

Moderating Effect of ICT Competence on the Association between Work-Life Conflict and Job Performance: Evidence from Academic Staff in Public Universities in Kenya

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Abstract:

Job performance is low in many organizations and economic sectors the world over. This is so even in organizations where there are huge investments in procuring ICT infrastructure and capacity building of staff in use of ICT in their job processes. Additionally, work-life conflict has been on the rise and has had a negative association with employee performance. Therefore, this study sought to investigate the moderating effect of ICT competence on the association between work-life conflict and job performance. The target population was the academic staff in public universities in Kenya, which was made up of professors, senior lecturers, lecturers and assistant lecturers, and from which a stratified random sample of 398 was collected. Research design was descriptive survey with self-administered questionnaire being used to collect primary data. Hierarchical linear regression analysis was carried out to evaluate the moderating effect. It was established that work-life conflict indeed had a statistically significant association with job performance. It was also established that ICT competence had a statistically significant moderating effect on the association between work-life and job performance. It was further established that, at ICT competence of 4.126 on a scale of 1 to 5, the negative association between work-life conflict and job performance was reversed to a positive one. Consequently, this study recommends that public universities invest in building academic staff ICT competences for reduced work-life conflict and ultimately, higher job performance. Academic staff can also take personal initiatives to acquire necessary ICT skills and positive attitude towards its use for better job performance.

Keywords: Work-life conflict, ICT competence, Academic staff, Job performance

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I. Background

A good level of job performance is key to the overall success of an organization and ultimately, economic sector. This can be inferred from an argument by Tarmidi and Arsajah (2019), that organizational performance is indeed the sum total of individual employee job performances. Job performance can be defined as the extent to which goals and objectives of an organization are achieved by an employee. In addition, job performance is necessary because an organization exists and fulfills its obligations to stakeholders depending on its overall performance (Molefe, 2010). The importance of job performance in the dynamic environments where organizations carry out their operations has risen in the recent past (Ivanov & Avasilcăi, 2014). This rise in importance that is attached to job performance has led to managers appreciating the need to come up with various interventions for its improvement (Ivanov & Avasilcăi, 2014). Among the many factors that influence job performance, work-life conflict has featured prominently. For that reason, Akkas et al. (2015) observed that work-life conflict is attracting a lot of attention among organizational managers the world over due to its influence on employee wellbeing hence their job performance.

Cazan et al. (2019) further argues that there exists a permeable boundary between work life and out-of-work life which allows interferences and which may be positive or negative on either domain of the employee existential experiences. The term work-life is used in this and similar discussions because of the polar alignment between work life and the out-of-work life of an employee (Brummelhuis & Bakker, 2012). Research has shown that work and non-work domains interfere with each other and that these interferences lead to work-life balance or imbalance (Bauld et al., 2009). This view implies that whatever affects an employee at work also affects the way they perform their roles at home and vice versa.

According to Akkas et al. (2015), work-life conflict, which is indeed a source of stress for an employee, has three dimensions which are time-based conflict, strain-based conflict and behaviour-based conflict. However, Oren and Levin (2017) add resource-based conflict to the three to make four dimensions. The existence of these four conflicts between the work life and the out-of-work life of an employee influences their ability to perform optimally in their jobs. Even so, at some low levels, the effect of work-life conflict on job performance can be positive and therefore a motivation for enhanced job performance. In this regard, Hans Selye, draws a difference between eustress and distress where he argues that eustress (low levels of stress) is the experience that drives and inspires employees to achieve their life goals which results in them succeeding even in potentially challenging endeavours (Deshpande & Chopra, 2007). Therefore, at low levels, work-life conflict is positive and can lead to better job performance which is a key policy goal for organizational managers.

On the other hand, Information and Communication Technology (ICT) refers to technologies that facilitate access to and ease communication and may include phones, computers and internet connectivity among others (Ratheeswari, 2018). Therefore, ICT competence points to the ability of employees to efficiently and effectively use ICT devices and infrastructure in performance of their job tasks. Abrahams (2010) argues that universities and colleges continue to face an expectation from stakeholders that digital technology becomes part of the employee competence which would lead to better delivery of core mandates of the institutions of higher learning. According to Baskaran et al. (2020), technology adoption helps in improving job performance and this is achieved through reduction of human error in addition to increasing speed of communication in an organization. Adoption of ICT can therefore enable an employee discharge their duties with ease. This alteration of a relationship between two variables, that leads to strengthening, weakening or reversing, by another variable is referred to as moderating effect. It is worth mentioning that in many organizations, sectors and countries the world over, there has been heavy investment in ICT infrastructure. A case in point is that in the Kenyan budget of 2024/2025 financial year, the ICT sector was allocated USD.125.3 million (Sehloho, 2024).

In nature, a moderating variable alters the direction, strength and/or nature of a relationship between predictor variables and the response variable (Andersson et al., 2014). An interaction between independent variables and the dependent variable is deemed to have occurred when the values assumed by the dependent variable varies with different values of the moderating variable (Andersson et al., 2014). A moderating variable can therefore strengthen, weaken or dissipate a relationship between an independent and a dependent variable (Murphy & Aguinis, 2022). Therefore, this study sought to establish whether after investment are made in building ICT infrastructure in institutions of higher learning, there could be the added benefit of reduced work-life conflict for enhanced job performance.

Teeroovengadum et al. (2017) argue that a good understanding of ICT in teaching can inform strategies for its popularization which may lead to better learning outcomes. Teeroovengadum et al., (2017) argue that low ICT competence on the part of an instructor leads to inability to use it and this inability affects their job performance. Weerasekara and Thilakarathne (2019) further argue that ICT competence can ease performance of job tasks since it can overcome time, geographical and physical barriers. Some key dimensions of ICT competence are ICT knowledge, skills on the use of ICT and attitude towards use of ICT in organizational processes. According to Gilanie (2022), knowledge is the cognition or awareness of something. Knowledge empowers an employee to discharge their duties with ease. Therefore, ICT knowledge allows an employee to make informed choices on appropriate devices, platforms and applications to perform a given task.

On the other hand, a skill is the learned ability to perform a particular task with ease and minimum expenditure of time and/or energy (Zhang, 2019). On the part of the academic staff, possession of ICT skills facilitates use of digital devices and ICT infrastructure to make work easier and instructional sessions more interactive (Sehrawat & Parmar, 2020). On the other hand, attitude is a relatively permanent evaluation of something as either good or bad based on cognitive and behavioral information that a person possesses (Bizer et al., 2022). With regard to attitude towards use of ICT if performance of job tasks, a positive attitude makes an employee adopt technology in discharging assigned duties while a negative attitude would make then shun ICT use. A positive attitude may lead to better job performance by the academic staff and the converse is also true.

1.1 Problem statement

Acceptable levels of job performance are key to organizational as well as overall sectoral performance. One key negative influence of job performance is work-life conflict, which has received considerable attention among scholars and industry players in the recent past. Many of the interventions that have been proposed have not yielded the desired improvement in job performance. On the other hand, huge investments in ICT have been ongoing in organizations in which work-life conflict is being experienced. This study sought to explore whether these utilization of the ICT investments, by employees having the requisite competencies, have an incidental benefit of reduced work-life conflict which would result in improvement in job performance.

1.2 Research Objective

The objective of this study was to evaluate the moderating effect of ICT competence on the association between work-life conflict and job performance of academic staff in public universities in Kenya.

1.3 Hypothesis

H₀: ICT competence does not have a statistically significant moderating effect on the association between work-life conflict and job performance of academic staff in public universities in Kenya.

II. Literature Review

The Systems theory was used in this study to explain the relationship between work-life conflict and job performance. One of the early developers of the Systems theory was Von Bertalanffy (Friedman & Allen, 2014). A Systems perspective, seeks to understand not just the entity per se, but in its relationship and interaction with others and the environment as well. Under Systems approach, the employee is seen as an open system where work-life and out-of-work life dimensions interact with each other (Setyanto, 2017). Workers have out-of-work obligations that may require attention during working time and the same can also be said of employees having work commitments that require attention outside working hours (Brummelhuis & Bakker, 2012). This is especially so for employees who occupy senior management positions whose decisions and guidance are needed for seamless running of organizations. Siddiqui (2020) agrees with that and argues that employees have an out-of-work dimension which affects their job performance negatively. The author (Siddiqui, 2020) is of the opinion that this effect is mainly due to the attention needed by other personal relationships outside the workplace which affects their concentration and hence their job performance. Ashfaq et al. (2013) established that employee performance was affected negatively by work-life conflict as it was difficult for employees to manage time demands from their work and personal (out-of-work) lives.

In addition, Ratheeswari (2018) argues that during this current ICT age, the boundary between work life and family life has become blurred. This has led to employees continuing to discharge both work tasks outside working hours and family obligations during working hours. Therefore, interventions that can enable an employee to discharge both their work duties as well as their family duties should be implemented for enhanced job performance. In addition, Karihe (2016) demonstrated that transferring workers from their work stations reduces their ability to perform their jobs well due to the negative effect of the transfer on their families. This is because the workers spend more time away from their families than their families are used to. On the contrary, Hussain et al. (2012) established that work-life conflict had a positive influence on job performance. This can be justified on the basis of work-life conflict being at low levels in which the conflict provides a drive for higher job performance (Deshpande & Chopra, 2007). Additionally, job performance depends on the competencies that the employee has acquired (Ivanov & Avasilcăi, 2014). It can therefore be argued that employee's competences in performing given job tasks should be considered alongside their job performance (Molefe, 2010). This double view of job performance was given due consideration when its measurement was being done and specifically so, the teaching dimension.

2.1 Operational Framework

From literature reviewed, this study was operationalized as shown in Figure 1. The independent variable (work-life conflict) was measured using time-based conflict, strain-based conflict, behaviour-based conflict and resource-based conflict. The dependent variable (job performance) was measured using teaching, administration and responsibilities, community engagement and other contributions, and research. This approach to job performance measurement is the same one that is adopted by the Commission for University Education for hiring and promotion of academic staff (Commission for University Education [CUE], 2014). In addition, measurement of the moderating variable (ICT competence) was done using ICT knowledge, ICT skills and attitude towards use ICT in performance of job tasks. These sets of measures were considered appropriate and sufficient to quantify their respective variables.

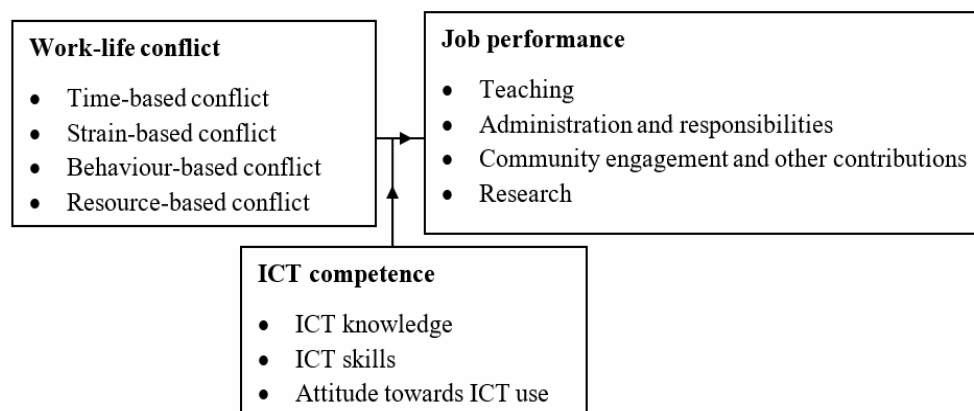


Figure 1: Operational Framework

III. Methodology

A realist view of existence was adopted in this study where objects are deemed to have an existence that is independent of human perception and experience (Ababneh, 2020). A researcher therefore only needs to develop a valid and reliable tool so as to objectively quantify constructs under investigation. Additionally, a positivist approach to knowledge development was adopted where research outcomes are law-like generalizations similar to those from the physical sciences (Sheppard, 2020). Research design was descriptive cross-sectional survey. This approach was adopted since constructs were measured as they existed naturally without any manipulation and data collection was one-off. A representative sample was picked for purposes of data collection. The findings were later generalized to the whole target population which was the 14,013 members of academic staff in public universities in Kenya. It was made up of professors, senior lecturers, lecturers and assistant lecturers.

Stratified random sampling method was used to pick 389 respondents as determined by Taro Yamane formula for finite population and on which self-administered questionnaires were used to collect primary data. Data collection tool was piloted to ascertain its reliability for which Cronbach's Alpha Coefficient (α) was used. The validity of research tool was discussed with experts. To achieve the research objectives, descriptive and inferential analyses were done on the data using SPSS-Version 26. Before inferential analysis could be done, data was tested for fulfillment of linear regression assumptions. These assumptions were that there exists a linear relationship between independent variable and the dependent variable as well as the existence of a linear relationship between the moderating and the dependent variables. This test was done through computation of Pearson correlation coefficient (r) between the variables.

The other assumption was that data of the dependent variable was normally distributed which was done through doing a Q-Q plot of job performance data. Normality of distribution of a data of the dependent variable is key for parametric methods to be applied and should be done early enough during data analysis (Gissane, 2016). The other assumption was that the independent variable data was homoscedastic which was done by use of Breusch-Pagan-Godfrey test. Testing for homoscedasticity was logically done after linear regression models were developed. Hypothesis testing was done at 95% level of confidence.

The simple linear regression model was;

$$Y = \beta_0 + \beta_1 \text{Work life conflict} + \varepsilon \text{-----(i)}$$

Y = job performance

β_0 =Autonomous job performance

β_1 =Rate of change of job performance with respect to work-life conflict

ε =Error term

The moderated linear regression analytical model was;

$$Y_m = \beta_{0m} + \beta_1 \text{Work-life conflict} + \beta_2 \text{ICT competence} + \beta_3 \text{Work life conflict *ICT competence} + \varepsilon \text{-----(ii)}$$

Where,

Y_m = moderated job performance

β_{0m} = Moderated autonomous job performance

β_1 =Rate of change of job performance with respect to work-life conflict

β_2 = Rate of change of job performance with respect to ICT competence

β_3 = Rate of change of job performance with respect to the interaction term (work-life conflict *ICT competence)

ε =Error term

Hierarchical linear regression analysis was carried out on the data to determine the presence, strength and nature of the moderating effect. This process involved developing a linear regression model between work-life conflict as a predictor variable and job performance as the response variable, then a model of work-life conflict and ICT competence as predictors while job performance remained the response variable and lastly, a model of work-life conflict, ICT competence and the interaction term between work-life conflict and ICT competence (work-life conflict*ICT competence) as predictors while job performance was retained as the response variable. Inference of moderation effect and its statistical significance was made from change in coefficient of determination (ΔR^2) and change in F statistic (ΔF) in the last multiple linear regression model and the statistical significance of the change.

All ethical aspects of research were given due consideration. These aspects included informed consent, anonymity and confidentiality. For that reason, during data collection, respondents were informed of their freedom to withdraw from the study at any time, freedom to leave any question unanswered if they so choose and also given the assurance that data collected would be used for academic purposes only. In addition, the broad study of which this paper is part, underwent ethical review by Dedan Kimathi University of Technology Scientific Ethics Review Committee (DeKUTSERC) before commencement of data collection, including the pilot study. An application was also done to the National Commission for Science Technology & Innovation (NACOSTI) for authorization to collect data from public institutions.

IV. Results and Discussion

Upon piloting, the tool was found to have a Cronbach's Alpha Coefficient (α) of 0.805>0.700 which was acceptable therefore the tool was ready for use in the main study (George & Mallery, 2003). Out of the 389 questionnaires that were issued to respondents, 299 were filled and returned translating to a response rate of 76.86%. This was an acceptable response rate in social sciences as argued by Ali et al., (2021). Descriptive analysis was carried out on the variables of this study and results were as summarized in Table 1.

As shown in Table 1, work-life conflict had a mean of 3.652 and a standard deviation of 0.857. The first quartile was at 3.000 while the third quartile was at 4.250 and therefore, the interquartile range was 1.250. Notably, the data was concentrated around the mean with 50% of it being between 3.000 and 4.250. In addition, job performance was found to have a mean of 3.480 and a standard deviation of 0.547. The first quartile was at 3.167 while the third one was at 3.833 and therefore the interquartile range was 0.667. It can be seen that job performance data was also concentrated around the mean with 50% being between 3.167 and 3.833. ICT competence had a mean of 3.632 and a standard deviation of 0.692. The first quartile was at 3.333 while the third one was at 4.333 and therefore the interquartile range was 1.000. With relatively small values of standard deviation, it was evident that there was agreement among respondents in their responses to statements used to measure the study variables. This agreement was to be expected since the target population was relatively homogeneous.

Table 1: Descriptive Statistics for Study Variables

Variable	Descriptive Statistics				
	Mean	Standard Deviation	First Quartile	Third Quartile	Interquartile Range
Work-life Conflict	3.652	0.857	3.000	4.250	1.250
Job Performance	3.480	0.547	3.167	3.833	0.667
ICT Competence	3.632	0.692	3.333	4.333	1.000

Before inferential analysis could be done, data was analyzed for fulfillment of linear regression assumptions. For that reason, a Q-Q plot of job performance data was done to test for assumption of normality. The plot was as in Figure 2.

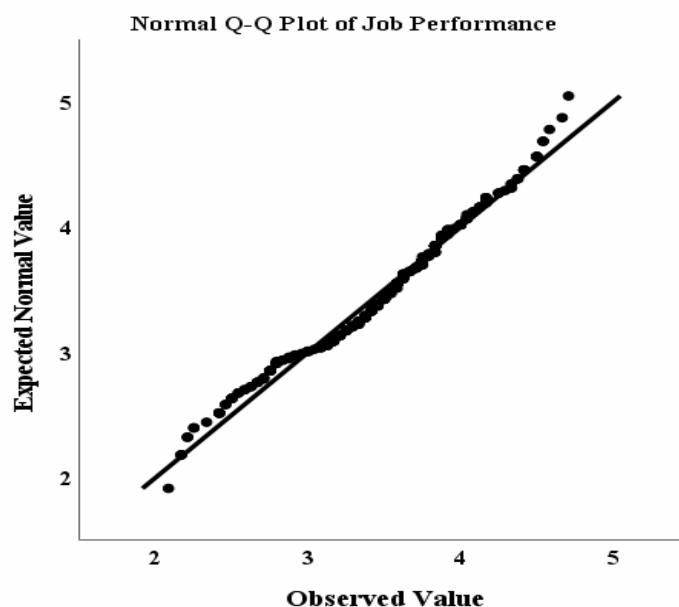


Figure 2: : QQ Plot Test for Normality Assumption

It was clear, through a visual inspection of Figure 2, that data points fell on an approximate straight line through the origin and at an angle of 45 degrees to the horizontal. The normality assumption was therefore fulfilled by job performance data. Test of existence of a linear relationship between independent variable and the dependent variable was done by computing Pearson correlation Coefficient (r). It was found that between work-life conflict and job performance, $r = -0.112$. Since a moderating variable is first introduced into the regression equation as an independent variable, it was also necessary to test for existence of a linear relationship with between ICT competence and job performance. It was found out that the relationship had a Pearson correlation coefficient (r) = 0.041. Therefore, necessary assumptions of linear regression analysis were met. Then, hierarchical linear regression analysis was carried out and results of that analysis were as presented in Table 2, Table 3 and Table 5.

Table 2: Hierarchical Linear Regression Models Summary

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.112a	.012	.009	.54471	.012	3.753	1	297	.054
2	.187b	.035	.028	.53940	.022	6.878	1	296	.009
3	.231c	.053	.044	.53516	.018	5.711	1	295	.017

a. Predictors: (Constant), Work-life conflict

b. Predictors: (Constant), Work-life conflict, ICT competence

c. Predictors: (Constant), Work-life conflict, ICT competence, Work-life conflict*ICT competence

As depicted in Table 2, the first linear regression model of work-life conflict and job performance had a coefficient of determination (R^2) = 0.012. This implied that work-life conflict accounted for 1.2% of variation in job performance. The remaining 98.8% is accounted for by other factors. The second model that had both work-life conflict and ICT competence as predictors of job performance had a coefficient of determination (R^2) = 0.035. This meant that both work-life conflict and ICT competence accounted for 3.5% of the variation in job performance and the remaining 96.5% was due to other factors that influence job performance. This change over and above the first model was statistically significant (p -value = 0.009 < 0.05).

The third model which had work-life conflict, ICT competence and the interaction term (work-life conflict*ICT competence) as predictors of job performance had a coefficient of determination (R^2) = 0.053. This meant that work-life conflict, ICT competence and the interaction term accounted for 5.3% of the variation in job performance. It also implied that the remaining 94.7% of the variation in job performance was explained by other factors. This was a statistically significant change ($\Delta F(1,295) = 5.711$, $\Delta R^2 = 0.018$, p -value = 0.017 < 0.05). Therefore, the null hypothesis, that ICT competence does not have a statistically significant moderating effect on the association between work-life conflict and job performance of academic staff in public universities in Kenya was rejected. This finding implies that ICT competence of academic staff in public universities in Kenya has a statistically significant moderating effect on the association between work-life conflict and their overall job performance.

Then, analysis of variance (ANOVA) was carried out to determine whether there were statistically significant differences between means of different groups. Results of that analysis were as depicted in Table 3.

Table 3: ANOVA Table

ANOVAa						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.113	1	1.113	3.753	.054b
	Residual	88.124	297	.297		
	Total	89.237	298			
2	Regression	3.115	2	1.557	5.353	.005c
	Residual	86.122	296	.291		
	Total	89.237	298			
3	Regression	4.750	3	1.583	5.529	.001d
	Residual	84.487	295	.286		
	Total	89.237	298			

a. Dependent Variable: Job performance

b. Predictors: (Constant), Work-life conflict

c. Predictors: (Constant), Work-life conflict, ICT competence

d. Predictors: (Constant), Work-life conflict, ICT competence, Work-life conflict*ICT competence

The first linear regression model, that had work-life conflict as the only predictor of job performance ($F(1, 297) = 3.753$, $p\text{-value} = 0.054 \approx 0.05$) was statistically significant. The second model that had work-life conflict and ICT competence as predictors of job performance was also statistically significant ($F(2, 296) = 5.353$, $p\text{-value} = 0.005 < 0.05$). The third model that had work-life conflict, ICT competence and the interaction term (work-life conflict*ICT competence) as predictors of job performance ($F(3, 295) = 5.529$, $p\text{-value} = 0.001 < 0.05$) was statistically significant as well. The forgoing findings imply that the relationships between the variables studied were not random occurrences but a representation of characteristics of the target population. This further implies that, for each of the three models, different groups had different means.

Before inferences could be made from results in Table 5, testing for fulfillment of the linear regression assumption of homoscedasticity of residuals was done to avoid biased and skewed test results. To do that, linear regression analysis was done with squares of residuals of work-life conflict values as the dependent variable and actual values of work-life conflict as the predictor as required of Breusch-Pagan-Godfrey test. The outcome of that process was as provided in Table 4.

Table 4: Test of Homoscedasticity Assumption on Work-life Conflict

ANOVAa						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.011	1	.011	.074	.786b
	Residual	46.321	297	.156		
	Total	46.333	298			

a. Dependent Variable: Residual-squared

b. Predictors: (Constant), Work-life conflict stressors

The linear regression model ($F(1, 297) = 0.074$, $p\text{-value} = 0.786 > 0.05$) of work-life conflict residuals squared and actual values of work-life conflict was not statistically significant. The default null hypothesis, in Breusch-Pagan-Godfrey test, that the data was heteroscedastic, was therefore rejected and the data confirmed to be homoscedastic. This meant that there was constant variance of the residuals in the regression model. Hence, linear regression analysis on the work-life conflict data vis-à-vis job performance could be used to make inferences about the target population without biases. The regression coefficients of the three regression models were as depicted in Table 5.

Table 5: Linear Regression Coefficients

		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	3.767	.151		24.894	.000
	Work-life conflict	-.072	.037	-.112	-1.937	.054
2	(Constant)	3.530	.175		20.178	.000
	Work-life conflict	-.156	.049	-.241	-3.193	.002
	ICT competence	.156	.060	.198	2.623	.009
3	(Constant)	5.356	.783		6.836	.000
	Work-life conflict	-.591	.188	-.912	-3.137	.002

ICT Competence	-.450	.261	-.569	-1.728	.085
Work-life conflict*ICT Competence	.142	.060	1.314	2.390	.017

a. Dependent Variable: Job performance

A summary of beta coefficients for the three regression models provides that, the first regression model had $\beta_0=3.767$ (p-value=0.000<0.05) and therefore statistically significant, $\beta_1=-0.072$ (p-value=0.054<0.05) and also statistically significant. The simple linear regression equation of work-life conflict and job performance was therefore;

$$Y=3.767-0.072 \text{ work-life conflict} + \varepsilon \text{ -----(iii)}$$

Equation (iii) implies that a unit increase in work-life conflict leads to a 0.072 decrease in job performance. It indicates that work-life conflict had a statistically significant negative association with job performance. This finding was consistent with the work of Ashfaq et al. (2013) and Siddiqui (2020).

The multiple linear regression model between work-life conflict and ICT competence as predictors of job performance had the following beta coefficients: $\beta_0=3.530$ (p-value=0.000<0.05), $\beta_1= -0.156$ (p-value=0.002<0.05) and $\beta_2=0.156$ (p-value=0.009<0.05). Therefore, the regression model became;

$$Y=3.530-0.156 \text{ work-life conflict} + 0.156 \text{ ICT competence} + \varepsilon \text{ -----(iv)}$$

In addition, the moderated linear regression model that had work-life conflict, ICT competence and the interaction term between work-life conflict and ICT competence, as predictors of job performance had the following beta coefficients; $\beta_0=5.356$ (p-value=0.000<0.05), $\beta_1= -0.591$ (p-value=0.002<0.05), $\beta_2=-0.450$ (p-value=0.085>0.05) and $\beta_3=0.142$ (p-value= 0.017<0.05). Hence, the moderated linear regression model was as depicted by equation (v);

$$Y_m=5.356-0.591 \text{ work-life conflict}+0.142 \text{ work-life conflict} * \text{ICT competence} \text{ -----(v)}$$

From the linear regression model (v), job performance depends on both work-life conflict as well as the interaction term between work-life conflict and ICT competence. Therefore, partial differentiation was required to determine the rate of change of job performance with respect to work-life conflict. Hence, the partial derivative of moderated job performance () with respect to work-life (x) conflict was computed;

$$=-0.591+0.142*\text{ICT competence} \text{ -----(vi)}$$

Equation (vi) implies that the rate of change of moderated job performance with respect to work-life conflict (beta coefficient) depends on ICT competence of the employees. Therefore, the β -coefficient of the regression line is not constant, but varies with the value of moderating variable. It was therefore necessary to inspect the regression line for the nature of the turning point. The turning point is the value of variable on the horizontal axis for which the gradient of the curve is zero. Therefore, equation for the gradient of this curve is equated to zero and solved for the value of ICT competence. Thus;

$$-0.591+0.142*\text{ICT competence}=0 \text{ ----- (vii)}$$

Therefore, at the turning point, the value of ICT competence will be given by;

$$\text{ICT competence}=4.162 \text{ -----(viii)}$$

At that point (where ICT competence=4.162), the rate of change of job performance with respect to work-life conflict would be equal to zero (which means that it is either maxima, minima or a point of inflection). Further investigation was therefore needed to establish its nature. This was done by testing the values of the gradients of the curve on either side of the stationary point.

On the left-hand side of the turning point (say ICT competence=4)

$$=-0.591+0.142*4=-0.023 \text{ ---the gradient is negative -----(ix)}$$

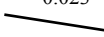
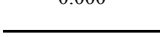
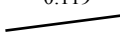
It is clear from equation (ix) that on the left hand side of ICT competence of 4.162, work-life conflict has a negative relationship with job performance. This means that an increase in work-life conflict leads to a decline in job performance.

On the right-hand side (say ICT competence=5)

$$=-0.591+0.142*5= 0.119 \text{ ---the gradient is positive -----(x)}$$

Equation (x) implies that on the right hand side of the same point (ICT competence=4.162), work-life conflict has a direct association with job performance. Therefore, the turning point of curve of work-life conflict and job performance curve was indeed minima. A summary of these findings and a pictorial representation of the nature of the regression line on either side of the turning point is provided in Table 6.

Table 6: Values of β -Coefficients about the Turning Point

Turning Point Details/Position	On the left	At the turning Point	On the right
ICT competence value	4.000	4.162	5.000
β -Coefficient	-0.023	0.000	0.119
Nature of the regression line			

Therefore, ICT competence of academic staff of more than 4.162 on a scale of 1 to 5 would make work-life conflict vary directly with job performance. Hans Selye, argues that low levels of stress (eustress) is the stress experience that drives and inspires employees to achieve their life goals and thereby succeed even in potentially challenging endeavours (Deshpande & Chopra, 2007). This implies that at that level of ICT competence and above, work-life conflict is indeed eustress and therefore provides the necessary motivation for higher levels of job performance.

V. Conclusions and Recommendations

This study has established that work-life conflict has a statistically significant negative association with job performance. Measures should therefore be taken by university management and other stakeholders to reduce the conflict for improved job performance. It has also been established that ICT competence has a statistically significant moderating effect on the association between work-life conflict and job performance. A high ICT competence (of 4.162 and above on a scale of 1 to 5) reverses the negative association that work-life conflict had with job performance to a positive one. It follows that work-life conflict was lowered from high levels, in which it is a source of distress for employees, to low levels where it is referred to as eustress and acts as a motivation for job performance. Therefore, this study recommends that managers of public universities in Kenya invest in building ICT competences of the academic staff, not just for the benefits that go with ICT use, but also for reduced work-life conflict. This would contribute to enhanced job performance and ultimately organizational performance.

References

- [1]. Ababneh, M. (2020). Linking Ontology, Epistemology and Research Methodology, *Science & Philosophy*, 8(1), 75-91.
- [2]. Abrahams, D. A. (2010). Technology Adoption in Higher Education: A Framework for Identifying and Prioritizing Issues and Barriers to Adoption of Instructional Technology. *Journal of Applied Research in Higher Education*, 2(2), 33–49.
- [3]. Akkas, M. A., Hossain, M. I. & Rhaman, S. (2015). Causes and Consequences of Work-Family Conflict (WFC) among the Female Employees in Bangladesh: An Empirical Study. *Journal of Business and Economics*, 6(12), 2063–2071. [https://doi.org/10.15341/jbe\(2155-7950\)/12.06.2015/007](https://doi.org/10.15341/jbe(2155-7950)/12.06.2015/007).
- [4]. Ali, F., Ciftci, O., Nanu, L., Cobanoglu, C. & Ryu, K. (2021). Response Rates in Hospitality Research: An Overview of Current Practice and Suggestions for Future Research. *Cornell Hospitality Quarterly*, 62(1), 105–120. Available at: <https://journals.sagepub.com/doi/pdf/10.1177/1938965520943094>
- [5]. Andersson, U., Cazorra, A. C. & Nielson, B. B. (2014). From the Editors: Explaining Interaction Effects within and Across Levels of Analysis. *Journal of International Business Studies*, 45, 1063–1071. <https://www.researchgate.net/publication/268151633>
- [6]. Ashfaq, S., Mahmood, Z. & Ahmad, M. (2013). Impact of Work-Life Conflict and Work Over-load on Employee Performance in Banking Sector of Pakistan. *Middle-East Journal of Scientific Research*, 14(5), 688-695.
- [7]. Baskaran, S., Lay, H. S., Ming, B. S. & Mahadi, N. (2020). Technology Adoption and Employee's Job Performance: An Empirical Investigation. *International Journal of Academic Research in Economics and Management and Sciences*, 9(1), 78–105.
- [8]. Bauld, R., Brough, P. & Timms, C. M. (2009). Working to Live or Living to Work? The Impact of Time Demands and Preferred Working Hours on Work and Family Outcomes. in J. E. Langford, P. H., Reynolds, N.J. and Kehoe (Ed.), 8th industrial and Organizational conference (IOC) (pp. 13–17). *Australian Psychological Society*. <https://doi.org/10.5040/9781350023123.ch-007>.
- [9]. Bizer, G. Y., Barden, J. C. & Petty, R. E. (2022). Attitudes. Attitudes, 247-253 <https://www.researchgate.net/publication/230061454>
- [10]. Brummelhuis, L. L. & Bakker, A. B. (2012). A Resource Perspective on the Work-Home Interface: The Work-Home Resources Model. *American Psychologist*, 67(7), 545–556. <https://doi.org/10.1037/a0027974>.
- [11]. Cazan, A. M., Truță, C. & Pavalache-Ilie, M. (2019). The Work-Life Conflict and Satisfaction with Life: Correlates and the Mediating Role of the Work-Family Conflict. *Romanian Journal of Applied Psychology*, 21(1), 3–10. <https://doi.org/10.24913/rjap.21.1.02>.
- [12]. Commission for University Education (CUE, 2014). Harmonised Criteria and Guidelines for Appointment and Promotion of Academic Staff in Universities in Kenya. <http://www.cue.or.ke/index.php/downloads/category/16-standards-and-guidelines>
- [13]. Deshpande, A. & Chopra, R. K. (2007). *Fundamentals of Organizational Behavior*. Sun India Publications.
- [14]. Friedman, B. D. & Allen, K. N. (2014). Systems Theory. *Researchgate*, 2–20. <https://doi.org/10.13140/2.1.1132.9281>
- [15]. George, D. & Mallery, P. (2003). SPSS for Windows step by step: A simple guide and reference. 11.0 update (4th ed.). Boston, MA: Allyn & Bacon.
- [16]. Gilanie, G. (2022). Knowledge and its Types. Available at: https://www.researchgate.net/publication/364352262_Knowledge_and_its_Types
- [17]. Gissane, C. (2016). Is the Data Normally Distributed? *Physiotherapy Practice and Research* 37 (2016) 57–60. doi 10.3233/PPR-150069
- [18]. Hussain, R. I. & Mujtaba, B. G. (2012). The Relationship Between Work-Life Conflict and Employee Performance: A Study of National Database and Registration Authority Workers in Pakistan. *Journal of Knowledge Management, Economics and Information Technology*, 2, 84-94
- [19]. Ivanov, C. I. & Avasilcăi, S. (2014). Performance Measurement Models: An Analysis for Measuring Innovation Processes Performance. *Procedia - Social and Behavioral Sciences*, 124, 397–404. <https://doi.org/10.1016/j.sbspro.2014.02.501>
- [20]. Karihe, J. N. (2016). Determinants of Occupational Stress affecting Employees Performance in Public Universities in Kenya, (Unpublished Doctoral Thesis). Jomo Kenyatta University of Agriculture and Technology, Juja, Kenya.
- [21]. Molefe, G. N. (2010). Performance Measurement Dimensions for Lecturers at Selected Universities: An International Perspective. *SA Journal of Human Resource Management/ SA Tydskrif Vir Menslikehulpbronbestuur*, 8(1), 1–13. <https://doi.org/10.4102/sajhrm.v8i1.243>
- [22]. Murphy, K.R. & Aguinis, H. (2022). Reporting Interaction Effects: Visualization, Effect Size, and Interpretation. *Journal of Management*, 48 (8), 2159–2166. doi: 10.1177/01492063221088516. Available at: <https://www.hermaanaguinis.com/pdf/JOMreportinginteractions.pdf>
- [23]. Oren, L. & Levin, L. (2017). Work-Family Conflict/Enrichment: The Role of Personal Resources. *International Journal of*

- Manpower*, 38(8), 1102–1113. <https://doi.org/10.1108/IJM-06-2014-0135>
- [24]. Ratheeswari, K. (2018). Information Communication Technology in Education. *Journal of Applied and Advanced Research*, s45-s47
- [25]. Setyanto, E., Rasyidah, N. & Sulhan, M. (2017). Aplikasi Tik Dalam Manajemen Pendidikan Dasar Dan Menengah. *HIKMAH: Jurnal Pendidikan Islam*, 6(2), 298–317. <https://doi.org/10.1287/serv.2.1>
- [26]. Sehloho, M. (2024). Kenya allocates \$125.3M toward ICT sector. *Connecting Africa*. <https://www.connectingafrica.com/digital-inclusion/kenya-allocates-125-3m-toward-ict-sector>
- [27]. Sehwat, M. & Parmar, B.J. (2020). Role of ICT in Work-Life Balance: A Integrated Perspective of the Higher Education Sector. *International Journal for Research in Engineering Application & Management (IJREAM)*, 5(10), 107-110
- [28]. Sheppard, V. (2020). Research Methods for the Social Sciences: An Introduction. Available at: <https://pressbooks.bccampus.ca/jibcresearchmethods/>
- [29]. Siddiqui, M. N. (2014). Impact of Work-Life Conflict on Employee Performance. *Far East Journal of Psychology and Business*, 12(3), 26–40.
- [30]. Tarmidi, D. & Arsajah, R. (2019). Employee and Organizational Performance: Impact of Employee Internal and External Factors, Moderated by Online Application. *Journal of Resources Development and Management*, 57(July), 30–37. <https://doi.org/10.7176/jrdm/57-04>
- [31]. Teeroovengadum, V., Heeraman, N. & Jugurnath, B. (2017). Examining the Antecedents of ICT Competence in Education using an Extended Technology Acceptance Model (TAM). *International Journal of Education and Development using Information and Communication Technology (IJEDICT)*, 13(3) 4-23
- [32]. Weerasekara, M. K. & Thilakarathne, P. H. (2019). Use of ICT Supported Interventions for Occupational Stress Management: A Systematic Review of Published Studies. 2019 International Conference on Business Innovation (ICOB), 146-153
- [33]. Zhang, C. Q. (2019). What is a Skill? (pp. 270-272). In D. Hackfort, R.J. Schinke, & B. Strauss (Eds.), *Dictionary of Sport Psychology: Sport, Exercise, and Performing Arts*. London, UK: Academic Press. Available at: <https://www.researchgate.net/publication/337274617>