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Information systems implementation and user performance in the county government of Machakos, Kenya

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ABSTRACT

This paper aims to examine the impact of IS Implementation on User Performance in the county Government of Machakos, Kenya. This paper made use of descriptive designs as well explanatory study designs. In addition, the research made use of primary data that was gathered using open and closed ended questions in a research questionnaire. Data collected was analyzed using the SPSS software. It was established that IS implementation had a positive effect on user performance which in return impacts the organizational performance. The study revealed that, IS ability is to provide high quality information, which reduces errors and resolve performance problems when they occur. The study concluded that IS is a major factor influencing user performance in Machakos County Government, Kenya and that there was a positive relationship between independent variables and dependent variable. Therefore, this study recommends that County Governments should invest heavily on IS without fear as this will improve their employee's performance and in return improve the performance of the County Governments in terms of service delivery to the citizens.

Introduction

Individual achievement evaluation from IS use has been an ongoing concern in IS research. The findings from this can be significant since it will assist in the advancement of improved techniques for making use of IS and assessing their impact on the user and organization performance (Abugabah & Sanzogni, 2014).

The performance of the users and the organization can be influenced by the implementation of IS as such there is need to comprehend the effect of IS on user performance since it will improve performance either for the individual or for the organization. Organizations are continually investing progressively in different types of IS implementations, basically from the perception that the investments will result in improved productivity (Ali & Younes, 2013).

Though there have been considerable documenting concerning IS, similarly on the effectiveness of the system, the impacts alongside additional pertinent subjects, several studies have had their focus on problems associated with the expectations of users and their satisfaction or organizational level performance problems. Research on end-user performance has been carried out but limited answers on the subject are provided. Conversely, there is no clarity on the case, especially regarding, the factors that result in higher performance, the way in which end user performance can be improved using IS, the issues that should be focused on by employers and vendors to be able to maximize reimbursements and achieve realistic payback from their investments in IS (Hernandez, Jimenez & Martin, 2008).

Supporters of e-government think that governments can use today's technology - driven era to minimize corruption and improve accountability and transparency, openness, productivity, and social inclusion (New Tactics, 2015). As such County Governments in Kenya have continued to invest increasingly in various types of IS with the same believe.

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Despite the investments by organizations and county governments in Kenya on IS, these systems have been underutilized. Acceptance and adoption of the systems by the users has been the main contributor to this. For instance, during the implementation of the EHR system in Machakos County, the manual paper file system ran in conjunction with the new technology, rather than being entirely replaced. As a result, health care staff prefer the manual paper system other than the electronic structure. The difficulty was exacerbated through their perception that EHR seemed difficult to employ and that sufficient training was not provided to the health care staff (Paton & Muinga, 2018).

County governments must improve organizational assistance and training to be able assist their staff comprehend the advantages of having IS and improve adaptation of these technologies to staff demands in order to enhance acceptance and use of the IS. According to Ali and Younes (2013), the impact of implementing the IS is determined by the level of user acceptability. Users function best when they believe the system to be far more valuable and easier to use, according to the findings of their research.

Mutuku (2020) discovered that user perception had a substantial impact on online digital platform uptake including using. Users' views of security and privacy, relevance, convenience of use, sophistication, pace, efficacy, and price had an effect on adoption alongside the usage of the E-citizen systems in Kenya, according to the research. Moreover, Gor (2015) found that usability (measured by intricacy, connectivity, and system support) and ultimately performance expectancy of the technology (measured by trainability, comparative advantage) were some of the crucial factors affecting implementation and utilization of online digital platforms in Nairobi.

Past studies have shown a positive connection between user performances and IS implementation. For instance, Benard and Nzuki (2018) in their study in Nairobi metropolitan on ICT considerations as well as Revenue collection, established that ICT plays a key role in boosting an organization's productivity, increases the accuracy and efficacy of its employees, and contributes to the organization's value proposition. This study sought to establish the impact of IS Implementation on User Performance in the county Government of Machakos, Kenya.

The reminder of this study is organized as follows. The next section provides a review of extant literature. The third section introduces methodology and data. Finally, conclusions and implications of the study are presented in the final section.

Literature Review

Information Quality and User Performance

Ali and Younes (2013) revealed that IQ positively and significantly influences user performance in the research on how IS impacts employee Performance. Amongst the parameters studied, the most important features of IQ to aid users in completing their activities while using IS were timeliness and completeness.

Laudon and Laudon (2011) on Decision Making in Management Information Systems state that High-quality decisions need high-quality information. Furthermore, they identified the qualities of decisions to be affected by the following IQ attributes: Integrity, Accuracy, Consistency, Validity, Completeness, Accessibility and Timeliness. Moreover, the following were their definitions of the IQ attributes, Accuracy refers to the degree to which data can accurately represent reality. On the other hand, integrity may be defined as the consistency of data structure and connections between attributes and entities. Furthermore, uniformity is the consistency of the data components' definitions. Completeness on the other hand is the presence of all required facts. Validity can be defined as the presence of data values that fall inside the defined limits. In addition, timeliness refers to data being available when it is needed. Data that is accessible, understandable, and useable defines accessibility. Decision-making will suffer if the output of IS does not satisfy these quality criteria.

IQ was described by Al-Mamary, Shamsuddin, and Aziati (2014) as the desired qualities of the system outputs. Moreover, Relevance, understandability, conciseness, correctness, completeness, timeliness, currency, and usefulness were identified as IQ characteristics. According to the findings, the IS output should be applicable to the purpose it is required for, with ease in comprehending, accurate or less error-prone, succinct, comprehensive, or contain all necessary information, currency, rapid availability, and timely to meet information demands, and usability.

On IQ: definitions, dimensions, measurement, and relationship with decision making, Alshikhi and Abdullah (2018) proposed essential dimensions which are completeness, timeliness, correctness, and relevance. The study also proved IQ and user happiness as the most important factors in determining the success of the IS.

Previous Researches have shown a significant impact of information quality that users acquire from IS on User Performance. According to the researchers, if critical operations that result in more accurate, accessible, comprehensive, relevant, and timely information are enabled, information systems can improve performance indefinitely (Abugabah & Sanzogni, 2014). The features that will be used to assess the IQ impact on user performance in this Research are; Accuracy, Integrity, Consistency, Validity and Accessibility of information.

System Quality and User Performance

SQ constitutes the desirable characteristics of an IS (Urbach & Müller, 2012). Widiastuti, Haryono and Said (2019) on influence of SQ, IQ, quality of service on consumer acceptability and satisfaction, as well as overall benefits. The researchers came to conclusion that there is a favorable but insignificant influence on the system's quality. SQ also has a favorable and substantial influence on user satisfaction, according to the study. In addition, the more the users of a system believe it is of excellent quality, the more contented they are with it. The research measured SQ based on system integration, system flexibility, response time, error recovery, access convenience, reliability, language, and ease of use.

On the influence of SQ, IQ, and service quality on performance, Bahari and Mahmud (2017) discovered that SQ affects positively affects individual performance and substantially, as well as positively and significantly affecting the company's performance. Moreover, the research evaluated SQ on the basis of functionality, ease of use, reliability, portability, data quality, importance, flexibility, and integration.

SQ has a substantial direct influence on user statistics performance, according to Zaremohzzabieh, Samah, Bolong, Muhammad, Abdullah, D'Silva and Shaffril (2016) on a framework of IS success for measuring the efficacy of statistical learning instrument on university students' performance in statistics. The researchers noted that SQ could be crucial at the initial levels of applying IS. According to the findings, students needed a more participatory system with an ease of use, consistent, accessible, and one that was user-friendly. SQ was assessed in terms of the system's availability on request–response time, current technology, adaptability, data quality, and integration.

According to Novi, Zaki, and Bambang (2017), IS features affects the satisfaction of users and benefit perception positively in adopting accounting IS that is based on technology in local governments. The perception of the benefits of information technology in local government is influenced by user satisfaction with the system. Moreover, the research looked at five different aspects of information systems: benefit perception, system utilization, quality, user satisfaction, and organizational performance. The study will examine the system quality through the following factors, System Flexibility, System Reliability, Ease of Use, system Response time, and Ease of Learning,

User Characteristics and User Performance

In IS research, user attributes like computer experience, age and gender were believed to be important considerations (Arning & Ziefle, 2007). Previous research revealed that user traits, frequently referred to as "individual differences," make up the significant factors in explaining the effect and the usage of IS. Moreover, literatures in human-computer interactions and end-user computer performance have recently documented the findings.

Human information processing qualities, communication features, and physical characteristics are the major influences in the area of computer interactions. Users form opinions and attitudes based on current and previous interactions (Despont-Gros*, Mueller & Lovis, 2004). The present contact with the assessed IS, previous encounters with other IS, and individual traits all contribute to the user's attitude about the IS. In addition, the study evaluates attitude concerning innovation, level of consumption, demographic data and degree of use.

The advantages got from the utilization of an IS vary from one user to another based on their characteristics (Abugabah & Sanzogni, 2014). In this way, the effects of the IS on user performance will differ in with regard to user type and usage, experience, position, age and gender. Past researches have shown a huge influence of user attributes on the user's overall performance. This research will use age, gender, user type and usage and experience to measure the effect of user characteristics on user performance.

Task Technology Fit and User Performance

Abugabah and Sanzogni (2014) on exploring factors affecting end-user performance of IS discovered that a system with the required functionality to achieve a particular task results in better performance. Moreover, the research measured TTF using locatability, compatibility, meaning, adequacy, and Information Technology support.

Widagdo and Susanto (2016) on individual performance impact from TTF within the generation X (1956-1980) based their research on Task Characteristics and Technology Characteristic. TTF is a reasonable viewpoint on whether the utilized technology can maximize user labor or job, according to the study. When information technology functions within and can support the users' everyday activities, the appropriateness of the technology for the activity will, of course, impact individual performance.

According to Tam and Oliveira (2018) on mobile banking performance impact: implementing the TTF methodology proved that usage and TTF are crucial individual performance models. The TTF measures used in the study were task and Technology characteristics. Moreover, the results showed that a greater use of the service was a result of an improved match amongst m-banking and banking portfolio of jobs.

Empirically, these outcomes prove that TTF factors directly influence user performance. In addition, the TTF model proposes consistent task and technology results in high user performance. This research will use compatibility, IS Support and training, locatability and meaning to test TTF impact on users.

Research and Methodology

Descriptive as well as explanatory research designs were adopted by the study. The major target population for this study were the 464 employees working for Machakos County government at headquarter office (Ndonye & Genga, 2019). The sampling procedure included determining the workers target population, which in this case were the 464 workers working in Machakos County government headquarters offices, and then selecting a sample from that group to enhance data collection. Stratified sampling was adopted to come up with respondents from four different departments of interest to the researcher i.e. Finance Department, Revenue Collection Department, Administration Department and IT Department. Simple random sampling was carried out to choose interviewees from all four departments allocating every element in the population a corresponding consideration possibility within the sample (Morse, 2016). The sample size was 215. This research used first hand data gathered from respondents through questionnaires that were the primary instrument of data collection. The questionnaires contained a Likert scale that ranged from 1 to 5 which enabled allocating numerical values to the responses (Mugenda & Mugenda, 2003).

Validation was achieved by content and construct validity. When executing content validity, the researcher looked for assessments of experts in the field of study. Construct va1idity was tested through a critical review of the theoritica1 and empirical 1iterature. The researcher made use of the method of internal consistency to evaluate the study instrument reliability through Cronbach's Alpha coefficient. The research used Statistical Package for Social Sciences, (SPSS) software to analyze the collected data. Moreover, the data from the study was examined using descriptive analysis as well as inferential analysis. Factors that include the mean, frequency distributions and percentage were made use of to perform descriptive analysis while inferential analysis was done using regression and correlation. To define the quantitative impact exerted on the variables that are dependent, regression was carried out on the four variables that are independent against the dependent variables. Moreover, data that was analyzed was presented in table form and figures followed by summarized explanation in relation to the literature. The researcher used multiple regression model for inferential statistics.

Analysis and Findings

Collected data underwent editing, followed by coding and classification on similarity basis as well as tabulation. Statistical package for social sciences (SPSS version 27) was used to code, enter and compute the findings of the research. Moreover, the data from the study was examined using descriptive analysis as well as inferential analysis. Factors that include the mean, frequency distributions and percentage were made use of to perform descriptive analysis while inferential analysis was done using regression and correlation.

Reliability of Study Instrument

The researcher made use of the method of internal consistency to evaluate the study instrument reliability through Cronbach's Alpha coefficient. The below shows that the reliability coefficients were above the 0.7 thresholds indicating that all the five variables were reliable.

Table 1: Results of Reliability

Variables	No Of Items	Cronbach Alpha	Comments
IQ	6	0.864	Reliable
SQ	6	0.786	Reliable
User Characteristics	6	0.718	Reliable
TTF	6	0.735	Reliable
User Performance	8	0.795	Reliable

Sources: Research Data (2021)

Descriptive Analysis

Information Quality

The information below indicated that most of the interviewees concurred to a larger extent that the information from the system was accurate with a mean of 3.67. This implied that the employees believed that the results from the system were as per their expectation. The employees were able to access the information with a mean of 3.59.

The information from the system was consistent with a mean of 3.05. The employees agreed that the information was valid with a mean of 3.10. The information from the system was original with a mean of 3.60. This made their trust on the system to be high and as such improve their performance.

These findings implied that the employees greatly accepted the information from the system and had much faith on the quality of information from the system.

Table 2: Information Quality

Statement	Mean	SD
The information from the system is accurate	**3.67**	**1.31**
The information from the system is accessible	**3.59**	**1.22**
The information from the system is consistent	**3.05**	**1.05**
The information from the system is valid	**3.10**	**1.22**
The information from the system is original	**3.60**	**1.32**

Sources: Research Data (2021)

The findings of the research show that the effect of IQ on the performance of the users is significant and positive. They indicated the importance of IQ as a key factor affecting user performance positively. All measures of IQ were examined to find out the value of each measure and find out which contributed most significantly focusing on the user performance. Comparing these measures, accuracy, integrity and accessibility were found out to be the most valuable attributes of IQ to help users in performing their tasks while using IS. Users rely on the system to acquire correct information needed to perform their work and achieve their company goals, and Accuracy leads to a more correct work with fewer errors. Information accessibility enables users to boost their efficiency and decrease spent time in doing their duties. Consistency, validity and integrity of the information makes the users to have faith in the system and hence rely more on the IS in performing their tasks hence improving their performance. The study finding concurs with the views of Abugabah and Sanzogni (2014) who established that if critical operations that result in more accurate, accessible, comprehensive, relevant, and timely information are enabled, IS can improve performance indefinitely. Laudon and Laudon (2011) also observed that the same attributes of IQ that affect decision making.

System Quality

The below indicated that most of the interviewees concurred that the system ease of use system was high with a mean of 3.75. The system was reliable with a mean of 3.45. The system was flexible with a mean of 2.75. The system was easy to learn with a mean of 3.30. The system gave a fast response with a mean of 2.90. This indicated that a large number of the employees embraced the system on a large extend despite some of the challenges experienced from the system.

Table 3: System Quality

Statement	Mean	SD
The system is easy to use	**3.75**	**1.11**
The system is reliable	**3.45**	**1.19**
The system is flexible	**2.75**	**1.03**
The system is easy to learn	**3.30**	**1.29**
The system response is fast	**2.90**	**1.05**

Sources: Researcher (2021)

The Project findings show that SQ affects the user performance which indicates a strong direct correlation between measures of SQ and the performance of users. Majority of the IS users agreed that the systems were easy to use and learn hence making them to have faith on the same as such relying on the IS more and more. Reliability, ease of learning and ease of use were the most valuable measures which contribute to user performance significantly by increased use of IS. System flexibility and response rate also contributed significantly to increased use of the system as such improved their speed and accuracy hence improving their performance. Though not major, system down time was identified as factor which also had effect on the user performance. The study finding concurs with the sentiments of Widiastuti, Haryono and Said (2019) that SQ has a favorable and substantial influence on user satisfaction and that the more the users of a system believe it is of excellent quality, the more contented they are with it. Similarly, Bahari and Mahmud (2017) discovered that SQ positively affects individual performance, as well as positively and significantly affecting the company's performance.

User Characteristics

The below table indicated that most of the interviewees concurred that User experience on the system use influences their performance with a mean of 3.10. User age on system use influences their performance with a mean of 2.65. User gender on system use influences their performance with a mean of 1.05. This implied that user gender didn't have great impact on the user performance. User roles on system use affects their performance with a mean of 2.50.

These results indicated that User characters had a slight effect on user performance.

Table 4: User Characteristics

Statement	Mean	SD
User experience on the system use affects their performance	**3.10**	**1.96**
User age on system use affects their performance	**2.65**	**1.82**
User gender on system use affects their performance	**1.05**	**1.09**
User roles on system use affects their performance	**2.50**	**1.56**

Sources: Research Data (2021)

From the results, user characteristics also had effect on the performance of the users. The most significant attribute which had effect on user performance was user experience. Most experienced computer users found it easy to learn and use the system compared to new computer users. This had effect on their attitude towards IS use. User gender and age didn't have much significant effect of the usage of the system. The results also showed that IS are developed for users of all levels and any type of user is suitable to use IS. This boosts the ability of the users to depend on the systems to do their duties. Thus, increasing IS usefulness. The study finding concurs with Abugabah and Sanzogni (2014) who established that the advantages got from the utilization of an IS vary from one user to another based on their characteristics thus the effects of the IS on user performance will differ in with regard to user type and usage, experience, position, age and gender. Similarly, Arning and Ziefle (2007) revealed that user traits, frequently referred to as "individual differences," make up the significant factors in explaining the effect and the usage of IS.

Task Technology Fit

The above table indicated that most of the interviewees concurred that the IS and the task done are compatible with a mean of 3.41. The users are supported on the IS use with a mean of 2.11. They also accepted that they were trained about the system use with a mean of 2.33. The tasks done by the system are traceable with a mean of 2.90. The IS is meaningful to the task with a mean of 2.10.

Table 5: Task Technology Fit

Statement	Mean	SD
The IS and the tasks done are compatible	**3.41**	**1.39**
The users are supported on the IS use	**2.11**	**1.09**
The users are trained on system use	**2.33**	**1.25**
The tasks done by the system are traceable	**2.90**	**1.94**
The IS is meaningful to the task	**2.10**	**1.05**

Sources: Research Data (2021)

The results showed that the TTF had a significant and positive impact on user performance. However, compatibility of the systems was the most valuable attribute for user performance while IS support was least significant for user performance. They attain most advantages if the systems match with their work requirements and a high compatibility. The findings also showed that most of the users wanted more training on the usage of the system for regular recap to enable them become more and more familiar with system and such increasing usage of the IS hence having effect on the User Performance. The study finding concurs with Abugabah and Sanzogni (2014) who established that a system with the required functionality to achieve a particular task results in better performance. Similarly, Tam and Oliveira (2018) proved that usage and TTF are crucial individual performance models as the results showed that a greater use of the service was a result of an improved match amongst m-banking and banking portfolio of jobs.

User Performance

The below table indicated that most of the interviewees concurred that the IS use lead to increase of user speed of doing work with a mean of 3.62. IS use lead to increase of user accuracy with a mean of 3.42. IS use lead to increase of user effectiveness with a mean of 2.33. IS use lead to increase of user efficiency with a mean of 3.25. IS use lead to increase of user creativity with a mean of 2.74.

Table 6: User Performance

Statement	Mean	SD
IS use has increased user accuracy	**3.42**	**1.39**
IS use has increased user effectiveness	**3.13**	**1.33**
IS use has increased user efficiency	**3.25**	**1.22**
IS use has increased user creativity	**2.74**	**1.05**
IS use has increased user speed	**3.62**	**1.61**

Sources: Research Data (2021)

This implied that User Performance improved with increase in use of IS by the users hence improving the County Government performance. The study finding concurs with Ali and Younes (2013) that user performance may be judged with regard to the speed alongside precision with which users can access the information they need from a system. Similarly, Orlovska, Wickman and Soderberg (2018) acknowledged that several features of user performance, including efficiency or effectiveness, are dependent on the support system's capability to execute its tasks.

Inferential Statistics

In assessing the variables relationship, the researcher used Pearson's product moment correlation analysis as illustrated below;

Table 7: Correlations Analysis

		User Performance	IQ	SQ	User Characteristics	TTF
Performance of User	Pearson Correlation	1				
	Sig (2 tailed)					
IQ	Pearson Correlation	0.715	1			
	Sig (2 tailed)	0.0015				
SQ	Pearson Correlation	0.751	0.316	1		
	Sig (2 tailed)	0.0011	0.2110			
User Characteristics	Pearson Correlation	0.512	0.321	0.41	1	
	Sig (2 tailed)	0.0025	0.7660	0.0017		
TTF	Pearson Correlation	0.650	0.561	0.321	0.211	1
	Sig (2 tailed)	0.0019	0.0023	0.001	0.0056	

Sources: Research Data (2021)

The data presented before on IQ, SQ, User Characteristics and TTF was calculated by getting the averages of each factor into single variables per factor. At a confidence interval of 95% and 2-tailed confidence level of 5%, Pearson's correlations analysis was conducted. The above table shows the correlation matrix between the factors (IQ, SQ, User Performance and TTF) and User Performance in Machakos County Government. From the above table, a positive relationship exists between User performance in Machakos County Government and IQ, SQ, User Characteristics and TTF of magnitude 0.715, 0.751, 0.512, and 0.650 respectively. This shows that a correlation exists between IS Implementation and User Performance in Machakos County Government the highest correlational value being for SQ and lowest value being for User Characteristics. At 95% confidence level, all the variables showed a significant p-value ($p<0.05$). The significance values for relationship between IQ, SQ, User Characteristics and TTF were 0.0015, 0.0011, 0.0025 and 0.0019 respectively. Thus the most significant variable was System Quality followed by IQ, then TTF and lastly User Characteristics. The study finding concurs with Ali and Younes (2013) that the impact of IS on users indicated that SQ and IQ are very important factors that affect the benefits of use as the users think that the IS ability is to provide high quality information.

Regression Analysis

The researcher also performed a multiple regression analysis to examine statistical relationship between variables (independent) on User Performance in Machakos County Government. The extent to which dependent variable changes is explained by coefficient of determination can be illustrated by the variation percentage in the dependent variable (Performance of users in Machakos County Government) that is illustrated by the four independent variables (IQ, SQ, User Characteristics and TTF) or independent variable change.

Table 8: Regression Coefficients

Model	**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
	B	Std. Error	Beta		
1 (Constant)	0.142	1.2135		1.543	0.0154
IQ	0.771	0.3425	0.151	3.215	0.0115
SQ	0.834	0.1023	0.155	4.212	0.0135
User Characteristics	0.593	0.2177	0.117	3.256	0.1224
TTF	0.623	0.2231	0.153	3.415	0.2225

Sources: Research Data (2021)

The regression equation from the results in the table was;

User Performance in Machakos County Government = $1.142 + 0.771X_1 + 0.834X_2 + 0.593X_3 + 0.623X_4$.

From the above regression model, holding IQ, SQ, User Characteristics and TTF to zero constant, User Performance equaled to 0.142. From the findings, an increase in IQ by a unit would result to change in User Performance by 0.771, while change in SQ by a unit would result into increase in User Performance by 0.834, while an increase in User characteristics by a unit would result to

change in User Performance by 0.593 and finally change in TTF by a unit would result into an increase in User Performance by 0.623. Thus at 5% significance level and 95% confidence level it can be concluded that all the significance values were below 0.05 hence acceptable to make a decision as all the values were statistically significant. The study finding concurs with Ali and Younes (2013) who demonstrated the importance of all the factors mentioned above and explored the relative contribution of each factor to the user performance.

Analysis of Variance

Table 9: ANOVA Test

Model	Squares Sum	Difference	Mean Square	F	Sig
Regression	0.004	22	0.001	3.615	0.017[b]
Residual	0.062	193	0.018		
Total	0.069	215			

Sources: Research Data (2021)

ANOVA statistics from the above table show that the processed data (population parameters), had a level of significance of 0.017 showing a conclusion can be made from the data on the parameter of the population as the value of significance (p-value) is less than 5%. Critical value was less than the calculated (2.262 < 3.615) indicating that the four variables had a great impact on User Performance in County Government of Machakos. The value of significance was below 0.05 hence forecasting could be done as the model was fit and statistically significant. The study finding concurs with Ali and Younes (2013) who demonstrated the importance of all the factors mentioned above and explored the relative contribution of each factor to the user performance.

Model Summary

Table 10: Summary of the Model

Model	R	R^2	Adjusted R^2	Std. Error of Estimate
1	0.9028	0.8150	0.7210	0.5914

Sources: Researcher (2021)

Independent variables that were examined, illustrate only 81.5% of IS implementation and Performance of the users in Machakos County Government as shown by the R^2. Thus meaning that other variables not included in this study contribute 18.5% of IS Implementation and User Performance in Machakos County Government. As such, further study should be done to examine the other variables (18.5%) that affect User Performance in Machakos County Government. The study finding were in line with Ali and Younes (2013) who noted that most areas of research require further developments hence need for studying the impact of user characteristics on individual performance.

Conclusion

The research deduced that IS is a major factor influencing user performance in Machakos County Government, Kenya. It demonstrated that there exists a strong relationship between independent variables (IQ, SQ, User Characteristics and TTF) and dependent variable (User Performance in Machakos County Government, Kenya). With the digital era, technology is a mandatory requirement for each organization which needs to improve its employee's performance as organizations with greater technological infrastructure improve the SQ, improving the individual and organizational development of the company. Implementation of IS would lead to increased user Accuracy, Effectiveness, Efficiency, Creativity and Speed while performing their duties.

All the factors mentioned above and explored had a positive impact on user performance. According to users, IS produces information whose quality is high, which in turn decreases errors and solves problems which arise from performance as soon as they happen. On top of that, the TTF and SQ play a key role in increasing the performance quality and raise work volume of users as well as user characteristics which also affected their performance though not much significant compared to the other factors. IS adoption helped users to finish their job more effectively and improved their productivity. Satisfied users are highly motivated to increase IS usage when the satisfaction and use are leading to better outcome on their performance.

The project found out that IS implementation had a great impact on the performance of users which in return impacts the organizational performance. As such this project recommends that County Governments should invest heavily on IS without fear as this will improve their employee's performance and in return improve the performance of the County Governments in terms of service delivery to the citizens. Considering user needs and requirements for users working in a given industry can help designers and practitioners of IS in designing and implementing IS.

The management should consider the impact of the proposed system on user performance before making investment decisions prior to purchasing IT. The IT infrastructure setup while implementing the IS should be considered as this greatly affects the SQ which eventually affects the performance of the users. County Governments should invest in new technology every time there is an upgrade so as to avoid some of the challenges experienced by the users.

Further research should establish the effect of user characteristics on individual performance as it seems interesting. Researchers should also find out the failure of IS Implementation among County Governments.

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Data Availability Statement: The data presented in this study are available on request from the corresponding author. The data are not publicly available due to privacy.

Conflicts of Interest: The authors declare no conflict of interest.

References

Abugabah, A., & Sanzogni, L. (2014). Exploring Factors Affecting End-user Performance of Information Systems. International Journal for Infonomics, 7(3), 1-18. http://dx.doi.org/10.20533/iji.1742.4712.2014.0113

Ali, B. M., & Younes, B. (2013). The impact of information systems on user performance: an exploratory study. Journal of Knowledge Management, Economics and Information Technology, 3(2), 128-154.

Al-Mamary, Y. H., Shamsuddin, A., & Aziati, N. (2014). Factors affecting successful adoption of management information systems in organizations towards enhancing organizational performance. American Journal of Systems and Software, 2(5), 121-126. http://dx.doi.org/10.12691/ajss-2-5

Alshikhi, O. A., & Abdullah, B. M. (2018). Information quality: definitions, measurement, dimensions, and relationship with decision making. European Journal of Business and Innovation Research, 6(5), 36-42.

Arning, K., & Ziefle, M. (2007). Understanding age differences in PDA acceptance and performance. Computers in Human Behavior, 23(6), 2904-2927. https://doi.org/10.1016/j.chb.2006.06.005

Bahari, A., & Mahmud, R. (2018). Impact of system quality, information quality and service quality on performance. In 34th Annual Computer Security Applications Conference (Vol. 3, No. 2, pp. 1-6). http://repo.unand.ac.id/5029/1/Asniati%20Bahari-Roslinah%20Mahmud.pdf

Benard, R. K., & Nzuki, D. (2018). Information Communication Technology Considerations and Revenue collection in Nairobi city county, Kenya. International Journal of Social Sciences and Information Technology, 4(10), 21-32.

Despont-Gros, C., Fabry, P., Muller, H., Geissbuhler, A., & Lovis, C. (2004). User acceptance of Clinical Information Systems: A methodological approach to identify the key dimensions allowing a reliable evaluation framework. In MEDINFO 2004 (pp. 1038-1042). IOS Press. https://doi.org/10.1016/j.jbi.2004.12.004

Gor, K. E. N. N. E. T. H. (2015). Factors Influencing the Adoption of Online Tax Filing systems in Nairobi, Kenya. The Strategic Journal of Business and Change Management, 2(77), 906-920.

Hernandez, B., Jimenez, J., & Martin, J. (2008). Business acceptance of information technology: Expanding TAM using industry sector and technological compatibility. International Journal of Enterprise Information Systems (IJEIS), 4(4), 62-79. https://doi.org/10.4018/jeis.2008100105

Laudon, K. C., & Laudon, J. P. (2011). Essentials of management information systems. https://doi.org/10.15837/ijccc.2007.1.2342

Mugenda, O. M., & Mugenda, A. G. (2003). Research Methods: Qualitative and Quantitative Approaches.(Revised edition), Nairobi.

Mutuku, M. K. (2020). A Meta-Analysis of User Perception and Use of Online Digital Platforms in Kenya: Evidence from E-citizen Platform, Kenya. INTERNATIONAL JOURNAL OF MANAGEMENT &Amp; INFORMATION TECHNOLOGY, 15, 35–42. https://doi.org/10.24297/ijmit.v15i.8721

Ndonye, A. A., & Genga, P. A. (2019). Human Resource Management Practices and Retention of Employees in Machakos County, Kenya. International Journal of Current Aspects, 3(VI), 235-250. https://doi.org/10.35942/ijcab.v3ivi.87

New Tactics in Human Rights (2022, March 20) Information and Communication Technology and its Role in Government Transparency and Citizen Participation | New Tactics in Human Rights. https://www.newtactics.org/conversation/information-and-communication-technology-and-its-role-government-transparency-and

Novi, T., Zaki, B., & Bambang, H. (2017). The influence of information system quality on the organization performance: a modification of technology-based information system acceptance and Success Model. Russian Journal of Agricultural and Socio-Economic Sciences, 72(12). https://doi.org/10.18551/rjoas.2017-12.13

Orlovska, J., Wickman, C., & Söderberg, R. (2018). Big Data Usage Can Be a Solution for User Behavior Evaluation: An Automotive Industry Example. Procedia CIRP, 72, 117-122. https://doi.org/10.1016/j.procir.2018.03.102

Paton, C., & Muinga, N. (2018). Electronic health records: a case study from Kenya. Pathways Prosper. Comm. Backgr. Pap. Ser. no, 12. https://doi.org/10.2196/preprints.12995

Tam, C., & Oliveira, T. (2016). Performance impact of mobile banking: using the task-technology fit (TTF) approach. International Journal of Bank Marketing. https://doi.org/10.1108/ijbm-11-2014-0169

Urbach, N., & Müller, B. (2012). The updated DeLone and McLean model of information systems success. In Information systems theory (pp. 1-18). Springer, New York, NY. https://doi.org/10.1007/978-1-4419-6108-2_1

Widagdo, P. P., & Susanto, T. D. (2016, October). The effect of task technology fit toward individual performance on the Generation X (1956–1980) using information technology. In 2016 2nd International Conference on Science in Information Technology (ICSITech) (pp. 181-186). IEEE. https://doi.org/10.1109/icsitech.2016.7852630

Widiastuti, R., Haryono, B. S., & Said, A. (2019). Influence of system quality, information quality, service quality on user acceptance and satisfaction and Its impact on net benefits (study of information system users lecturer performance load (BKD) in Malang State University). HOLISTICA–Journal of Business and Public Administration, 10(3), 111-132. https://doi.org/10.2478/hjbpa-2019-0032

Zaremohzzabieh, Z., Samah, B. A., Bolong, J., Muhammad, M., Abdullah, R., D'Silva, J. L., & Shaffril, H. A. M. (2016). A model of information systems success for assessing the effectiveness of statistical learning tool on university students performance in statistics. Mediterranean Journal of Social Sciences, 7(2), 271. https://doi.org/10.5901/mjss.2016.v7n2p271

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