacy, as revealed by this study, emphasizes the importance of investing in and efficiently utilizing resources to foster continuous learning and adaptation at KenGen.

The second null hypothesis was stated as **H_{02}:** Information technology adoption has no statistical significant influence on implementation of learning agility strategy in KenGen, Kenya. The research findings revealed a beta coefficient of 0.168 with a significance level of P=0.001<0.05 in relation to information technology adoption and implementation of learning agility strategy. This statistical result indicated significant association between the adoption of information technology and the effective implementation of the learning agility strategy at a confidence level of 95%. Consequently, due to these results, the second null hypothesis was rejected, leading the researcher to draw the conclusion that the adoption of information technology significantly influence the implementation of the learning agility strategy at Kenya Electricity Generating Company.

The third null hypothesis was stated as **H_{03}:** Employee skills and competencies has no statistical significant influence on implementation of learning agility strategy in KenGen, Kenya. The results of the study's analysis unveiled a beta coefficient of (β=0.324; p=0.000<0.05), demonstrating a statistically significant correlation between employee skills and competences and the successful implementation of the learning agility strategy at a 95% confidence level. As a result, the rejection of the third null hypothesis substantiated the conclusion that the capabilities and competencies of employees influence the implementation of the learning agility strategy at Kenya Electricity Generating Company.

These results aligns with Ombongi's research conducted in 2020, focusing on the strategies employed by KenGen Company PLC to gain a competitive edge. Ombongi's study unveiled that the strategies implemented by KenGen were intricately linked to the distinct resources and attributes existing within the organization. In the specific context of implementing a learning agility strategy at KenGen, the Resource-Based View (RBV) theory underscored the crucial importance of effectively harnessing the organization's human capital, knowledge, and expertise to foster an environment of continual learning and adaptability. This strategic approach can serve as a pivotal asset, allowing KenGen to optimize its operations and competencies within the ever-changing landscape of the energy sector.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter outlines the summary of major findings of the research. It also presents conclusions based on the research objectives, as well as recommendations and suggestions for future research.

5.2 Summary of Findings

This segment outlines the summary of findings of the study concerning the influence of resource adequacy, adoption of information technology, employee skills and competencies on the implementation of the learning agility strategy.

5.2.1 Influence of Resource Adequacy on Implementing the Learning Agility Strategy

The findings from the descriptive analysis shows that resource adequacy had a significant positive influence on the implementation of learning agility at Kenya Electricity Generating Company. Respondents concurred that the organization possesses sufficient financial resources to support learning-based activities, creating a conducive environment for learning and development. They also acknowledged that the availability of appropriate tools is integral to fostering learning agility. Management support in providing adequate physical and technology resources was highlighted as crucial for the effective implementation of the learning agility strategy. Additionally, the study revealed a significant correlation ($r=0.657^{**}$; $P= 0.000$) between resource adequacy and the implementation of learning agility strategy. Moreover, the regression analysis ($\beta=0.189$; $p=0.034<0.05$) confirmed the influence of resource adequacy on the strategy's implementation.

5.2.2 Influence of Information Technology Adoption on Implementing the Learning Agility Strategy

The findings from the descriptive analysis shows that information technology adoption had a significant positive influence on the implementation of learning agility at Kenya Electricity Generating Company. It became evident that the adoption of technology played a pivotal role in amplifying access to information, thereby facilitating a rapid acquisition of fresh knowledge and skills among employees. Moreover, this technological adoption was noted to foster an environment conducive to collaboration and the exchange of experiences among the workforce, thus nurturing a workspace supportive of the learning agility strategy's implementation. The study's meticulous analyses uncovered a substantial correlation ($r=0.505^{**}$; $p=0.000$) between

the adoption of information technology and the successful implementation of learning agility. Further emphasizing this influence, the regression analysis (β=0.168; P=0.001<0.05) underscored the significant impact exerted by the adoption of information technology on the implementation of the learning agility strategy.

5.2.3 Influence of Employee Skills and Competences on Implementing the Learning Agility Strategy

The findings from the descriptive analysis shows that employee skills and competences had a significant positive influence on the implementation of learning agility at Kenya Electricity Generating Company. Notably, the endorsement by management of creativity, teamwork, and overall support significantly contributed to the cultivation of problem-solving abilities and critical thinking skills, which are intrinsic components of learning agility. The study's results also indicated a significant correlation (r=0.701**; p= 0.000) between the employee skills and competencies and the implementation of the learning agility strategy. Moreover, the regression analysis (β=0.324; p=0.000<0.05) further underscored the significant influence of the employees' skills and competencies on the strategy's implementation, affirming their pivotal role in shaping the effective implementation of learning agility strategy within KenGen.

5.2.4 Implementation of Learning Agility Strategy

The research findings revealed that learning agility stems from a reflective process that fosters the generation of ideas and improvements in service delivery. The implementation of learning agility strategy aligns closely with the organization's core objectives, encompassing the provision of clean energy, enhancement of shareholder value, and expansion of energy sources. The findings established an interconnected and substantial relationship among various determinants resource adequacy, information technology adoption, employee skills, and competencies and the implementation of learning agility within the Kenya Electricity Generating Company. This underscored the intricate interplay among these determinants, emphasizing their combined significance in driving the successful adoption and implementation of learning agility strategies at KenGen.

5.3 Conclusion

The conclusions drawn from the major findings regarding the influence of resource adequacy, information technology adoption, employee skills, and competencies on the implementation of the learning agility strategy are outlined below:

Firstly, the study established a link between resource allocation adequacy and the effective implementation of the learning agility strategy within KenGen. Not only did the findings confirmed the significant role of financial and physical resources in fostering a conducive environment for learning, but they also highlighted the pivotal timing of resource allocation. Timely provision of resources emerged as a critical factor influencing the promotion of a learning culture. The study also indicate that a proactive and strategic approach to resource allocation is paramount to meet the learning objectives and ensure that the organization maximizes its value delivery. It highlighted the importance of a coordinated allocation of resources that aligns with the changing requirements of learning initiatives, underscoring that this synchronization is essential for the effective implementation and long-term viability of the learning agility strategy.

Secondly, the study concluded that technology adoption plays a dynamic role in meeting the current energy demands and fortifying the company's responsiveness to the ever-evolving landscape of energy needs. This underscored the critical need for KenGen to proactively adapt and reconfigure its information technology strategies in response to the dynamic market realities. It indicated that a forward-thinking approach to technology, aligning it with the company's strategic objectives, is pivotal for sustaining the effective implementation of learning agility. Furthermore, it highlighted that the continual evolution and adaptation of information technology are not just advantageous but a requisite for KenGen's competitiveness and adaptability in the energy sector, cementing the vital role of technological integration for the organization's future success and resilience.

Finally, it was established that employee skills and competencies influence the implementation of learning agility at KenGen. The study indicated that a culture of continuous learning is essential for empowering employees with the adaptable skills necessary to navigate and thrive in the ever-changing dynamics of their work environment. The research also highlighted that the acquisition and enhancement of skills play a fundamental role in augmenting productivity while bolstering the organization's adaptability in the face of dynamic challenges. Nurturing an environment where learning and skill development are continuous and encouraged, KenGen can better position its workforce to handle the evolving demands and complexities within the energy sector. The study further accentuated the direct correlation between employee skill development and the company's ability to proactively adapt and innovate, showcasing that a culture of continuous learning is a linchpin for KenGen's sustained growth and success.

5.4 Recommendations

The research suggests several recommendations based on the statistically significant findings. Firstly, KenGen should establish an effective resource allocation strategy that aligns with the organizational goals. This would enable the company to systematically prioritize and optimize the use of resources specifically for learning-related endeavors. By employing this method, KenGen can ensure that its resources, whether financial or physical, are directed effectively to cultivate a culture of learning, thereby strengthening the implementation of the learning agility strategy. The introduction of clear resource allocation criteria would enhance the tracking of progress in learning initiatives, ensuring that resources are not only distributed but also evaluated for their impact.

Secondly, there is a need for increased investment in technology coupled with a focus on fostering learning dynamics within KenGen. Augmenting financial investments in advanced technology will not just upgrade the company's technological framework but also facilitate the integration of collaborative tools. These tools can lay the groundwork for a culture of sharing knowledge and cooperative learning among employees. This network of shared information and ideas will enable KenGen to adapt more seamlessly to the constantly changing business landscape, thus fortifying the successful execution of the learning agility strategy. Additionally, adopting AI-driven analytics could further support decision-making by predicting future skill gaps, enhancing the company's ability to stay sustainable.

Lastly, KenGen should actively promote a culture that explicitly encourages continual learning among its workforce. It is crucial to offer diverse learning resources and opportunities for skill development to employees, supporting their professional advancement. Encouraging collaboration and a shared learning environment among employees will act as a catalyst for effectively implementing the learning agility strategy. By fostering a culture that advocates ongoing learning and collaborative sharing of knowledge, KenGen can empower its workforce to adeptly respond to the evolving demands and challenges in the energy sector. Embedding learning outcomes into performance evaluations could reinforce the significance of continuous skill development, ensuring learning is aligned with organizational goals.

Overall, KenGen should focus on enhancing employee skills and competencies as the foremost priority to drive the successful implementation of learning agility. Providing targeted training and development will enable employees to better adapt to changing conditions and contribute effectively. Additionally, ensuring adequate resources, both financial and physical, is crucial

to support the necessary learning infrastructure. While information technology is also important, KenGen should continue to invest in updating IT systems to create a supportive and flexible learning environment. Emphasizing these areas in this sequence will help KenGen maximize the effectiveness of its learning agility strategy.

5.5 Suggestions for Further Research

Future studies should explore the link between learning agility strategy and organizational performance within KenGen. Moreover, examining the effect of knowledge management practices on the performance of listed energy sector companies in Kenya would be a valuable area for further research. The ongoing challenges with learning agility at KenGen, despite hiring skilled personnel, point to possible gaps in leadership and governance. These issues may arise from insufficient alignment or support from leadership regarding learning initiatives. Future research should evaluate how leadership and governance affect the implementation of learning agility and identify improvements needed to enhance staff development and achieve strategic objectives.

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APPENDICES

Appendix I: Introduction Letter

Dear Sir / Madam,

RE: PERMISSION TO COLLECT DATA FOR ACADEMIC RESEARCH

I am a Master of Business Administration (Strategic Management Option) student of Laikipia University seeking to carry out a research study entitled ***"Determinants of Effective Implementation of Learning Agility Strategy in Kenya Electricity Generating Company (Olkaria), Kenya".*** You have been identified and carefully chosen for the study. This letter's purpose is to request permission to consult with selected members using the attached copies of the attached Questionnaire. The obtained information is for study purposes only and will be treated as strictly confidential. Thank you.

Yours Sincerely,

Henry Krop Loriono
Student-Laikipia University

Appendix II: Research Questionnaire

The purpose of this questionnaire is to identify the determinants of effective implementation of learning agility strategy. Kindly, respond by either selecting the response among choices given that best represents your views or by filling the spaces provided.

SECTION A

Background information

Kindly respond by a tick (√) for your answer

1. Years of experience:
   a) Below 5 years ☐
   b) 6-15 years ☐
   c) 16-30 years ☐
   d) Above 30 years ☐

2. Management level
   a) Senior managers (level 0-3) ☐
   b) Middle managers (level 4-5) ☐
   c) Technical staff (level 6-7) ☐

3. Education Level (please tick the appropriate one)

a) Certificate { }

b) Diploma { }

c) Degree { }

d) Masters { }

e) PhD { }

SECTION B: Resource Adequacy

On a scale of 1-5, tick in the appropriate box on how you strongly agree or disagree with the statements given. Strongly agree (SA) =5, Agree (A) =4, Neutral (N) =3, Disagree (D) =2, and Strongly Disagree (SD) =1

Statement	SA 5	A 4	N 3	D 2	SD 1
Adequate financial resources is required to support the activities undertaken at KenGen					
The financial resources are enough to support the activities of the organization					
Employees are allocated adequate space to do their activities					
Working environment is available and equipped with required tools for all the employees.					
The management provide adequate financial resources to employees within the good timelines.					
Employees are given time to present findings of their creativity and innovations to the management					

SECTION C: Information technology Adoption

On a scale of 1-5, tick in the appropriate box on how you strongly agree or disagree with the statements given. Strongly agree (SA) =5, Agree (A)=4, Neutral (N)=3, Disagree (D)=2, and Strongly Disagree (SD)=1

Statement	**SA 5**	**A 4**	**N 3**	**D 2**	**SD 1**
The IT equipment available are adequate to serve all employees.					
IT equipment are up to date to meet the demands of the industry					

There are relevant network connectivity and software available for the employees					
Employees' can access the software and any relevant source of information through these networks					
Employees can apply their own creativity in my company					
Employees are encouraged to discover and develop new approaches to improve the efficiency of the company activities.					

SECTION D: Employee skills and competencies

On a scale of 1-5, tick in the appropriate box on how you strongly agree or disagree with the statements given. Strongly agree (SA) =5, Agree (A) =4, Neutral (N) =3, Disagree (D) =2, and Strongly Disagree (SD) =1

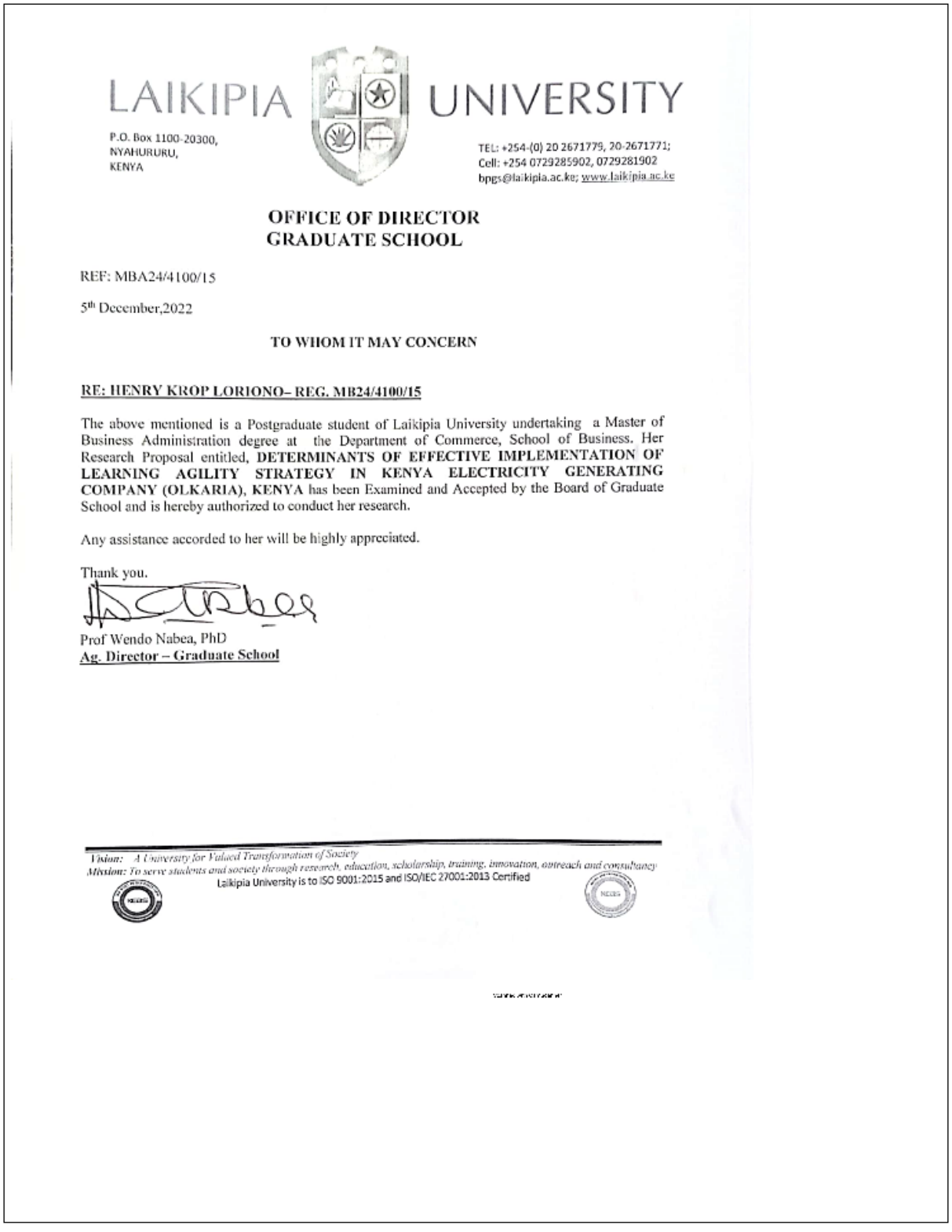
Statement	**SA 5**	**A 4**	**N 3**	**D 2**	**SD 1**
Employees have the opportunity to learn on their own					
Individual employees are supported to achieve the required skills					
Employees are encouraged by the management to be creative and their ideas are embraced by the organization.					
The management encourages team work and provides supports.					
The management provides the necessary training, skills and benchmarks.					
Trainings and benchmarks are the most effective ways of learning.					

SECTION E: Effective Implementation of Learning agility strategy

On a scale of 1-5, tick in the appropriate box on how you strongly agree or disagree with the statements given. Strongly agree (SA) =5, Agree (A)=4, Neutral (N)=3, Disagree (D)=2, and Strongly Disagree (SD)=1

Statement	**SA 5**	**A 4**	**N 3**	**D 2**	**SD 1**
Organizational strategic objectives have been effectively achieved					
There are improved financial results that have been achieved by the company					
The organizational development has been enhanced over time					
In my organization, I am encouraged to experiment with new ideas					
In my organizations innovations champions are being rewarded					
There is low staff attrition rate in the organization					

Appendix III: Data Collection Authorization Letter



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OFFICE OF DIRECTOR
GRADUATE SCHOOL

REF: MBA24/4100/15

5th December,2022

TO WHOM IT MAY CONCERN

RE: HENRY KROP LORIONO– REG. MB24/4100/15

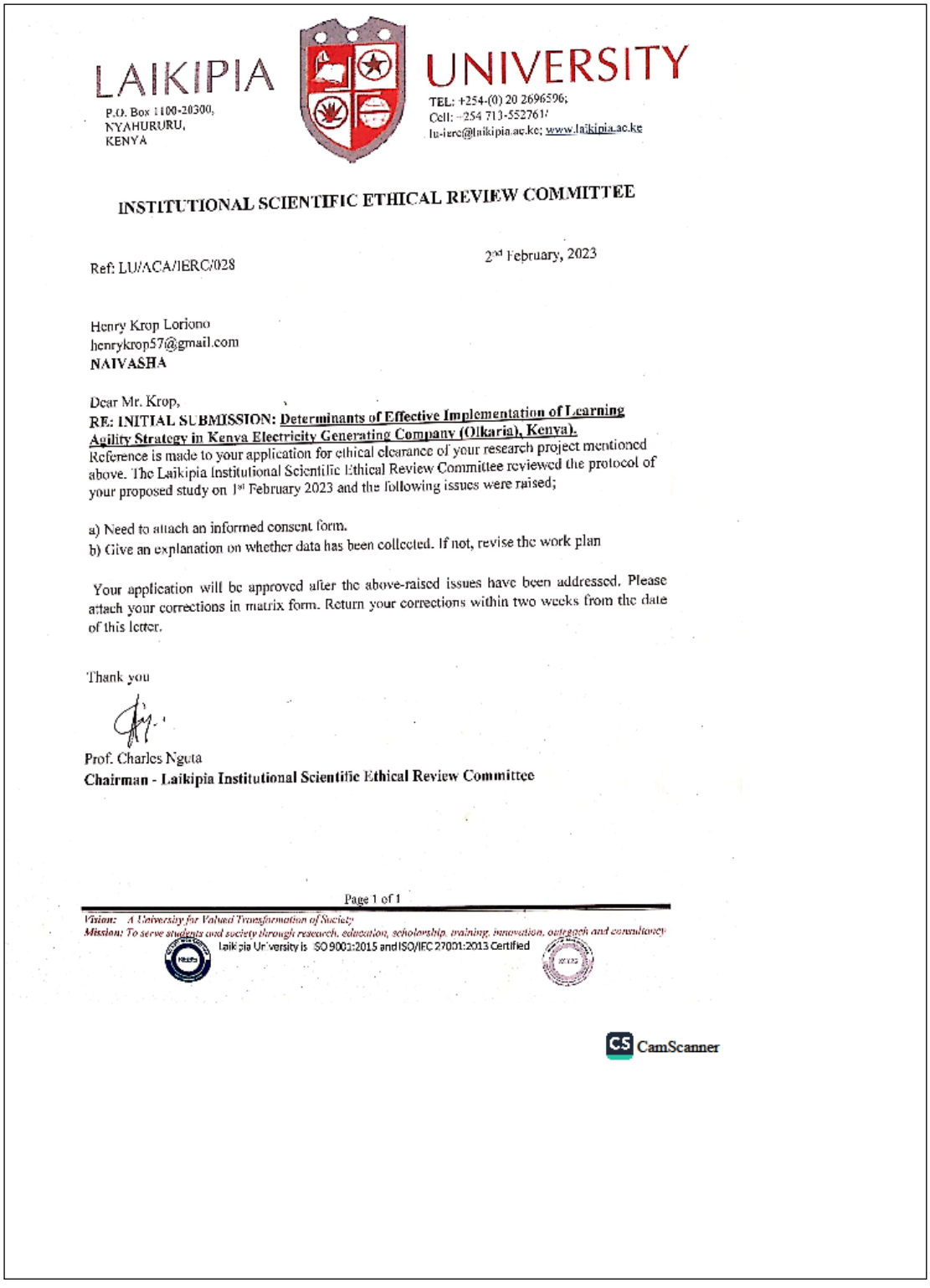
The above mentioned is a Postgraduate student of Laikipia University undertaking a Master of Business Administration degree at the Department of Commerce, School of Business. Her Research Proposal entitled, **DETERMINANTS OF EFFECTIVE IMPLEMENTATION OF LEARNING AGILITY STRATEGY IN KENYA ELECTRICITY GENERATING COMPANY (OLKARIA), KENYA** has been Examined and Accepted by the Board of Graduate School and is hereby authorized to conduct her research.

Any assistance accorded to her will be highly appreciated.

Thank you.

Prof Wendo Nabea, PhD
Ag. Director – Graduate School

Appendix IV: Institutional Ethics Review Committee Letter



LAIKIPIA UNIVERSITY

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Cell: +254 713-552761/
lu-ierc@laikipia.ac.ke; www.laikipia.ac.ke

INSTITUTIONAL SCIENTIFIC ETHICAL REVIEW COMMITTEE

Ref: LU/ACA/IERC/028

2nd February, 2023

Henry Krop Loriono
henrykrop57@gmail.com
NAIVASHA

Dear Mr. Krop,

RE: INITIAL SUBMISSION: Determinants of Effective Implementation of Learning Agility Strategy in Kenya Electricity Generating Company (Olkaria), Kenya).

Reference is made to your application for ethical clearance of your research project mentioned above. The Laikipia Institutional Scientific Ethical Review Committee reviewed the protocol of your proposed study on 1st February 2023 and the following issues were raised;

a) Need to attach an informed consent form.
b) Give an explanation on whether data has been collected. If not, revise the work plan

Your application will be approved after the above-raised issues have been addressed. Please attach your corrections in matrix form. Return your corrections within two weeks from the date of this letter.

Thank you

Prof. Charles Nguta
Chairman - Laikipia Institutional Scientific Ethical Review Committee

Page 1 of 1

Vision: A University for Valued Transformation of Society
Mission: To serve students and society through research, education, scholarship, training, innovation, outreach and consultancy
Laikipia University is ISO 9001:2015 and ISO/IEC 27001:2013 Certified

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Appendix V: NACOSTI Research Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **201677**

Date of Issue: **24/February/2023**

RESEARCH LICENSE

This is to Certify that Mr.. HENRY KROP LORIONO of Laikipia University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nakuru on the topic: DETERMINANTS OF EFFECTIVE IMPLEMENTATION OF LEARNING AGILITY STRATEGY IN KENYA ELECTRICITY GENERATING COMPANY (OLKARIA), KENYA for the period ending : 24/February/2024.

License No: **NACOSTI/P/23/23842**

201677

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

See overleaf for conditions

Appendix VI: KenGen Approval to conduct research

KenGen

Kenya Electricity Generating Company PLC

Pension Plaza II, Kolobot Road, Parklands
P.O. Box 47936 - 00100, Nairobi, Kenya
Telephone: +254-20-3666000, +254-711036000
Website: www.kengen.co.ke

Our Ref: Staff / 32 /JO /am

Date: 7th March,2023

Henry Krop Loriono
Geologist II Rig

Thro' Chief drilling Operations

Dear Sir,

RE: APPROVAL TO CONDUCT A RESEARCH

Reference is made to your letter dated, 5th December,2022.

This is to confirm that you have been granted an approval to conduct academic research in our Company on "Determinants of effective implementation of learning Agility strategy in Kenya Electricity Generating Company (Olkaria), Kenya.

The data collected is strictly for the intended purposes only and should be treated in strict confidence. You are expected to share your research findings with KenGen after the research.

You will be accorded all the necessary assistance in your research.

Yours faithfully,
FOR: KENYA ELECTRICITY GENERATING COMPANY PLC

SALLY KARAU
For: HUMAN RESOURCE DEVELOPMENT MANAGER