



EFFECT OF HUMAN RESOURCE DEVELOPMENT PROGRAMS ON EMPLOYEE PRODUCTIVITY IN MINISTRY OF ENERGY, KENYA

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ABSTRACT

Human Resource Development programs improve workforce competence in order to create a competitive advantage and contribute to organizational success. The main objective of this study was to establish the influence of human resource development programs on employee productivity in Ministry of Energy, Kenya. Specifically, the study was to assess the influence of training programs on employee productivity and establish the influence of job rotation on employee productivity in Ministry of Energy, Kenya. The research design used in the study was descriptive survey. The population in this study comprised of 221 employees and the sample size was 143 generated according to Slovin's Formula. Pilot study was 10% of the sample size. The analysis involved both inferential statistics and descriptive statistics. The data was presented in tables and figures. The response rate was 83.72%. The independent variables examined in the study were Training Programs, and Job Rotation Program. Descriptive analysis such as frequency, percentage, mean and standard deviation were used to analyze the data which was summarized using figures and tables. Correlation analysis was used to examine the strength of the effect of Training Programs, and Job Rotation Program on employee productivity in Ministry of Energy, Kenya. Regression analysis was used to examine the nature of the effect of Training Programs, and Job Rotation Program on employee productivity in Ministry of Energy. The findings of the study demonstrated that Training Programs and Job Rotation Program have a positive effect on employee productivity in Ministry of Energy. The study therefore recommends the inclusion of Human Resource Development programs in the strategic plans of Ministry of Energy. The study also recommends that training approaches and participation of staff should be improved.

Key Words: Human resource development programs, Employee productivity, Training programs, Job rotation

Background of the Study

In numerous developing and developed nations, there exists a prevailing perception that employees are merely instruments for task completion, often neglecting to recognize their individual work requirements and competencies. This perspective warrants careful consideration and calls for a shift towards a more enlightened approach. As a result, this phenomenon leads to a decrease in individuals' focus and engagement in their tasks, ultimately resulting in a decline in their overall productivity that often fails to meet the expectations set by their supervisors. Numerous scholars have espoused the notion that a strong correlation exists between development programs and employee productivity (Diab & Ajlouni, 2015).

The implementation of a development program within an organization is a crucial aspect of effective human resource management. In contemporary times, the significance of fostering staff growth and providing support in various dimensions, including physical capabilities and cognitive approaches towards subjects and ideas, has become increasingly recognized (Anwar & Abdullah, 2021). The primary objective of such initiatives is to enhance productivity levels within the workforce. The integration of training and development programs is fundamental to the success of an organization.

Research conducted by Gardi et al. (2020) highlights the critical role that training and development play in ensuring the long-term viability and growth of an organization. The attainment of expanding individuals' choices is achieved through the process of human development. It is widely acknowledged that choices are subject to change over time in an indefinite manner (Anwar & Louis, 2017). However, the attainment of any goal is contingent upon three fundamental prerequisites for individuals: a prolonged and robust state of well-being, a comprehensive acquisition of knowledge and skills, and the availability of resources necessary for a dignified existence (Ali & Anwar, 2021).

Raza (2015) asserts that education and employee development represent a paramount concern in contemporary times, as they offer manifold benefits to organizations. The successful operation and ongoing security of the organization rely on the diligent efforts of a dedicated workforce. The successful implementation of an effective training and development consultation for employees is crucial in achieving desired outcomes. By ensuring that employees receive adequate training and development opportunities, organizations can enhance their performance and productivity. This can be achieved through careful planning and execution of a comprehensive consultation process.

The implementation of training and development programs is highly likely to significantly enhance the overall performance of workers. The concept can be likened to a foundational element that leads to a more elevated outcome or accomplishment. The significance of having a well-structured commercial enterprise cannot be overstated, regardless of its scale. Whether it is a modest establishment with a handful of employees or a sprawling organization with numerous staff members, the need for effective business operations remains paramount. In light of the aforementioned considerations, it is imperative to underscore the indispensability of training and development initiatives within all organizational contexts. By implementing such measures, organizations can effectively mitigate the risk of engaging in erroneous or deceptive practices in the future (Raza 2015).

Statement of the Problem

One of the ways of increasing employee productivity according to Chartered Institute of Personnel Development (2020) is through development programs. Past studies have ardently been trying to establish the nature of relationship between human resource development programs and the productivity of employees.

For instance, Santos, Pereira, Silva, Cadilhe, and Cunha (2019) are of the view that development programs should be well planned and systematically implemented so as to benefit an organization and also increase the employee productivity.

Mwangi (2017) established the influence of development programs on employee performance in Somalia Non-Governmental Organization Consortium in Nairobi. Jacknonia (2018) also investigated the effect of development programs on employee performance at Safaricom Company Limited. More recently, Solomon (2020) carried out a study to determine the effect of development programs on performance of employees focusing on public sector organizations in Debre Tabor City administration.

These studies, fail to provide a causative link between the independent variable (human resource development programs) and the dependent variable (productivity of employees). In addition, they do not address public sector in Kenya and to be specific, Ministry of Energy. Over and above, despite emerging focus on development programs, the majority of studies used a general conceptualization rather than striking on specific aspects of the human resource development programs.

In the global sphere, there has been concern of ways to increase employees' productivity. In Ministry of Energy this has further been fueled by Covid 19 pandemic that demands for new skills across all departments, affecting 60% of workers (ILO, 2021). The labour organization reports that the pandemic has prompted concerns about skills erosion among employees with 55% reported more stressed, 41% said it takes them longer to finish work now and 22% admitted their work standard has lowered. This impacts productivity, performance, and ultimately the business.

Ministry of Energy, Kenya has a low state of employee productivity as shown by the numerous customer complaints both internal and external eg. power blackouts and general high cost of electricity. The workforce is composed of a high percentage of staff almost going for retirement, staffing gaps in grading structures, especially at higher levels, stagnation in one position for too long, shortage in skills due to changing career development expectations, and the possible exit of highly qualified and skilled human resources coupled with lack of Human Resource budget (GOK, 2017). Therefore, the study wishes to investigate if the current state of employee productivity could have been influenced by human resource development programs.

Objectives of the Study

General Objective of the Study

The objective of this study was to examine the effect of human resource development programs on employee productivity in Ministry of Energy, Kenya.

Specific Objectives of the Study

- a) To assess the influence of training programs on employee productivity in Ministry of Energy, Kenya;
- b) To establish the influence of job rotation programs on employee productivity in Ministry of Energy, Kenya;

LITERATURE REVIEW

Theoretical review

Goal Setting Theory

The theory presented by Edwin A. Locke in 1968, in his seminal article titled "Toward a Theory of Task Motivation and Incentive," has significantly contributed to our understanding of

motivation in the context of tasks. The present theory posits a strong and intrinsic connection between goal setting and task performance, as well as overall productivity. Moreover, it is asserted that the establishment of specific and challenging objectives, coupled with the provision of appropriate feedback, significantly enhances task performance, leading to superior outcomes. According to the seminal work of Locke, et al (1981), the concept of "goal" within the framework of Goal-Setting Theory (GST) can be defined as the specific objective or purpose that an individual strives to achieve through their actions (p. 126). According to Moeller et al. (2012), goal setting is a crucial process that involves the establishment of specific and effective targets for task performance.

Prior to the 1960s, a cohort of researchers embarked upon an investigation into the efficacy of goal setting within the realm of business. The findings of the study indicate that the implementation of goal setting strategies has a significant and beneficial impact on the performance and productivity of workers. Extensive research conducted by scholars such as Gardner et al. (2016), Locke and Latham (1990), and Locke and Latham (2002) has consistently demonstrated the profound impact of goal setting on students' academic achievement. In a study conducted by Gardner et al. (2016), a total of 127 medical students were selected to partake in a surgical skill training program. The study revealed that the implementation of goal setting proved to be highly effective in facilitating the acquisition of surgical skills among novice students.

This was particularly evident when students adopted a targeted approach and exhibited goal orientations that were specific and well-defined. The findings of the study indicate that students exhibit enhanced learning performance when they possess well-defined and precise goals. The theory of goal setting holds substantial importance in the realm of employee motivation and performance enhancement. Research has consistently shown that organizations that adopt a goal-setting approach, wherein both management and employees establish specific and challenging objectives and wholeheartedly commit to them, tend to exhibit higher levels of motivation and perseverance in pursuit of these goals. This heightened dedication and determination ultimately contribute to increased employee productivity and overall organizational success.

Organisational theory

Modern organization theory is rooted in concepts developed during the beginnings of the Industrial Revolution in the late 1800s and early 1900s. Of considerable import during that period was the research done by of German sociologist Max Weber (1864—1920). An organisation theory furnishes a general frame of reference for explaining understanding behaviour patterns in organizations in order to achieve employee productivity. It also furnishes a scientific base for managerial actions for predicting, controlling and influencing behaviour with a view to increase efficiency of the organisation. It also encompasses the study of structure, functioning, productivity and performance of organisations and the behaviour of employees working in organisations.

Organizations practice division of labor both vertically and horizontally. Vertical division includes three basic levels—top, middle, and bottom. The chief function of top managers, or executives, typically is to plan long-term strategy and oversee middle managers. Middle managers generally guide the day-to-day activities of the organization and administer top-level strategy. Low-level managers and laborers put strategy into action and perform the specific tasks necessary to keep the organization operating and increase employees productivity. Organizations also divide labor horizontally by defining task groups, or departments, and assigning workers with applicable skills to those groups. Line units perform the basic functions of the business, while staff units support line units with expertise and services. In general, line units focus on supply, production, and distribution, while staff units deal mostly with internal operations and controls or public relations efforts. The Management may document the most efficient means of accomplishing a task or

provide standards for rewarding workers; this will create great working environment and increases overall productivity.

Conceptual Framework

The Conceptual Framework below shows a diagrammatic representation of the relationship between the independent variables and the dependent variable in the study. The independent variables are Training, Coaching, Mentorship and Job Rotation programs, dependent variable is Employee productivity.

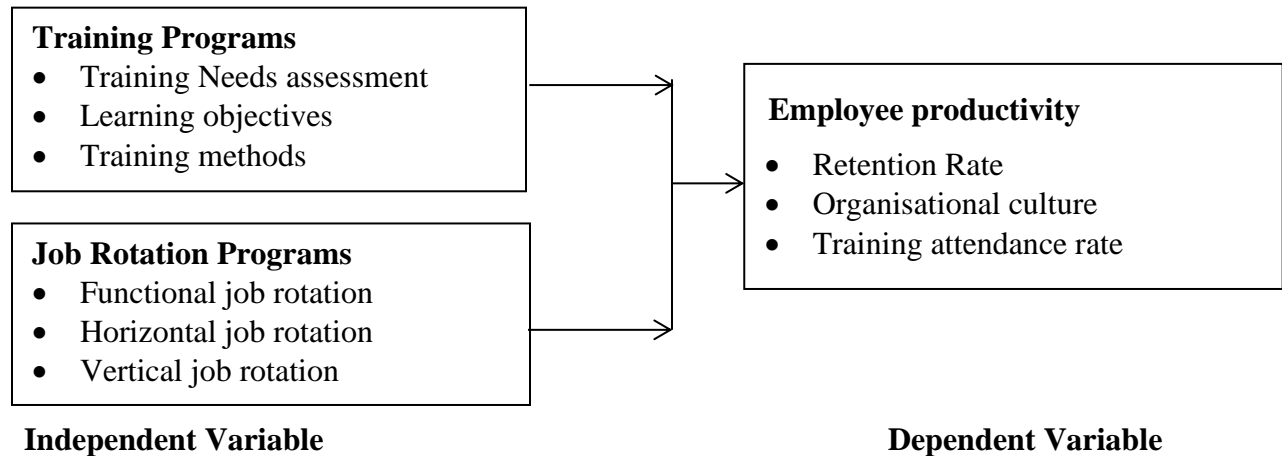


Figure1: Conceptual Framework

Training

Training was measured using Training Needs assessment, learning objectives and Training methods as shown in the diagram above. In the rapidly changing world of society, employee training is not only a desirable activity but also an activity an organization must undertake if it is to retain a decent and knowledgeable workforce. (Sundari, 2022); (Rigby, C.S & Ryan, 2018); (Sheehan, M., Garavan, T.N., 2014); (Werner, J.M., & DeSimore, 2011). According to Alderfer's ERG theory - **Growth needs** describe our intrinsic desire for personal development. These needs are aligned with the other part of Maslow's esteem-related needs such as self-esteem, self-confidence, and achievement and self-actualization needs such as morality, creativity, problem-solving and discovery.

Human projects are required to develop the staff with the continuous and new methods of training. G Ali et al. (2021) have mentioned the importance of infinite value of training and development. It is important to look for more and new techniques and skills for advanced achievement in training (Abdullah, 2018). However, school administrators recognize that the training is clearly required for the development of individuals parallel to assist the workers with productive capacities. Training is one of the great tools to establish organization conditions which lead to strive for better personnel performance.

Saleh et al. (2021) have also explained the benefit of training for an organization. They clarified the purpose of training as follow: "increase productivity, improves the quality of work; improves skills, knowledge, understanding and attitude; enhance the use of tools and machine; reduces waste, accidents, turnover, lateness, absenteeism and other overhead costs, eliminates obsolescence in skills, technologies, methods, products, capital management etc (Othman & Abdullah, 2016). These skills bring the performance of officers to the level of the job; provide modifications of new policies and guidelines; helps people for accomplishment, expands man power progress and certifies the endurance and development of the

innovativeness. Abdullah & Othman, (2016) believes that the functions of training can be classified as follow: deliver the skills, information and talents require starting the job successfully, develop the workers having energy potentials. The progress and increasing efficiency can be done through reducing ruined work, mismanagement of machines and decreasing physical dangers (Abdullah & Othman, 2021)

According to systems management theory employees are one of the most important components of a company in order to improve quality. Other elements crucial to the success of a business are departments, workgroups, and business units. In practice, managers are required to evaluate patterns and events in their companies so as to determine the best management approach. This way, they are able to collaborate on different programs so that they can work as a collective whole rather than as isolated units. The social judgment theory was originally formulated by Sherif and Hoveland. This theory attempts to explain how existing attitudes produce distortions of attitude related objects and how these judgments mediate attitude change.

Baltrunaite and Sekliuckiene's (2020) study on using organizational learning complements Richardson's emphasis on 'experiencing' the learning and development activities. According to Baltrunaite and Sekliuckiene (2020), where an employee has 'experienced' learning and development, there is a possibility of intuiting, interpreting, integrating, and institutionalizing these practices (the 4I model) which in turn fosters improved quality and organizational growth. This is very useful especially for start-ups growth.

Job Rotation

Job rotation was measured using functional job rotation, horizontal job rotation and vertical job rotation as shown in the diagram above. Functional job rotation involves moving employees across different functions or departments within an organization. A study by Chen et al. in 2021 found that functional job rotation enhances employees' job satisfaction and improves their overall skill set. Horizontal job rotation refers to the movement of employees across different roles or positions at the same level within a department or team. According to research by Li et al. in 2022, horizontal job rotation promotes knowledge sharing and collaboration among employees, leading to increased innovation and productivity.

Job rotation and transfers as a way of developing employee skills within organization involves movements of employees from one official responsibility to another for example taking on higher rank position within the organization, and one branch of the organization to another (McCourt & Eldridge, 2015). These rotations and transfers facilitate employees to acquire knowledge of the different operations within the organization together with the differences existing in different countries where the organization operates. The knowledge acquired by the selected employees for this method is beneficial to the organization as it may increase the competitive advantage of the organization (Ortega, 2015). This usually aims to give trainee managers a feel for the organization by giving them the experience of working in different departments in order to share information and become committed to their flexible task. Job rotation is another version of training and development that became popular in the 1970s to help relieve boredom and thereby raise the productivity of shop floor workers. It is a management technique used to rotate incumbents from job to job or from department to department or from one plant to another in different geographical areas (Cheraskin & Stevens, 2014).

Employee Productivity

This variable was measured using retention rate, organisational culture and training attendance rate. Retention rate refers to the percentage of employees who stay with an organization over a specific period. According to a study by Smith et al. in 2021, organizations with higher retention

rates tend to have lower recruitment costs and higher productivity. Organization culture encompasses the shared values, beliefs, and behaviors within an organization. Research by Brown et al. in 2022 suggests that a positive and inclusive organization culture promotes employee engagement, satisfaction, and overall organizational performance.

Training attendance rate measures the percentage of employees who actively participate in training programs. A report by the Association for Talent Development in 2023 highlights the positive impact of high training attendance rates on employee skill development, job performance, and job satisfaction. The importance of higher productivity of the employees in public enterprise cannot be overemphasized, which include the following; Higher incomes and profit; Higher earnings; Increased supplies of both consumer and capital goods at lower costs and lower prices; Ultimate shorter hours of work and improvements in working and living conditions; Strengthening the general economic foundation of workers (Nwachukwu, 1988). It is the wish of every organization to be productive because productivity forms the cardinal essence for which every organization exists. To attain or increase productivity has led many organizations into constant reshuffling practice.

However, increased productivity could result from reduction in the use of resources, reduction in cost, use of better methods or improvement in factors of capabilities, particularly labour, put succinctly, productivity is measured by dividing value of output with the cost of input. It implies the attainment of predetermined goals or results with least necessary expenditure of resources; hence productivity can be equated with efficiency of sources. Nwachukwu (2006) agrees that higher productivity as would be the wish of many organizations can be achieved through ensuring higher earnings for workers; ultimate shorter hours of work and improvements in working and living conditions and strengthening the general economic foundation of workers.

Betlehem conducted research examining the impact of e-banking services on the performance of top performer commercial banks in Ethiopia. Overall the results revealed that e-banking services have a significant negative impact on the performance of commercial banks in Ethiopia. The other worth mentioning work-related work is Wubalem's (2017) MA Thesis. Wubalem investigated the interface between training and employee productivity in chain hotels located in Addis Ababa. Her research confirmed that training has a relationship with employee productivity. Yet, the other similar work to be reviewed is Gebremichael (2017) MA Thesis. This thesis was conducted by evaluating the promotional practice of private colleges in the case of CPU and Addis Ababa Medical colleges. The findings of the study generally indicate promotional efforts of the colleges are not achieving the intended objective. It also shows that there are problems in designing the messages and measuring results.

In 2016, the Royal Bank of Scotland (RBS) launched a pilot program called Jump in which employees participated in challenges on ways to save water and electricity, as well as other sustainability issues. At the end of the pilot, 95 percent of the employees reported that they felt the program had contributed to employee engagement, team building, and environmental stability. Given the success of the program, in 2017 it was expanded to all RBS sites and a smartphone app was added to help employees participate in the challenges (Barton 2017).

Empirical Review

Training

Training has various benefits in an organization (Qureshi, 2016). These include improving employees' morale, job satisfaction and encouraging employees to stay longer in the organization. Motivated employees are also less likely to be absent from work, make more errors and require more supervision at their workstation. This leads to cost reduction for the organization. Training

also leads to improved chances of career development for the employees through promotion as they have acquired additional skills. This becomes a benefit to the organization, as it is able to retain the well-trained employees (Onyango & Wanyoike, 2016).

According to Arsawan, Sanjaya, Putra and Sukarta (2017), training has a significant effect on employee productivity. The study suggests that the process of knowledge transfer through absorptive capacity play an important role, and that they have some impact on the subsidiaries performance. Ofobruku and Yusuf (2016) postulate that the degree of knowledge transfer scheme put in place in the organization was very significant as it affects employee performance. They recommend that for organizations to sustain improved employees' productivity, they should put in place knowledge transfer mechanism so as to achieve their objectives.

Van Tonder (2021) emphasised with current research the need for training for teachers in the South African context to overcome the challenges experienced by beginning teachers while bridging from pre-service teaching to in-service teaching and to introduce and illuminate the design of a new multimodal induction model. The researcher followed a narrative approach by discussing previous research regarding the insufficient pre-service training beginning teachers received and the lack of a structured programs in the South African context.

According to Burley (2018), when an organization trains its employees, it makes them a treasured asset in the organization. Organizations should therefore strive to entrench training programs in their human resource practices to yield important benefits for the organizations. According to Abeba, Misele and Lemessa (2018), training is conveying a precise skill to perform a particular job. Training is an educational activity aimed towards the attainment of specific skills and knowledge for the intention of a task (Atieno, 2016).

Elnaga and Imra (2016) also define employee training as programs that equips employees with information, new skills, or professional development opportunities. As highlighted by Mohamud (2016) that training is essential in an organization to ensure that an adequate supply of staff is competent and capable helping the organization to achieve its set vision, mission and objectives. Effective training is an advantage to the organization because it leads to reduction of time spent solving problems, redoing a given task, which in turn leads to saving the much-needed resources in the organization.

According to Al-Nuseirat and Biygautan (2018), organizations that strive to remain competitive are required to equip their employees with the relevant skills as this will encourage them to be creative and innovative thus permitting them to contribute to the organization's overall success and excellence in service delivery.

Job rotation

Al-Romeedy (2019) sought to propose and test a conceptual model that explores the effect of job rotation on employees' productivity through the mediating role of organizational behavior (namely, motivation, organizational commitment, job satisfaction, job involvement and job burnout). Data are gathered from employees in the tourism and aviation departments at travel agents category A in Egypt. In total, 788 questionnaires are analyzed using regression-based partial least squares structural equation modeling (PLS-SEM) using Smart PLS 3.21. The results indicate that organizational behavior (motivation, organizational commitment, job satisfaction, job involvement and job burnout) plays mediation roles in the relationship between job rotation and employees' performance.

Wagner *et al.* (2017) carried out a study to investigate how the basic problem of in-group favoritism in a setting of high task interdependence is addressed through an intervention strategy combining different approaches. This paper reports on evidence from extensive field-based case

research. It focuses on the holistic description of a single high-performance logistics setting and discusses the distinct but interrelated managerial approaches against the backdrop of behavioral theory. Most notably, the authors examine how culturally specific factors such as people's social in-group-outgroup categorization is reduced through a continual rotation of jobs.

A study by Thongpapanl, Kaciak and Welsh (2018) explored whether job rotation strategies and joint reward systems are equally effective in encouraging cross-functional collaboration (CFC) under all organizational contexts, ranging from young and small firms to mature and large ones. To ensure a wide applicability of findings in this study, the research model and hypotheses were tested with a sample of 232 Canadian firms active in a variety of industrial sectors. A survey instrument that comprised all the questionnaire items corresponding to the examined constructs is the foundation of the data used in this contribution. This study shows that job rotation and joint rewards are strong and positive drivers of interdepartmental collaboration, which subsequently enhance firm performance.

Ayough *et al.* (2021) aimed to derive an understanding of the underlying effects of job rotations on performance metrics in a lean cell. The authors use an optimization framework and an experimental design methodology for sensitivity analysis of the input parameters. The approach is an integration of three stages. The authors propose a set-based optimization model that considers human behavior parameters. They also solve the problem with two meta-heuristic algorithms and an efficient local search algorithm. Further, the authors run a post-optimality analysis by conducting a design of experiments using the response surface methodology (RSM). The results of the optimization model reveal that the job rotation schedules and the human cognitive metrics influence the performance of the lean cell. The results of the sensitivity analysis further show that the objective function and the job rotation frequencies are highly sensitive to the other input parameters.

Employee Productivity

James Clear (author of *Atomic Habits*) defines productivity as a measurement of the efficiency of a person completing a task. However, he argues that productivity is more than just getting things done. Jennifer and George (2016) Argued that the performance of workers contribute directly to an organization's level of effectiveness, efficiency and even towards the achievement of administrative goals. It also stated that a corporation's failure to certify that its workers are motivated has a negative influence on its organizational effectiveness and efficiency thereby 26 affecting employee's productivity levels concerning expected goals and objectives.

Work productivity is also important in terms of providing sound and quality service to different stakeholders. In a related study, Giuliano *et al.*, (2017) affirmed that corporate social responsibility (CSR) has certain benefits to productivity. However, to sustain a high impact and satisfaction guaranteed output, training is essential as revealed by Chetri *et al.*, (2018) in their study where employer-sponsored training and workforce productivity relationship is multidimensional. Furthermore, some employees simply like to multitask therefore, a study by Tetteh and Attiogbe (2019) found that schooling and working at the same time results in less time for studies which affects academic performance negatively.

Furthermore, work productivity equates to different prospects that might help an economy like one study of Sheehan and Shi (2019) where enhancing education can have significant gains from low-income countries. Tsuo and Yang (2019) on the other hand tackled productivity in terms of different firms or industries. Furthermore, retirement plans (Gabriele *et al.*, 2018) provides a negative impact on productivity. And finally, team and performance management also provide a certain degree of relationship to employee productivity (Nwinyokpugi *et al.*, 2020; Kenny, 2017). Productivity involves not only normal employees but also those with disabilities. Jammaers *et al.*,

(2016) discussed and identified three types of discursive practices that affect a person with a disability. Battaglio and French, (2016) mentioned that in their study the effect of organizational factors shows higher levels of self-sacrifice.

RESEARCH METHODOLOGY

Mixed methods data analysis techniques was employed in this study incorporating both descriptive and inferential data analysis. Pearson's Product Moment Correlation Coefficient (r) and Regression analysis was used. Since hypothesis was involved in this study, testing of regression coefficients was used. Regression analysis was conducted to determine whether each of the four independent variables has a significant relationship with the employee productivity.

This process is essential for determining the target population. The study focused on the employees working at the Ministry of Energy, specifically those located at the Ministry's headquarters in Nairobi, Kawi House. As per the official website of the Ministry of Energy, it has been reported that the ministry currently has a total of 221 employees.

The sampling frame had all 221 employees working within administration, accounts, procurement, planning and human resource management among other departments from the Ministry of Energy, specifically those located at the Ministry's headquarters in Nairobi, Kawi House.

Sampling was done using the Slovin's Formula (as used by Ariola, 2006). The formula is expressed as follows: $n = N / (1 + Ne^2)$. Where n is sample size; N is the population size and e is the error tolerance. The confidence level gives the margin error; in this formula, it ranges 95% - 99% implying an error tolerance of 0.05 and 0.01 respectively (Ariola, 2006). The current study used a 95% confidence level implying a 0.05 error tolerance. Therefore, using Slovin's Formula, the sample size was calculated. The equation gives sample size of 143 respondents. The study used stratified random sampling in order to account for the uneven distribution of employees in eight departments.

The study used primary and secondary data. Primary data was collected directly from the respondents and used to analyze the relationships that were being examined in this study. Secondary data was used to acquire information on the employees' productivity of the administration, accounts, procurement, planning and human resource management among other departments from the Ministry of Energy. A pilot study was conducted to test the reliability and validity of the research. According to Kothari (2010), a pilot test is a sort of preliminary survey which helps to test the reliability and validity of data collection instruments. Piloting was done in order to single out items in the research instruments that were vague in bringing out the relevant information. This pilot study involved senior management staff among the Ministry of Energy employees based at the Ministry headquarters. A minimum of 14 respondents who took part in the pilot study will not be included in the final sample size of the study.

Mixed methods data analysis techniques was employed in this study incorporating both descriptive and inferential data analysis. Pearson's Product Moment Correlation Coefficient (r) and Regression analysis was used. Huber (2004) indicates that Pearson's Product Moment Correlation (r) is a measure of the linear dependence (correlation) between two variables and can give a positive or negative value of their relationship. Since hypothesis was involved in this study, testing of regression coefficients was used. Regression analysis was conducted to determine whether each of the four independent variables has a significant relationship with the employee productivity.

RESEARCH FINDINGS AND DISCUSSION

The study sought to establish the respondent rate. A total of 129 questionnaires were issued out to respondents in 8 departments at the Ministry of Energy headquarters (Kawi House) in Nairobi as shown in table 4.1. Completed questionnaires that were received were 108. Results indicated

that the majority (83.72%) of the questionnaires were returned while (16.27%) were unreturned. The response rate was considered adequate given the recommendation by Fincham (2008), a response rate of 60% is considered appropriate in research. Saunders, Lewis and Thornhill (2007) suggest a response rate of 30-40% as sufficient for research. Sekaran (2003) document that 30% is equally considerate while Mugenda and Mugenda (2003), advices on response rates exceeding 50% and Hager, Wilson, Pollack and Rooney (2003) recommended 50%. Based on these assertions, this implied that the response rate for this study was adequate and sufficient to draw conclusions.

Descriptive Analysis of the Study Variables

Influence of training programs on employee productivity.

The main objective of this study was to evaluate the consequences of training programs on employee productivity within the Ministry of Energy in Kenya. The participants were requested to indicate their level of agreement or disagreement regarding various facets of training programs on employee productivity within the Ministry of Energy. The presented table showcases a collection of statements pertaining to training programs and their perceived impact, accompanied by the distribution of responses for each statement. The responses have been categorized into five distinct categories, namely: Strongly Disagree (S.D), Disagree (D), Neutral (N), Agree (A), and Strongly Agree (S.A). The table additionally presents the average and standard deviation of the participants' responses for each statement. The table presented herein offers valuable insights into the perceptions of employees regarding training programs and their impact within the Ministry of Energy.

The following analysis presents a comprehensive examination of the discovered outcomes: Regarding the topic of employee motivation and retention, it is imperative to acknowledge the significance of this issue within the realm of organizational management. The ability to effectively motivate and retain employees is crucial for the overall success and sustainability of any business. In light of this, it is essential to delve into the various factors the statement "Training programs have a positive impact on employee motivation and retention within the Ministry of Energy" garnered a significantly high proportion of respondents who agreed (70.6%). The aforementioned statement implies that employees commonly hold the belief that training programs play a significant role in enhancing their motivation and fostering their commitment to remain with the organization.

When examining the fairness of training program awards, it is important to consider the response to the statement "Training programs are fairly awarded." Notably, a significant proportion of respondents (35.3%) expressed a neutral stance (N) on this matter. This finding raises questions about the perceived fairness of the training program awards and warrants further investigation. This observation suggests that employees may possess a range of sentiments regarding the equity of the award selection procedure. Nevertheless, it is worth noting that the cumulative proportion of respondents who expressed agreement, encompassing both Agree (A) and Strongly Agree (S.A) categories, remains significantly higher at 50.2%. This finding underscores the prevailing sentiment in favor of the stated proposition.

The provision of an opportunity to acquire new skills by the management has garnered a considerable proportion of neutral responses, amounting to 38.3%. This observation implies that there exists a certain level of ambivalence among employees regarding the extent to which management facilitates opportunities for enhancing their skill sets. Regarding the allocation of funds for training programs, it is noteworthy that a considerable proportion of respondents (39.9%) expressed agreement with the statement "The Management allocate funds for training programs." This finding suggests that employees generally hold a positive perception of the organization's

commitment to allocating resources for training purposes. The survey results indicate that employees exhibit a generally positive attitude towards training, with responses being evenly distributed across the spectrum.

The data reveals that a significant proportion of respondents (39.3%) expressed agreement, indicating a noteworthy level of consensus. Additionally, a considerable percentage of participants (32.7%) provided neutral responses, suggesting a substantial presence of ambivalence or lack of strong opinion. The data collected on workplace relationships and training in the Ministry of Energy indicates that the statement "Training programs build workplace relationships" received a significant proportion of neutral responses (34.7%). This finding highlights the need for further investigation and analysis to better understand the underlying factors contributing to this response pattern. By delving deeper into the reasons behind these neutral responses, we can gain valuable insights that can inform the development of more effective training programs aimed at fostering positive workplace relationships within the Ministry of Energy. This observation implies that employees may hold divergent viewpoints regarding the influence of training programs on interpersonal dynamics within the workplace.

Overall, it can be inferred that Training programs have been found to have a significant and favorable influence on employee motivation and retention, as evidenced by the notable percentages of agreement and strong agreement. Perceptions of the subject under consideration generally tend to be favorable. However, it is crucial to acknowledge that there exist certain areas of ambiguity and doubt, particularly with regards to the equitable distribution of awards, the availability of opportunities for acquiring new skills, and the quality of workplace relationships. The current evidence suggests that employees exhibit a notable level of satisfaction regarding the allocation of funds for training programs. The mean values observed in this study consistently demonstrate a high level of agreement with the statements under investigation. The range of means, spanning from 3.07 to 3.76, further supports the notion of a general consensus among participants.

Table 1: Influence of training programs on employee productivity

Statement	S.D	D	N	A	S.A	Mean	Std. Dev
Training programs motivate and retains employee in Ministry of Energy	4.0%	4.3%	12.2%	70.6%	8.9%	3.76	.8277
Training programs are fairly awarded	4.0%	10.0%	35.3%	37.3%	12.9%	3.46	.9780
The management has given me an opportunity to learn new skills	4.3%	15.0%	38.3%	32.0%	9.9%	3.28	.9845
The Management allocate funds for training programs.	5.3%	19.0%	28.4%	39.9%	7.3%	3.13	.9816
Employees have a positive attitude towards training	4.0%	12.0%	32.7%	39.3%	11.2%	3.41	.9820
Training programs build work place relationships in Ministry of Energy	4.3%	26.0%	34.7%	26.4%	7.9%	3.07	1.009

Influence of Job Rotation on employee productivity

The second objective of the study sought to determine the Influence of Job Rotation on employee productivity in Ministry of Energy, Kenya. In regard to know whether or not the Ministry of Energy, Kenya has a flexible work force that affects employee productivity, 2.6% strongly disagreed, 9.9% disagreed, 26.2% were neutral, 45.4% agreed and 15.9% strongly agreed. Average

score rate was 3.6192 out of 5 and standard deviation of 0.95620 was recorded. This also indicated that majority of the respondents in Ministry of Energy, Kenya has flexible work force which affects employee productivity.

To know whether or not change of employee work station affects productivity, 8.9% strongly disagreed, 10.9% disagreed, 29.1% were neutral, 34.4% agreed and 16.6% strongly agreed. Average score rate was 3.3874 out of 5 and standard deviation of 1.15231 was recorded. This also indicated that majority of the respondents in Ministry of Energy in Kenya were of the opinion that change of employee work station affects productivity.

To know whether Job rotation improves communication network, 2.3% strongly disagreed, 12.2% disagreed, 28.1% were neutral, 34.7% agreed and 22.8% strongly agreed. Average score rate was 3.6325 out of 5 and standard deviation of 1.03783 was recorded. The finding indicated that majority of the respondents agreed that Job rotation improves communication network. Further analysis was aimed to determine the extent to which the Job rotation helps me in understanding organizational goals, 1.0% strongly disagreed, 11.6% disagreed, 15.9% were neutral, 49.3% agreed and 22.2% strongly agreed. Average score rate was 3.8013 out of 5 and standard deviation of 0.94725 was recorded.

On the other hand, to determine whether or not Job rotation strengthens succession planning, 2.6% strongly disagreed, 12.9% disagreed, 23.1% were neutral, 46.9% agreed, and 14.5% strongly agreed. Average score rate was 3.5762 out of 5, and standard deviation of .97774 was recorded. Lastly, the respondents were asked to state whether or not change of work increases employees efficiency and positively impacts on employees productivity, 6.6% Strongly disagreed, 24.4% disagreed, 36.6% were neutral, 25.4% agreed, and 6.9% strongly agreed. Average score rate was 3.0199 out of 5, and standard deviation of 1.02117 was recorded. The rest of the results are shown in table below.

Table 2: Influence of Job Rotation on employee productivity

Factor	S.D	D	N	A	S.A	Mean	Std. Dev
Flexible work force affects employee productivity	2.6%	9.9%	26.2%	45.4%	15.9%	3.619	.95620
Change of employee work station affects productivity	8.9%	10.9%	29.1%	34.4%	16.6%	3.387	1.1523
Job rotation improves communication network	2.3%	12.2%	28.1%	34.7%	22.8%	3.633	1.0378
Job rotation helps me in understanding organizational goals	1.0%	11.6%	15.9%	49.3%	22.2%	3.801	.9473
Job rotation strengthens succession planning	2.6%	12.9%	23.1%	46.9%	14.5%	3.576	.9777
Change of work increases employees efficiency and positively impacts on employees productivity	6.6%	24.4%	36.6%	25.4%	6.9%	3.020	1.0212

Employees Productivity

In this section, the study is concerned with the descriptive analysis of the dependent variable (Employees Productivity). The respondents were asked to state their level of agreement on the following items regarding employee productivity in Ministry of Energy in Kenya. The findings were as follows: On whether the Managers attitude towards employee productivity is positive,

33.1% of the respondents agreed, and 16.2% strongly agreed, 18.9% were undecided, 29.1% disagreed and only 2.6% of the respondents strongly disagreed. An average score rate of 2.8963 was recorded with a standard deviation of 0.99290.

Concerning whether Managers impact employee performance through behaviour modelling in Ministry of Energy, 7.3% strongly agreed, 30.6% agreed, 36.9% were neutral, 23.3% disagreed and 2.0% strongly disagreed. The overall mean rate of 3.2508 and standard deviation of 0.96271 was recorded. The respondents were asked how often they receive constructive feedback on their job performance in the Ministry of Energy; 44.9% of respondents agreed, 5.0% strongly agreed, 21.5% were undecided, but 25.7% disagreed and 3.0% strongly disagreed. An average score of 2.9967 out possible 5 and standard deviation of 0.97105 was recorded.

To find out if the functions and responsibilities of jobs are clearly defined the majority of the respondents at 34.7% were undecided 27.1% agreed, 9.2% strongly agreed, but 24.1% disagreed and 5.0% strongly disagreed. A mean score of 3.0836 out of 5 and standard deviation of 1.20807 was recorded. To find out whether employees are motivated in undertaking assigned duties and responsibilities, the majority of the respondents at 38.0% agreed, 21.8% were undecided, 29.0% strongly agreed, but 7.9% disagreed and 3.3% strongly disagreed. Mean score of 2.595 out of 5, and standard deviation of 1.23434 was recorded. The details of the findings are shown in table 3.

Table 3: Employees Productivity

Employees Productivity	S.D	D	N	A	S. A	Mean	Std. Dev
Managers attitude towards employee productivity is positive.	2.6%	29.1%	18.9%	33.1%	16.2%	2.896	.99290
Managers impact employee performance through behaviour modelling	2.0%	23.3%	36.9%	30.6%	7.3%	3.251	.96271
How often do you receive constructive feedback on your job performance in the Ministry of Energy	3.0%	25.7%	21.5%	44.9%	5.0%	2.997	.97105
The Ministry align organisational culture with management system	3.3%	8.6%	19.9%	53.3%	14.9%	3.636	3.0867
The functions and responsibilities of jobs are clearly defined.	5.0%	24.1%	34.7%	27.1%	9.2%	3.084	1.2080
I am motivated in undertaking assigned duties and responsibilities	3.3%	7.9%	21.8%	38.0%	29.0%	2.595	1.2343

Inferential Statistics

Correlation Analysis

The study findings depicted in Table 4 indicated that there was a significant positive effect of Training programs on employee productivity ($\rho=0.831$, p -value <0.05). This implies that a unit change in training programs increases employee productivity in Ministry of Energy, Kenya by 65.3%.

Finally, there was a positive and significant effect of Job Rotation Program on employee productivity ($\rho = 0.846$, p value <0.05). This implies that a unit change in Job Rotation Program increases employee productivity in Ministry of Energy, Kenya by 84.6%.

Table 4: Correlation Analysis of the study

		<i>Training programs</i>	<i>Job Program</i>	<i>Rotation</i>	<i>Employee Productivity</i>
Training programs	Pearson Correlation	1	0.503		.831**
	Sig. (2-tailed)		.085		.375
	N	107	107		107
Job Rotation Program	Pearson Correlation	0.503	1		.846**
	Sig. (2-tailed)	.085			.201
	N	107	107		107
Employee Productivity	Pearson Correlation	.831**	.846**		1
	Sig. (2-tailed)	.375	.201		
	N	107	107		107

Regression analysis

Regression analysis is a set of statistical methods used for the estimation of relationships between a dependent variable and one or more independent variables. This can be utilized to assess the strength of the relationship between variables and for modeling the future relationship between them.

Regression analysis on effect of Training programs on employee productivity in Ministry of Energy, Kenya

The first objective of the study was to establish the effect of Training programs on employee productivity in Ministry of Energy, Kenya. The linear regression model was carried out to reveal the role of independent variables on dependent variables and the findings are as herein presented. As the model summary in Table 5 reveal, the R Square (R^2) for the model was 0.690. This implies that Training program's effect up to 69.0% variation in the employee productivity. This confirms that Training program's has a positive significant effect on employee productivity in Ministry of Energy, Kenya.

Table 5: Model Summary for Training programs

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.831 ^a	.690	.687	.64329

a. Predictors: (Constant), Training programs

The Analysis of Variance (ANOVA) result are as shown in Table 6. As the findings indicate, the F-Statistics for the model was 234.216 at a significant level of $0.000 < 0.05$. This implies that there is a significant effect of Training programs on employee productivity in Ministry of Energy, Kenya.

Table 6: Analysis of Variance (ANOVA) for Training programs

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	82.154	1	82.154	234.216	.000 ^b
	Residual	36.830	106	.35076		
	Total	118.983	107			

a. Dependent Variable: Employee Productivity in Ministry of Energy

b. Predictors: (Constant), Training programs

The regression coefficients result as shown in Table 7 revealed that the Beta (β) coefficient for Training programs was 0.802 which implies that a unit change in Training programs would lead to an increase in employee productivity in Ministry of Energy by up to 80.2%. The P-value for

Training programs was 0.000 which is less than the standard P-value of 0.05. This implies that there is a significant and positive effect of Training programs on employee productivity in Ministry of Energy. On this merit, we therefore reject the null hypothesis that there is no significant effect of Training programs on employee productivity in Ministry of Energy, Kenya.

Table 7: Regression Coefficients for Training programs

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.844	.220		3.841	.000
	Training programs	.802	.057	.831	14.090	.000

a. Dependent Variable: Employee Productivity in Ministry of Energy, Kenya

Regression analysis effect of Job Rotation Program on employee productivity in Ministry of Energy, Kenya

The second objective of the study was to establish the effect of Job Rotation Program on employee productivity. The linear regression model analysis results are as herein shown in form of model summary, ANOVA test and regression coefficients. The model summary shown in Table 4.32 revealed that the R^2 for the model was 0.716. This is to imply that 71.6% of the variations in employee productivity in Ministry of Energy are as a result of Job Rotation Program.

Table 8: Model Summary for Job Rotation Program

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.846 ^a	.716	.713	.61622

a. Predictors: (Constant), Job Rotation Program

The ANOVA results are as shown in Table 9. As the findings reveal, the F-statistic for the model is 171.404 at a significance level of $0.000 < 0.05$. This is an implication that Job Rotation Program significantly effect the variations in the employee productivity in Ministry of Energy.

Table 9: ANOVA Results for Job Rotation Program

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	85.188	1	85.188	171.404	.000 ^b
	Residual	33.796	106	.497		
	Total	118.983	107			

a. Dependent Variable: employee productivity in Ministry of Energy, Kenya

b. Predictors: (Constant), Job Rotation Program

The regression coefficients as shown in Table 10 on the other hand revealed that the Beta coefficient for Job Rotation Program was 0.798. This implies that a unit change in Job Rotation Program would lead up to 79.8% increase in the employee productivity in Ministry of Energy. The p-value for the variable was 0.000 which is less than the standard P-value of 0.05. This is to mean that Job Rotation Program had a significant effect on the employee productivity in Ministry of Energy.

Table 10: Regression Coefficients for Order Processing Practices

Model		Unstandardized		Standardized	t	Sig.
		Coefficients				
		B	Std. Error	Beta		
1	(Constant)	.964	.199		4.833	.000
	Job Rotation Program	.798	.053	.846	14.978	.000

a. Dependent Variable: employee productivity in Ministry of Energy, Kenya

Conclusions of the Study

This section presents the conclusions made in the current study. Research objective one in this study was to assess the effect of training programs on employee productivity in Ministry of Energy, Kenya. The indicators of training programs were Training Needs assessment, Learning objectives and Training method. The indicators for employee productivity in Ministry of Energy, Kenya in this case were Retention rate, Organizational culture and Training attendance rate which have a positive significant relationship with employee productivity. It was therefore concluded that there was a positive and significant effect of training programs on employee productivity in Ministry of Energy, Kenya.

The last objective of this study was to determine the effect of job rotation program on employee productivity in Ministry of Energy, Kenya. The pointers for job rotation program were Functional job rotation, Horizontal job rotation and vertical job rotation. The indicators for employee productivity in Ministry of Energy, Kenya in this case were Retention Rate, Organisational culture and Training attendance rate which had a positive and significant effect with employee productivity. It was therefore concluded that there was a positive and significant effect of Job rotation programs on employee productivity in Ministry of Energy, Kenya.

Recommendation of the Study

Based on the study findings, the following recommendations are given under the study specific objectives: This study established a significant positive effect of training programs on employee productivity in Ministry of Energy, Kenya; $p < 0.05$ ($P=0.001$) with an explanatory power of 83.1 percent. The study therefore recommends the inclusion of training programs in the strategic plans of the Ministry of Energy. The study recommends also that during training needs assessment, various techniques can be used to assess needs where interviews or surveys of essential people can be employed in the training process and reviewing pertinent regulations to identify needs. The result of the needs assessment should be a description of the performance and/or regulatory compliance deficiencies of the intended audience.

The line manager should examine the employee's current performance against the standard to help them identify strengths, weaknesses and needs. Records such as customer complaints, absenteeism, productivity reports can be used to determine the employee's needs. The line managers should undergo regular training to acquire skills and best practices in coaching. This will assist them in identifying the specific job performance skills needed and developing specific measurable and performance objectives. The Ministry should strategically integrate job rotation programs into its organizational planning. Job rotation only focus on diversifying employees' skills but should also aim to align with the Ministry's broader goals and objectives. Before implementing job rotations, a thorough assessment of employees' readiness and current performance against organizational standards should be conducted. Utilizing performance data, such as productivity reports and feedback from managers and colleagues, can help identify specific areas of need and

improvement. Line managers responsible for overseeing job rotations should receive training in effective Mentorship and coaching techniques to support employees during transitions and development.

Areas for Further Study

From the findings, the R^2 was 83.3% which means that the independent variables (Training Programs and Job Rotation Program) explained employee productivity in Ministry of Energy, Kenya to an extent of 83.3%. There are other factors which are not captured by the proposed model in this study which are captured by 16.7% which is not explained. Another study can be carried out to determine other human resource development programs explaining 16.7% of human resource development programs in view of the study context and scope. This research did not address all the issues around the human resource development programs in any way and for that reason it is recommended that alternative study be done in other institutions for instance in the five ministries perhaps applying the same factors used in this study so as to find out whether the outcomes will be consistent in an unlike setting.

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