European Journal of Human Resource Management Studies
ISSN: 2601 - 1972
ISSN-L: 2601 - 1972
Available on-line at: http://www.oapub.org/soc

DOI: 10.46827/ejhrms.v6i1.1312 Volume 6 | Issue 1 | 2022

KNOWLEDGE CREATION PRACTICES AND EMPLOYEE PERFORMANCE IN SELECTED PUBLIC TECHNICAL VOCATIONAL EDUCATION AND TRAINING INSTITUTIONS IN KENYA

Kenneth Lwegado Endende[1],
Josephat Kwasira[2],
Felistus Makhamara[3i]
[1]PhD Candidate (Human Resource Management),
Jomo Kenyatta University of Agriculture and Technology,
Kenya
[2]Lecturer, Dr.,
Jomo Kenyatta University of Agriculture and Technology,
Kenya
[3]Lecturer, Dr.,
Kenyatta University,
Kenya

Abstract:
Employee performance in technical vocational education and training institutions has been found to be poor. Poor performance among employees is exhibited through a high level of incompetence and lack of innovativeness among Technical Vocational Education and Training Institutions (TVET) graduates. This culminates in problems of graduate employability owing to a lack of required skills required by employers. This poor performance may be ascribed in part to deterioration in individual employee performance as a consequence of ineffective skills amongst employees and inadequate knowledge management practices inside the institutions. Globally, despite the fact that there exist many knowledge management practices in higher educational institutions in many countries, there is strong agreement amongst academics and researchers that knowledge imparted through higher institutions of learning falls short in providing youth with the appropriate and relevant skills needed to succeed in the labour market. Higher education institutions as 'knowledge intensive' organizations thrive on the creation and dissemination of knowledge and therefore rely heavily on the performance of its employees to facilitate and continually generate and disseminate knowledge. The study sought to investigate the influence of Knowledge Creation Practices on Employee Performance in public technical vocational education and training institutions in Kenya. The study was anchored on Unified Model of Dynamic Knowledge Creation propounded by Nonaka, Toyama & Konno in the year 2000. The study used a positivism philosophy

[i] Correspondence: email lwegadoke@gmail.com

and a descriptive survey research design. The target population comprised of 11 national polytechnics in Kenya. The unit of inquiry comprised of 265 administrators comprised of both academic and non-academic heads of department. Primary data was collected using structured self-administered questionnaires. The reliability of the research instrument was ascertained using Cronbach Alpha. Validity was established using content and construct validity. Quantitative data were analysed using descriptive and inferential statistics with aid of SPSS 26. Descriptive analysis used includes; frequencies, mean, standard deviation and percentages while inferential analysis involved correlation analysis and multiple linear regression analysis to test the hypothesis at a significance level of 0.05. Regression analysis indicated that knowledge creation (P=0.000) has a significant influence on employee performance. The study concluded that knowledge creation practices significantly influence employee performance in TVETs. The study recommends that managers should create a better atmosphere in their institutions that encourage their employees to express new ideas. They also should apply effective ways to manage knowledge workers better by creating policies that inculcate new knowledge which consequently should go a long way in continously improving employee performance.

Keywords: knowledge management practices, knowledge creation practice, employee performance, technical vocational education and training institutions, national polytechnics

1. Introduction

Employee performance is an essential facet of modern-day human resources management. Higher Institutions of learning are always struggling to achieve more than their competition by employing many different strategies. Many strategies used such as knowledge management (KM) practices adopted by many institutions have proven to be ineffective and unreliable due to the dynamic external environments, leading to poor employee performance. The input of knowledge management to institutional performance is an essential aspect of growth and sustainability (Lyu, Zhou & Zhang, 2016). Evaluating an organization's capability to confer competitive advantage is accomplished through knowledge management (Deliu, 2020).

One avenue to be pursued by organizations in order to achieve employee performance is to manage knowledge efficiently and effectively. Raw data and information are not knowledge until HR comes up with strategies on how to process it into knowledge, disseminate it among employees and apply it. Organizations which manage knowledge have a competitive edge over those that don't (Najabat, 2015). From the Global perspective, the problem of how knowledge can be managed effectively among workers to boost employee performance has been marginalized (Sallis & Jones, 2013). The value resulting from effective knowledge management is quite enormous

(Najabat, 2015; Tseng & Lee, 2014), yet there are no measures in place to mitigate the risk of knowledge loss.

It is believed that globally, the higher the leadership's ability to inculcate creativity, teamwork and collaboration among employees, the more the performance (Gupta & Singh, 2014). Globally, extant studies on knowledge management are limited to ICT as a single hindering factor (Chang, Liao & Wu, 2017). Studies exist to show that knowledge management practices lead to improved employee performance. In fact, the process through which knowledge is created and enabled is critical in improving individual employee performance and that of entire institutions (Kremer, Villamor & Aguinis, 2019; Nair & Munusami, 2019). Some studies reveal there is lack of management of existing knowledge, especially in public service (The International Monetary Fund, 2016).

On the regional front, there are problems of gaps between Knowledge creation and implementation of the TVET agenda in many African countries. For example, the Presidential Task Team on Education in Nigeria (2011) observed that moving from Knowledge repository documents to on-the-ground implementation always raised serious challenges. In fact, the role of knowledge management practices to improve performance in Nigerian higher educational institutions is not clear. Also, the knowledge creation practices in Nigerian institutions of higher learning have not been documented in the literature. This suggests that there is no framework for knowledge creation in Nigerian institutions of higher learning. A study conducted by Krubu and Krub (2011) noted that, while faculty members in Nigerian universities were aware of knowledge management practices, there are no strategies or policies in place to drive knowledge creation, sharing and application.

On the local front, Kenya has placed a great emphasis on TVET as one of the vehicles for socio-economic and technological transformation, especially in the realization of her Vision 2030. But despite the progress made over the last decade in enhancing quality, retention, access, positive perception and gender parity in education and training, the Kenyan TVET sector continues to face many challenges. Among the challenges is a failure by the Kenyan Government to come up with clear policies that are aimed at promoting and pushing for the TVET agenda such as procurement and consumption of locally made goods and services (Cheruiyot & Munyi, 2019).

1.1 Statement of the Problem

The public service report of Kenya 2019 shows that the performance of individuals and departments has not yet reached the standard set. For instance, whenever an old experienced staff proceeds on leave, their functions come to a standstill until they report back. Furthermore, the older and more experienced workforce is reluctant to share the knowledge they possess for fear of losing their jobs to the younger team (Méda & Vendramin, 2017). Incidences of the older workforce retiring without passing their knowledge to the younger workforce have been witnessed which has forced the Government to engage retired staff on a contract basis (Reich, et al., 2014). Though the

government is investing in TVET in order to create1.3 million skilled workforces, but according to the Technical and Vocational Education and Training Authority Strategic Plan (2018-2022), the sector is still experiencing limitations in the overall HR capacity and retention, training tools, Research and Development and enhanced online management information systems among others. It is envisioned in Kenya's vision 2030, that Kenya wants to create a knowledge-based economy through knowledge-driven approaches, however, the problem of how knowledge can be managed effectively among workers to boost employee performance has been marginalized (Musyimi, 2021). Merchant and Van der Stede (2017) estimates that 1,000 workers could possibly incur up to USD 6 million per year in lost performance as a result of employees' failure to create new knowledge and manage existing knowledge. Regionally and locally, there are limited empirical studies linking knowledge management to employee performance within organizations (Naser, Al Shobaki & Amuna, 2016). Richards and Duxbury (2014) study focused on the influence of the knowledge acquisition process on knowledge applicability in public sector organizations within Canada. The study found that an individual that is already knowledgeable about a particular domain might be less likely to seek out new knowledge on that domain at the group level. Wong (2015) study on the role of knowledge management in business operations in USA highlighted key success factors for knowledge management, namely: knowledge leadership, culture, strong link of people to business imperative and technology infrastructure. Research findings indicate that only leadership and culture are statistically supported. The current study departs from reviewed studies as it was conceived and executed to investigate the influence of knowledge creation practice on employee performance in selected public technical and vocational education and training institutions in Kenya.

1.2 Specific Objective of the Study

To establish the influence of knowledge creation practice on employee performance in selected public Technical and Vocational Education and Training institutions in Kenya.

1.3 Hypothesis of the Study

H_0: Knowledge creation practice has no significant influence on employee performance in selected public Technical and Vocational Education and Training institutions in Kenya.

2. Literature Review

2.1 Theoretical Review

This study was guided by unified model of dynamic knowledge creation propounded by Nonaka, Toyama & Konno in the year 2000. According to the Unified dynamic knowledge creation model, Organizational knowledge creation needs continuous work and management to maintain and improve institutional knowledge. Nonaka and Toyama (2015) contend that knowledge sharing and transfer must occur after knowledge creation at the start of a firm's success. According to them, knowledge creation occurs

between tacit and explicit knowledge as the new knowledge emanates from the model. This theory addresses the need for management to continuously create its own knowledge bases in order to improve organizational performance. It also provides support for organizational development and hence, an appropriate theoretical framework since it recognizes various types of knowledge management practices. Von Krogh et al., (2013) aver that virtual, mental, or physical space where knowledge emanates should be continuously monitored. Information interpretation should address the location in support of knowledge creation and enhance the theoretical place where knowledge creation occurs. Knowledge falls into two categories: media and type of interaction (Nonaka et al., 2000). Nonaka and Toyama (2015) submit that media is categorized into a systemizing theoretical place of knowledge creation, visual, exercising, face-to-face, originating and dialoguing theoretical place of knowledge creation. Dialoguing and systemizing theoretical places of knowledge creation and knowledge sharing involve exercising, originating and mutual interactions.

The theoretical framework supporting employee-wide Knowledge gap identification should be emphasized in organizations to aid in problem-solving. Human resource managers should, therefore, guide the knowledge creation cycle and encourage the use of modern information technology practices, which in turn cultivates more innovative practices among employees (Ben-Menahem, Von Krogh, Erden & Schneider, 2016). This theory was relevant to the current study since it aided in investigating the influence of knowledge creation on employee performance. The model is thus appropriate for this study as it recognizes the dynamic nature of jobs and hence helps in creating knowledge which is the key resource whose use can achieve employee performance culminating in institutional performance. In this study, the theory provides a strategy for creating new vital knowledge and as an approach to better make use of existing learning resources by redeploying them into regions where the firm stands a chance of gaining. On the other hand, knowledge management improves the organization's capacity to shield it's imperative learning and skills from being lost or from being duplicated.

2.2 Conceptual Framework

The study conceptual framework consists of an independent variable: knowledge creation practice and the dependent variable is employee performance. Figure 1 represents the relationships between the independent and dependent variables.

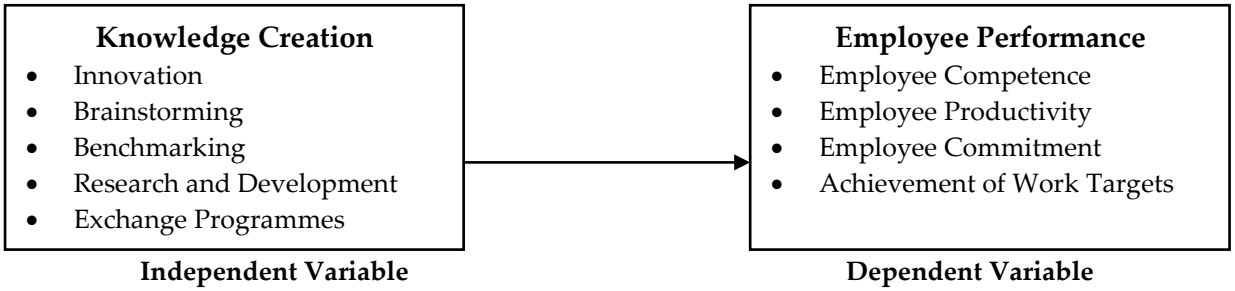

Figure 1: Conceptual Framework

The ability to create and use knowledge enables institutions to develop competitive advantages (Hunt & Arnett, 2016). The knowledge creation process allows firms to amplify knowledge embedded initially and transfer knowledge into operational activities to improve efficiency and create business value (Nonaka, Toyama & Nagata, 2020). Akhavan, Ramezan and Moghaddam (2013) called knowledge management the process with which the organizations create knowledge. Smith (2005) suggested that organizational routines have an important impact on knowledge creation capability in that they comprise a firm's climate that informally and tacitly defines how the firm develops and uses knowledge.

Knowledge creation is akin to exploration, in which individuals and teams generate new ideas and concepts, by combining existing knowledge. The creation of knowledge is closely tied to the innovation of products and services. According to Balestrine, Vargas and Fayard (2008), knowledge creation means the capability of a company as a whole to create new knowledge, disseminate it throughout the organization, and embody it in products, services, and systems. Von Krogh, Ichijo and Nonaka (2000) suggest that enabling knowledge creation elaborates the reasons and practical ways to support knowledge creation so that firms can create organizational knowledge consistently. Nonaka and Teece (2001) point out an organization as an entity that creates knowledge by virtue of its actions and interactions with its environment and new synthesis of existing firm-specific capabilities. Mobilization of internal and external resources should ensure that there is the generation of new knowledge that facilitate the organization to achieve its goals (Ben, 2022).

To ensure that the correct strategies are laid in place, the company may barnstorm and conduct research on the possible strategy to manage knowledge assets through the creation of an institutional knowledge bank (Chebet & Njuguna, 2020). The institutions may also identify the source of explicit knowledge and tacit knowledge by putting up policies aimed at creating and managing existing knowledge. According to Groop, Ketokivi, Gupta and Holmström (2017) knowledge creation includes identifying tacit from explicit ones and vice versa.

2.3 Empirical Studies

Voorberg, Bekkers, Timeus, Tonurist and Tummers (2017) studied how knowledge management helps in change management of an organization; they also sought to find out what influences business strategies to the firm's performance among other value-adding activities in order to increase organizational performance. The findings indicated that adequate management of skills and employee perception impacts institutional performance positively. The study concluded that employees and management are important for maintaining and controlling staff perception which has a positive impact on the productivity of the firm. Kruger and Johnson (2017) conducted a study on the effect of knowledge management on service delivery in South African insurance firms. The study findings show that knowledge management strategy to support business strategy is one of the ways to enhance knowledge creation in organizations. Strategies

can be achieved by empowering and motivating employees to be more innovative and creative.

Tseng (2016) study focused on the effect of the knowledge management model on the organization's capabilities. The study used open and closed-ended questionnaires to collect data on the effect of knowledge management models on the organization's capabilities. The findings revealed that the main effect of knowledge creation is sharing tacit knowledge via the process of socialization. For example, the organization may adopt conventional face-to-face interactions such as meetings and electronic communication channels such as forums or videoconferences. Leadership behaviors are considered essential to enhance knowledge creation in organizations. Leaders with vision provide the organization with clear direction in terms of guidelines and what types of knowledge to create. The study also revealed that organizations can enhance knowledge creation by cultivating organizational learning culture.

Mehralian, Nazari, and Ghasemzadeh (2018) study focused on how knowledge creation within firms affects the performance of pharmaceutical organizations. The study relied on secondary data and a survey research design. Data were analyzed using Structured Equation Measure. Findings of the study revealed that knowledge creation leads to the accumulation of a company's intellectual capacity by incorporating the mediating impact of intellectual capacity thus increasing organization performance. Cumari (2018) study focused on the influence of knowledge management practices on the performance of Kenya Bureau of Standard (KEBS). Study findings revealed that; KEBS employees obtain new knowledge from business partners, relies on formal document and sharing of knowledge orally in meetings, company encourages and motivates their employees to formal education and knowledge sharing is done in an official manner through project reports as ways of knowledge creation increases organizational performance.

Shannak, Maqableh and Tarhini (2017) conducted a study in Jordan to assess the role played by knowledge creation in the Jordan medical sector. The study findings revealed that socialization of external and internalization of internal factors helps workers to review and learn through learned lessons and informal meetings which play a role in the innovation of an organization. Malkawi and Rumman (2016) investigated the influence of knowledge management on product innovation in Small and Micro-enterprises (SMEs). Findings of the study revealed that knowledge creation through obtaining new knowledge from external sources such as expert networks and from business partners encourages innovation of new products since it encourages the exchange of knowledge with co-workers leading to the exchange of new ideas that encourages innovation. The study concluded that knowledge creation promotes innovation thus leading to an increase in overall organizational performance.

2.4 Knowledge Gaps

Despite the plethora of research advocating knowledge management, the empirical literature reviewed could not find studies that are directly related to the influence of

knowledge management practices on employee performance in technical vocational educational and training institutions. However, there are some studies that focus on institutional knowledge management which have relevance to the current study. Kigwilu (2014) examined the operations of community colleges in Kenya, Uganda and Tanzania. The evaluation sought to establish the strengths, weaknesses, achievements and challenges within community colleges in East Africa. However, the findings in the cited study did not unearth what really impinged employee performance in public TVET institutions in a particular country or region. The cited studies do not provide current information and they, therefore, do not present a clear picture of why the existing knowledge management practices fail to achieve what they are intended to achieve indicative that there could be factors responsible for poor employee performance in public TVETs.

3. Material and Methods

A descriptive survey research design was adopted for this study. According to the list obtained from the Technical and Vocational Education and Training Authority (2019), there are a total of 617 registered public technical vocational educational training institutions in Kenya. From the 617 registered TVETs, the study purposively sampled the entire 11 registered public national polytechnics. Therefore, the target population was 11 registered public national polytechnics. The unit of observation was 11 national polytechnics while the unit of inquiry was 70 management staff, 112 heads of academic departments and 117 heads of non-academic staff.

The study adopted a structured questionnaire to collect primary data from principals and heads of departments. Out of these 265 questionnaires, 191 questionnaires were successfully filled and handed back to the researcher which gave a 72.1% response rate. The pilot was done on 10% equivalent of the study sample (The Sigalagala National Polytechnic). Content validity was achieved by subjecting the data collection instruments to an evaluation by a group of 3HR officers 'who are experts so they provided their comments on the relevance of each item on the instruments. The construct validity was maintained by restricting the items to the conceptualization of the variables and ensuring that the indicator of a particular variable is within the same construct. This was achieved by factor analysis with help of SPSS version 26. Knowledge creation practices had an overall factor loading of 0.801 while employee performance had an overall factor loading of 0.842. To measure the reliability, the Cronbach Alpha technique was employed. Cronbach alpha coefficient was estimated from the response using Statistical Package for Social Scientist (SPSS). Knowledge creation practices yielded a Cronbach Alpha Coefficient of 0.909 while employee performance yielded an alpha of 0.930 therefore, the research instrument was reliable.

Data collected were analyzed through quantitative data analysis techniques in order to determine the extent to which the main study variables are related. The researcher used descriptive statistics that include a measure of central tendency; mean

and measure of variability; standard deviation. The study used inferential statistics such as correlation analysis and regression analysis to test null hypotheses. These statistical tests were at a 5% significance level (Greenland, Senn, Poole & Altman, 2016).

4. Results and Discussion

4.1 Descriptive Analysis

The study did seek to interrogate whether knowledge creation practices influence employee performance of TVETs. To describe a distribution of the scores of measurements using indices or statistics the study entailed the use of descriptive statistics to present findings using percentages.

Table 1: Descriptive Analysis for Knowledge Creation

Knowledge Creation (Valid N=191)	**5**	**4**	**3**	**2**	**1**	**Mean**	**S.D**
1. Employees learn something new from benchmarking experience.	64 (33.5)	82 (42.9)	5 (2.6)	25 (13.1)	15 (7.9)	3.8	1.3
2. Employees obtain a good extent of new knowledge from external sources.	10 (5.2)	86 (45)	30 (15.7)	55 (28.8)	10 (5.2)	3.2	1.1
3. Innovations are always encouraged and supported to create new knowledge.	53 (27.7)	103 (53.9)	15 (7.9)	14 (7.3)	6 (3.1)	4.0	1.0
4. Employees have a fast and early response to innovations to keep pace with new knowledge.	60 (31.4)	88 (46.1)	17 (8.9)	21 (11)	5 (2.6)	3.9	1.0
5. Employees hold various brainstorming sessions to come up with new ideas to improve performance.	82 (42.9)	84 (44)	5 (2.6)	10 (5.2)	10 (5.2)	4.1	1.1
6. Employees carry out regular research to discover improved ways of achieving employee performance	85 (44.5)	75 (39.3)	14 (7.3)	12 (6.3)	5 (2.6)	4.2	1.0
7. Exchange programmes are encouraged to foster the creation of new knowledge.	82 (42.9)	55 (28.8)	34 (17.8)	13 (6.8)	7 (3.7)	4.01	1.103
Note: 1-Strongly Disagree, 2-Disagree, fairly agree, 4-Agree, 5-Strongly Agree. ( ) –Percentage, S.D-Standard Deviation							

From Table 1 above, 7.9% (15) of the respondents strongly disagreed and a further 13.1% (25) disagreed that exchange programmes are encouraged to foster the creation of new knowledge. On the other hand, 2.6% (5) fairly disagreed, 42.9% (82) agreed while 33.5% (64) strongly agreed with the same assertion. A mean of 3.8 and a standard deviation of 1.3 imply that knowledge creation helps to learn something new from benchmarking experience. Moreover, 5.2% (10) of the respondents strongly disagreed and further 28.8% (55) disagreed that employees obtain a good extent of new knowledge from external Sources. On the other hand, 15.7% (30) fairly disagreed, 45% (86) agreed while 5.2% (10) strongly agreed with the same assertion. A mean of 3.2 and a standard deviation of 1.1 imply that employees obtain a good extent of new knowledge from external sources.

More so, 3.1% (6) of the respondents strongly disagreed and further 7.3% (14) disagreed that innovations are always encouraged and supported to create new knowledge.

On the other hand, 7.9% (15) fairly disagreed, 53.9% (103) agreed while 27.7% (53) strongly agreed with the same assertion. Besides, 2.6% (5) of the respondents strongly disagreed and a further 11% (21) disagreed that employees have a fast and early response to innovations to keep pace with new knowledge. On the other hand, 8.9% (17) fairly disagreed, 46.1% (88) agreed while 31.4% (60) strongly agreed with the same assertion. A mean of 3.9 and a standard deviation of 1.0 imply that employees have a fast and early response to innovations to keep pace with new knowledge. Additionally, 5.2% (10) of the respondents strongly disagreed and further 5.2% (10) disagreed that employees hold various brainstorming sessions to come up with new ideas to improve performance.

On the other hand, 2.6% (5) fairly disagreed, 44% (84) agreed while 42.9% (82) strongly agreed with the same assertion. A mean of 4.1 and a standard deviation of 1.1 imply that employees hold various brainstorming sessions to come up with new ideas to improve performance. Further, 2.6% (5) of the respondents strongly disagreed and further 6.3% (12) disagreed that employees carry out regular research to discover improved ways of achieving performance. On the other hand, 7.3% (14) fairly disagreed, 39.3% (75) agreed while 44.5% (85) strongly agreed with the same assertion. A mean of 4.2 and a standard deviation of 1.0 imply that employees carry out regular research to discover improved ways of achieving performance. Finally, 3.7% (7) of the respondents strongly disagreed and further 6.8% (13) disagreed that exchange programmes are encouraged to foster the creation of new knowledge. On the other hand, 17.8% (34) fairly disagreed, 28.8% (55) agreed while 42.9% (82) strongly agreed with the same assertion. A mean of 4.01 and standard deviation of 1.103 implies that exchange programmes are encouraged to foster the creation of new knowledge.

Clearly, the average level of knowledge creation practices according to the sampled respondents of TEVTs in Kenya was at 77.7% mean response (mean=3.8833, std. dev. =.59937) rated high as shown in Table 1.0. This implies that the level of knowledge creation practices of the majority of the public TVETs in Kenya seems not to be insignificantly small which is further supported by an insignificant standard deviation. The study findings correlate with Smith (2005) suggestion that organizational routines have an important impact on knowledge creation capability in that they comprise a firm's climate that informally and tacitly defines how the firm develops and uses knowledge.

The study findings deduced that knowledge creation practices play a critical role in the performance of agricultural cooperative societies. This is further supported by Gholami, Asli, Shirkouhi and Noruzy (2013) who showed that knowledge creation had a significant factor loading on knowledge management and productivity, performance, staff performance, innovation, work relationships, and customer satisfaction have significant factor loading on organizational performance. This is supported by Xu, Yang, Zhang and Guo (2021) who established that knowledge creation has a structural relationship with performance. Similarly, Choe (2014) established that with the use of

TCS, a firm can create, transfer and share diverse kinds of tacit knowledge among employees for the facilitation of process innovation.

Table 2: Descriptive Analysis for Employee Performance

Knowledge Creation	**5**	**4**	**3**	**2**	**1**	**Mean**	**S.D**
1. Employees learn something new from benchmarking experience.	64 (33.5)	82 (42.9)	5 (2.6)	25 (13.1)	15 (7.9)	3.8	1.3
2. Employees obtain a good extent of new knowledge from external sources	10 (5.2)	86 (45)	30 (15.7)	55 (28.8)	10 (5.2)	3.2	1.1
3. Innovations are always encouraged and supported to create new knowledge	53 (27.7)	103 (53.9)	15 (7.9)	14 (7.3)	6 (3.1)	4.0	1.0
4. Employees have a fast and early response to innovations to keep pace with new knowledge	60 (31.4)	88 (46.1)	17 (8.9)	21 (11)	5 (2.6)	3.9	1.0
5. Employees hold various brainstorming sessions to come up with new ideas to improve performance	82 (42.9)	84 (44)	5 (2.6)	10 (5.2)	10 (5.2)	4.1	1.1
6. Employees carry out regular research to discover improved ways of achieving sustainable performance	85 (44.5)	75 (39.3)	14 (7.3)	12 (6.3)	5 (2.6)	4.2	1.0
7. Exchange programmes are encouraged to foster the creation of new knowledge	82 (42.9)	55 (28.8)	34 (17.8)	13 (6.8)	7 (3.7)	4.01	1.103

From Table 2 above, 7.9% (15) of the respondents strongly disagreed and a further 23% (44) disagreed that knowledge management helps employees to learn within the organization and this helps in improving performance. On the other hand, 20.9% (40) fairly disagreed, 27.7% (53) agreed while 20.4% (39) strongly agreed with the same assertion. A mean of 3.3 and a standard deviation of 1.2 imply that knowledge management helps employees to learn within the organization and this helps in boosting performance. Further, 6.8% (13) of the respondents strongly disagreed and further 1% (2) disagreed that the use of knowledge management practices helps employees to share best practices thereby reducing the learning curve.

From Table 2 above, 17.8% (34) fairly disagreed, 37.2% (71) agreed while 37.2% (71) strongly agreed with the same assertion. A mean of 4.0 and a standard deviation of 1.1 imply that the use of knowledge management practices helps employees to share best practices thereby reducing the learning curve. Moreover, 7.3% (14) of the respondents strongly disagreed and further 9.9% (19) disagreed that new employees use knowledge banks and portals to learn quickly thereby improving productivity. On the other hand, 18.8% (36) fairly disagreed, 35.1% (67) agreed while 28.8% (55) strongly agreed with the same assertion. A mean of 3.7 and a standard deviation of 1.2 imply that new employees use knowledge banks and portals to learn quickly thereby improving productivity.

From Table 2 above, 9.9% (19) of the respondents strongly disagreed and a further 25.1% (48) disagreed that performance has improved after increased learning due to knowledge management practices. On the other hand, 18.3% (35) fairly disagreed, 24.1% (46) agreed while 22.5% (43) strongly agreed with the same assertion. A mean of 3.2 and

a standard deviation of 1.3 imply that performance has improved after increased learning due to knowledge management practices. Furthermore, 6.3% (12) of the respondents strongly disagreed and further 30.9% (59) disagreed that knowledge management helps to increase efficiency thereby improving performance. On the other hand, 20.9% (40) fairly disagreed, 18.8% (36) agreed while 23% (44) strongly agreed with the same assertion. A mean of 3.2 and a standard deviation of 1.3 imply that knowledge management helps to increase efficiency thereby improving performance.

More so, 3.7% (7) of the respondents strongly disagreed and further 16.8% (32) disagreed that there are well-defined knowledge management practices that help to improve performance by providing faster knowledge. On the other hand, 20.4% (39) fairly disagreed, 38.2% (73) agreed while 20.9% (40) strongly agreed with the same assertion. A mean of 3.6 and a standard deviation of 1.1 imply that there are well-defined knowledge management practices that help to improve performance by providing faster knowledge. Apparently, the average level of employee performance according to the sampled respondents of TEVTs in Kenya was at 69.9% mean response (mean = 3.49, std. dev. = .93042) rated high. This implies that the level of employee performance of the majority of the public TVETs in Kenya seems not to be insignificantly small though not all of them seem to perform well.

This expansion has created competition for the available manpower thus leading to increased talent turnover (Musinya, 2021). According Muma, Nzulwa, Ombui, Omondi and Charles (2019), 68% of public tertiary colleges in Kenya are experiencing low talent engagement as indicated by a high rate of talent turnover which hinders their competitive advantage. Similarly, records obtained from TVETA Central and personnel registries (2021) indicate that there is a high fluctuation of employee turnover between 2015 and 2019 with 106 employees leaving one institution for a period of a year. Only one public TVET recorded an employee turnover of 15. Steadman (2017) asserts in his baseline survey of local Kenyan TVET that staff satisfaction stood at 63.6% for teaching staff and 64% for non-teaching staff. The high rate of employee turnover and decreased levels of engagement lead to poor performance of the organizations, hampered continuity and succession, and reduced innovativeness as well as standards.

4.2 Inferential Analysis

The null hypothesis of the study sought to examine the significance of the causal and effect relationship between knowledge creation and sustainable employee performance. The researcher sought to test the following hypothesis;

H_0: Knowledge creation has no significant influence on sustainable employee performance in public technical and vocational education and training institutions in Kenya.

The study adopted the approach of Simple Linear Regression analysis and the findings were as shown in Table 3. The R correlation coefficient indicated that there is significant relationship between knowledge creation and employee performance ($r= 0.749$, p-value= $0.000< 0.05$). This implied that an increase in knowledge creation practices

would result in to increase in sustainable employee performance. The model (knowledge creation) was able to explain 56.1% of the variation in the employee performance in public technical and vocational education and training institutions in Kenya as indicated by the R Square = 0.561 as shown in the model summary of Table 3.

Table 3: Knowledge Creation and Employee Performance Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.749[a]	.561	.559	.65880
a. Predictors: (Constant), Knowledge creation b. Dependent Variable: Sustainable employee Performance				

The ANOVA test results from Table 4 were F (1,190) = 241.715, P = 0.000< 0.05; an indication that the Simple Linear Regression model was a good fit for our dataset. The results indicate that the significance of the F is 0.00 which is less than 0.05, this, therefore, implies that the regression model statistically significantly predicts the outcome variable and is, therefore, a good fit for the data. This is an indication that there exists a significant relationship between knowledge creation and employee performance among public technical and vocational education and training institutions in Kenya.

Table 4: Knowledge Creation and Employee Performance Model ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	104.909	1	104.909	241.715	.000[b]
	Residual	82.030	189	.434		
	Total	186.939	190			
a. Dependent Variable: Sustainable Employee Performance						
b. Predictors: (Constant), Knowledge Creation						

The regression coefficient results showed that β= 1.240, t =15.547, p=0.000<0.05; hence knowledge creation had a statistically significant influence on the sustainable employee Performance in public technical and vocational education and training institutions in Kenya. Knowledge creation had a positive standardized beta coefficient = 1.240 as shown in the coefficients results of Table 5; this implies that a unit improvement in knowledge creation was likely to result in an improvement in employee performance in public technical and vocational education and training institutions in Kenya by 1.240 units.

Table 5: Knowledge Creation and Employee Performance Model Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		β	Std. Error	Beta		
1	(Constant)	-1.320	.313		-4.212	.000
	Knowledge creation	1.240	.080	.749	15.547	.000
a. Dependent Variable: Employee Performance						

To predict the sustainable employee performance of TVETs when given the level of knowledge creation, the study suggests the use of the following model;

Employee Performance = -1.320 + 1.240 Knowledge creation

The results indicated that there positive and significant correlation between knowledge creation and employee performance ($r = 0.749$, $p = 0.000$). Simple linear regression indicated there is a direct significant influence of knowledge creation on employee performance as it significantly accounted for 56.1% variation. Linear regression unstandardized coefficient indicated that when other variables in the model are controlled, a unit change in knowledge creation is likely to result in an improvement in employee performance by 1.240 units. This influence was also stated by a t-value of 15.547 which implies that the standard error associated with the parameter is less than the influence of the parameter. Therefore, there is sufficient evidence to reject the null hypothesis and accept that for each increase in knowledge creation practices; there is 1.240 units increase in employee performance of TVETs.

The above findings demonstrate that employee performance is positively influenced by knowledge creation. The study findings affirm previous findings that creation influence was significant meaning knowledge creation was very important to achieve organizational competitiveness. The knowledge created should be used for decision-making concerning products, service delivery and process improvement hence organizational competitiveness. Further, the coefficient is showing a positive influence and a unitary change in knowledge creation leads to 0.464 units of change in institutional performance in the same direction of change as knowledge creation.

Malkawi and Rumman (2016) revealed that knowledge creation through obtaining of new knowledge from external sources such as expert networks and from business partners encourages innovation of new products since it encourages the exchange of knowledge with co-workers leading to the exchange of new ideas that encourage innovation. The study concluded that knowledge creation promotes innovation thus leading to an increase in overall institutional performance. Cumari (2018) revealed that; KEBS employees obtain new knowledge from business partners, relies on formal document and sharing of knowledge orally in meetings, company encourages and motivates their employees to formal education and knowledge sharing is done in an official manner through project reports as ways of knowledge creation increases organizational performance.

Kruger and Johnson (2017) conducted a study on the effect of knowledge management on service delivery in South African insurance firms. The study findings show that knowledge management strategy to support business strategy is one of the ways to enhance knowledge creation in organizations. Strategies can be adopted through innovation. Tseng (2016) also studied the effect of the knowledge management model on the organization's capabilities. Leadership behaviors are considered essential to enhance knowledge creation in organizations. Leaders with vision provide the organization with clear direction in terms of guidelines and what types of knowledge to create. The study also revealed that organizations can enhance knowledge creation by cultivating organizational learning culture. Mehralian, Nazari, and Ghasemzadeh (2018) conducted

a study to examine how knowledge creation within a firm affects the performance of pharmaceutical organizations. The findings of the study revealed that knowledge creation leads to the accumulation of a company's intellectual capacity by incorporating the mediating impact of intellectual capacity thus increasing organization performance.

5. Recommendations

The positive association between knowledge creation and employee performance and the rejection of the null hypothesis shows that knowledge creation is very essential in improving employee performance. Indeed, on the basis of this research, managers have to devote efforts in order to improve knowledge creation practices by reinforcing the socialization, externalization, combination and internalization processes and boosting effective institutional creativity within TVETs. Thus, the study recommended that in order to achieve employee performance; managers have to create a better atmosphere in their institutions and encourage their employees to express new ideas. They also should apply effective ways to manage knowledge workers better. In this way, managers can create new knowledge and offer better services to their various stakeholders and consequently improve the overall employee performance.

6. Conclusion

The objective of the study was to examine the influence of knowledge creation practices on employee performance in public technical and vocational education and training institutions in Kenya. Averagely, the level of knowledge creation in the public TVETs in Kenya is indicated by an average mean of 3.88. An implication is that exchange programmes are encouraged to foster the creation of new knowledge, employees carry out regular research to discover improved ways of achieving performance and employees hold various brainstorming sessions to come up with new ideas to improve performance. The study established that knowledge creation had a significantly strong positive relationship with employee performance in public technical and vocational education and training institutions in Kenya since a unit improvement in knowledge creation was likely to result in an improvement in employee performance in public technical and vocational education and training institutions in Kenya. Therefore, the study concluded that knowledge creation has a significant positive influence on employee performance in public technical and vocational education and training institutions in Kenya.

Acknowledgements
First and foremost, I register my full appreciation to my supervisors, Dr. Josephat Kwasira and Dr. Felistus Hilda Makhamara for their unending guidance, encouragement, support and more so for their unfailing availability in supervising this work. I am also greatly indebted to my lecturers and staff of the School of Human

Resource Management and Entrepreneurship. Many thanks also to Prof. Rambo, University of Nairobi (UoN) for his guidance.

Conflict of Interest Statement

The authors declare no conflicts of interest.

About the Authors

Kenneth Lwegado Endende is a Human Resource Management PhD Candidate at the school of entrepreneurship, technology, leadership and management, Jomo Kenyatta University of Agriculture and Technology, Kenya.

Dr. Josephat Kwasira is a lecturer of human resource management at the school of entrepreneurship, technology, leadership and management, Jomo Kenyatta University of Agriculture and Technology, Kenya.

Dr. Felistus Makhamara is a lecturer at the Department of Human Resource Management in the School of Business at Kenyatta University, Kenya.

References

Akhavan, P., Ramezan, M., & Moghaddam, J. Y. (2013). Examining the role of ethics in knowledge management process: Case study: An industrial organization. *Journal of Knowledge-Based Innovation in China*. *39*(10), 8899-8908.

Balestrin, A., Vargas, L. M., & Fayard, P. (2008). Knowledge creation in small-firm network. *Journal of knowledge management*. *2*(3), 47-62.

Ben, A. (2022). Effectiveness in Knowledge Sharing Practices in Governmental Service Firms: The Effect of Organizational Characteristics on Interdepartmental Knowledge Sharing. *European Journal of Information and Knowledge Management*, *1*(1), 21-32.

Ben-Menahem, S. M., Von Krogh, G., Erden, Z., & Schneider, A. (2016). Coordinating knowledge creation in multidisciplinary teams: Evidence from early-stage drug discovery. *Academy of Management Journal*, *59*(4), 1308-1338.

Chang, W. J., Liao, S. H., & Wu, T. T. (2017). Relationships among organizational culture, knowledge sharing, and innovation capability: a case of the automobile industry in Taiwan. *Knowledge Management Research & Practice*, *15*(3), 471-490.

Chebet, D., & Njuguna, R. (2020). Knowledge management practices and service delivery at Oxfam International, Kenya. *International Academic Journal of Human Resource and Business Administration*, *3*(9), 55-74.

Cheruiyot, S. K., & Munyi, F. W. (2019). Gender Inclusion in TVET: An Examination of Sustainable Interventions in Selected TVET Institutions in Kenya. *International Journal of Science, technology, education and management Research*, *4*(III), 39-55.

Choe, J. M. (2014). The product and process innovations through the strategic alignment of knowledge management. *Asian Journal of Technology Innovation*, *22*(1), 1-15.

Cumari, G. M. (2018). *Knowledge Management Practices and Performance of Kenya Bureau of Standards* (Doctoral dissertation, University of Nairobi).

Deliu, D. (2020). The Intertwining between Corporate Governance and Knowledge Management in the Time of Covid-19 - A Framework. *Journal of Emerging Trends in Marketing and Management*, *1*(1),93-110.

Gholami, M. H., Asli, M. N., Nazari-Shirkouhi, S., & Noruzy, A. (2013). Investigating the influence of knowledge management practices on organizational performance: an empirical study. *Acta Polytechnica Hungarica*, *10*(2), 205-216.

Greenland, S., Senn, S. J., Rothman, K. J., Carlin, J. B., Poole, C., Goodman, S. N., & Altman, D. G. (2016). Statistical tests, P values, confidence intervals, and power: a guide to misinterpretations. *European journal of epidemiology*, *31*(4), 337-350.

Groop, J., Ketokivi, M., Gupta, M., & Holmström, J. (2017). Improving home care: Knowledge creation through engagement and design. *Journal of operations management*, *53(3)*, 9-22.

Gupta, V., & Singh, S. (2014). Psychological capital as a mediator of the relationship between leadership and creative performance behaviors: Empirical evidence from the Indian R&D sector. *The International Journal of Human Resource Management*, *25*(10), 1373-1394.

Kigwilu, P. C. (2014). *Determinants of effective implementation of Artisan and Craft curriculum in Catholic sponsored community colleges in Nairobi region, Kenya* (Doctoral dissertation, The Catholic University of Eastern Africa).

Kremer, H., Villamor, I., & Aguinis, H. (2019). Innovation leadership: Best-practice recommendations for promoting employee creativity, voice, and knowledge sharing. *Business Horizons*, *62*(1), 65-74.

Krubu, D. E., & Krub, S. G. (2011). Towards sustainable development: An assessment of knowledge management initiatives in Nigerian universities. *J Sustain Dev Africa*, *13*(3), 165-177.

Kruger, C. N., & Johnson, R. D. (2017). Information management as an enabler of knowledge management maturity: A South African perspective. *International journal of information management*, *30*(1), 57-67

Lyu, H., Zhou, Z., & Zhang, Z. (2016). Measuring knowledge management performance in organizations: an integrative framework of balanced scorecard and fuzzy evaluation. *Information*, *7*(2), 29-33.

Malkawi, M. S., & Rumman, A. A. H. A. (2016). Knowledge management capabilities and its impact on product innovation in SME's. *International Business Research*, *9*(5), 76-85.

Méda, D., & Vendramin, P. (2017). The Coexistence of Generations at Work. In *Reinventing Work in Europe* (pp. 177-219). Palgrave Macmillan, Cham.

Mehralian, G., Nazari, J. A., & Ghasemzadeh, P. (2018). The effects of knowledge creation process on organizational performance using the BSC approach: the mediating role of intellectual capital. *Journal of Knowledge Management*. *52*(1), 95-121.

Merchant, K. A., & Van der Stede, W. A. (2017). *Management control systems: performance measurement, evaluation and incentives*. Pearson education.

Muma, M., Nzulwa, J., Ombui, K., Odhiambo, R., Wekesa, S., Omondi, M., ... & Charles, M. (2019). Influence of recruitment strategies on retention of employees in universities in Kenya. *International Journal of Social Science and Humanities Research*, *7*(2), 28-55.

Musinya, F. D. (2021). An Investigation of The Relationship Between Work Environment Practices and Employee Retention in International Non-Governmental Organizations in Nairobi County, Kenya. *Human Resource and Leadership Journal*, *6*(1), 16-48.

Musyimi, P. (2011). Universities and economic development in Africa case study: Kenya and University of Nairobi.

Nair, B. V., & Munusami, C. (2019). Knowledge management practices: An exploratory study at the Malaysian higher education institutions. *Journal of Research in Innovative Teaching & Learning*. *22*(3), 447-467.

Najabat, A. (2015). Declining Employee Performance in Public Sector Organizations. An Etiological Study of Public Sector Organizations in Pakistani. *International Journal of Politics and good Governance*. *21(3)*, 16-23.

Naser, S. S. A., Al Shobaki, M. J., & Amuna, Y. M. A. (2016). Knowledge Management Maturity in Universities and its Impact on Performance Excellence - A Comparative study. *Journal of Scientific and Engineering Research*, *14*(3), 293-306.

Nonaka, I., & Teece, D. J. (Eds.). (2001). *Managing industrial knowledge: creation, transfer and utilization*. Sage.

Nonaka, I., & Toyama, R. (2015). The knowledge-creating theory revisited: knowledge creation as a synthesizing process. In *The essentials of knowledge management* (pp. 95-110). Palgrave Macmillan, London.

Nonaka, I., Kodama, M., Hirose, A., & Kohlbacher, F. (2014). Dynamic Fractal Organizations for Promoting Knowledge-Based Transformation–A New Paradigm for Organizational Theory. *European Management Journal*, 32 (7), 137-146.

Nonaka, I., Toyama, R., & Konno, N. (2000). SECI, Ba and leadership: a unified model of dynamic knowledge creation. *Long range planning*, *33*(1), 5-34.

Richards, G. S., & Duxbury, L. (2015). Work-group knowledge acquisition in knowledge intensive public-sector organizations: An exploratory study. *Journal of Public Administration Research and Theory*, *25*(4), 1247-1277.

Sallis, E., & Jones, G. (2013). *Knowledge management in education: Enhancing learning & education*. Routledge.

Shannak, R., Maqableh, M., & Tarhini, A. (2017). The impact of knowledge management on job performance in higher education: The case of the University of Jordan. *Journal of Enterprise Information Management*. *3*(4), 20-33.

Smith, K. G., Collins, C. J., & Clark, K. D. (2005). Existing knowledge, knowledge creation capability, and the rate of new product introduction in high-technology firms. *Academy of management Journal*, *48*(2), 346-357.

Tseng, S. M., & Lee, P. S. (2014). The effect of knowledge management capability and dynamic capability on organizational performance. *Journal of enterprise information management*.

Von Krogh, G., Ichijo, K., & Nonaka, I. (2000). *Enabling knowledge creation: How to unlock the mystery of tacit knowledge and release the power of innovation*. Oxford University Press on Demand.

Von Krogh, G., Takeuchi, H., Kase, K., & González, C. (2013). *Towards Organizational Knowledge: The Pioneering Work of Ikujiro Nonaka Houndmills*, Hampshire: Palgrave Macmillan.

Voorberg, W., Bekkers, V., Timeus, K., Tonurist, P., & Tummers, L. (2017). Changing public service delivery: learning in co-creation. *Policy and Society*, *36*(2), 178-194.

Wong, K. Y. (2015). Critical success factors for implementing knowledge management in small and medium enterprises. *Industrial management & Data systems*.

Xu, T., Yang, J., Zhang, F., & Guo, W. (2021). Interfirm coopetition, interfirm knowledge creation, and collaborative innovation performance: The moderating roles of environmental competitiveness and dysfunctional competition. *Industrial Marketing Management*, *99*, 123-135.