
TECHNOLOGY AND SECURITY IN KAMPALA DISTRICT: A CASE STUDY OF KAWEMPE MUNICIPALITY

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ABSTRACT

The following goals served as the framework for the study, which focused on technology and security in the Kampala district: to determine the degree of technological equipment and security in the district; to determine the degree of technological infrastructure and security in the district; and to determine the connection between electronic devices and security in the district. Target population participants included local residents who were surveyed as primary those surveyed, the chairman of the local council III, and the information and communication officer of the Kampala District who additionally served as a key the informant, totaling a hundred participants in order to provide the investigators with more information.

According to the study's conclusions, security and technology are related in Kampala District. Technological and security have a substantial positive correlation—0.908, according to Pearson's coefficient of correlation—between them. The association is considered significant at the 99% confidence level because the p-value is less than 0.05. This suggests that using technology to improve security in Kampala District is a good thing. The strong association between security levels and the adoption of technology for security suggests that these two factors are correlated. In all sections of Kampala, but especially in the Kawempe Municipality, surveillance systems that can recognize more sensitive objects and public areas must be deployed as soon as possible.

Encourage information sharing and dialogue among all social agencies. For example, all agency staff should have an email address to discuss and share ideas online in group discussions.

Key words: technology and security

Background of the study

The world has undergone a revolutionary transition as a result of advancements in information and communication technology (Bryan, 2013). Every element of life has

been greatly impacted by technology in many different ways. It is now an essential component of all relationships. Similar to how relationships between states and their affairs have changed as a result of technology (Bryan, 2013).

In response to emerging technology, international collaboration was seen as being necessary as early as the International Telegraph Union (ITU) was founded in 1865. In the years that have followed, technological advancement has opened up new possibilities for multilateral cooperation in the fields of global leadership, peace and conflict resolution, administration, and relationships between states and societies.

The UN and other multinational institutions, however, have occasionally found it difficult to keep up with the rate of development (Vining, 2006).

Vining (2006) defined technology as science or knowledge applied practically to address issues or create helpful instruments. An array of stakeholders must be considered in any discussion about multilateral collaboration on new technology. Particularly in the private sector and civil society, actors have frequently taken the lead in creating and pioneering novel applications of these technologies as well as in governing their usage. For instance, many people believe that international Internet governance should continue to be conducted mostly outside of multilateral and governmental institutions (Vining, 2006). In adapting to new technologies, the UN must determine where it can play a useful role and where existing mechanisms and other actors are better placed (Vining, 2006).

In addition to determining its role in tackling new technologies, the United Nations report from 2002 sought to incorporate this technology into its other areas of endeavor. Some aspects of this integration are further along than others. For instance, the 2015 results of several significant UN conferences highlighted the expanding significance of technology in sustainable development. The UN is more advanced in using new technologies into its work in other areas, such as peace and security (United Nations report, 2002).

It is commonly acknowledged that new technologies, especially information and communication technologies (ICTs), have the potential to help stimulate the economy

(Hacker & Vining, 2006). According to estimates, the gross domestic product (GDP) of low- and middle-income nations rises by 1.38 percent for every 10 percent improvement in broadband penetration. But there is still a significant disparity in access to ICTs among established countries and emerging nations, as well as among affluent and poor as well as between men and women within nations (Hacker & Vining, 2006).

Statement of the problem

Technology development has made security threats increasingly advanced and complicated, which has boosted need for information security solutions. The Kawempe Municipality in the Kampala District is not immune to security challenges, like as theft, cyberattacks, and terrorism, among others. This study aims to look into the connection between technologies and security in Kawempe Municipality because the use of technological devices to improve security is garnering more and more attention. The study's objectives are to determine the community's present security concerns, assess the degree to which technology is being used for security, and look into the connection between utilization of technology and protection.

Specific Objectives

1. To find out the level of technological devices and security in Kampala District. A case study of Kawempe municipality
2. To find out the level of technology systems and security in Kampala District. A case study of Kawempe municipality
3. To find out the relationship between technology and security in Kampala District. A case study of Kawempe Municipality

Research questions

1. What was the level of technological devices and security in Kampala District. A case study of Kawempe Municipality?
2. What was the level of technology systems and security in Kampala District. A case study of

Kawempe Municipality?

3. *What was the relationship between technology and security in Kampala District. A case study of Kawempe Municipality?*

Methodology

Research Design

The descriptive survey design was chosen as the study method. This was so that it could be determined how frequently the phenomenon occurred and whether there were any existing correlations between the variables. The descriptive survey design was used because the cross-sectional method was helpful in getting a sense of the overall situation at the time the study was conducted. Cross-sectional studies can be conducted for relatively little money and are simple to interpret (Kumar, 2005).

Target Population

Kawempe was a Municipality in Kampala capital city in Kampala District in central region in Uganda with an estimate population of 388,665 (UBOS, 2014) 52% of whom are women and 94,202 households and it is the municipality with the high mortality and morbidity burden.

As a result, this group was too huge for the investigator, who chose a target population of 64 in order to obtain real and correct information.

Target population participants included local residents who were surveyed as primary participants, the chairperson of the local council III, and the information and communication officer of the Kampala District who was also studied as a key informant, totaling a hundred participants in order to provide the investigator with more information. The study included primary participants because they represented the group in Kawempe Municipality that was most impacted by technology and its effects on security at the local level.

Sampling procedures

Sample size

A sample is a small subset of the total population (George & Mallery, 2003). A sample was used to Kawempe Municipality which was chosen among municipalities in Kampala District.

The study sample comprised of 80 respondents out of 100 of the total population Therefore, 78 respondents were local members, 01 Local council III Chairperson, and 01 information and communication officer as the parent population. This was because the population more or less shared similar socio-demographic characteristics and also due to resource and time constraints and were easily accessible in the area. The respondents interviewed included local members, Local council III Chairperson, and the information and communication in Kawempe Municipality

Table 1; shows different Categories of the People in the Study sample with their Sizes.

Population (N)	Target	Sample
Local members	98	78
Local council III	01	01
Information and	01	01
Total	100	80

Sampling techniques

Simple random sampling

The respondents in this study were the local members as primary respondents. Simple random sampling was used to select respondents in the group of local members. A total of 78 local members from Kawempe Municipality participated in the study and their selection involved simple random sampling and specific attention was paid to inclusion of both male and female members in the study area.

Purposive Sampling

Field research or exploratory research both use this kind of sampling. Only those people who are pertinent to the investigation's design are chosen by objectives sampling, which is somewhat less expensive, more easily available, and more accessible. In addition, there is no way to guarantee that the sample is actually accurately representing the population, therefore the ability of the investigator to evaluate the population's constituent parts is given additional weight.

The local council III chairperson and the knowledge and communications officer were thus taken into consideration as the investigator's responses using this methodology. With purposive sampling, the researcher hardly knows whether the cases selected do represent the population or not. As mostly sampling problem is being addressed with a specific plan in mind, most of the sampling methods may be considered purposive in nature.

Data collection methods

Any study requires appropriate data collection methods with which to collect the necessary information that can ably answer the study questions (Mugenda & Mugenda, 2003). Lewis (2003) gives a distinction between primary and secondary data and each set of data requires an appropriate and relevant collection technique.

Questionnaire method

The researcher used the questionnaire as the major primary data collection in this study. Questionnaire is referred to as a set of questions used for collecting data from respondents in order to carry out the researcher. The researcher prepared 78 questionnaires for the local members, 01- for Local council III Chairperson and 01-for the information and communication officer to supplement the interview as the key informants.

Interview guides

The tool made use of a primary informational guide that asked questions about the

study's unique goals. This aided in gathering the qualitative data required for this investigation.

Data was gathered using brief interview guidelines for the local council III chairperson, the information and communication officer, and the local members. The factual material on particular issues pertaining to the study was presented before the interview program began. Information on the interaction of technology and security in Kawempe Municipality was gathered using an interviewing guide. In this strategy, knowledgeable participants were chosen to tell the investigators about particular study-related concerns.

Data Analysis

Data analysis, according to (Kothari, 2010), is the process of reviewing the information gathered in a survey and drawing conclusions and inferences. It entails carefully examining the information gathered and looking for relationships between the data categories (Kombo & Tromp, 2006; Kothari, 2010). To find and correct mistakes made by participants, data was modified. The answers provided to the questions were then coded into several categories. The data were analyzed using descriptive statistics like distributions of frequencies and proportions. The responses were all grouped according to their theme categories and their contents were evaluated for qualitative data using content analysis. Presentation was done on tables, and figures. Statistical Package for Social Sciences (SPSS) software was used to aid in the analysis of data.

RESULTS

Respondent's Background Characteristics according to their Categories

Beliefs are the background characteristics of respondents in different categories. These were identified in order to relate them to issues concerned with the relationship between technology and security in Kawempe municipality in Kampala District

Table 2: Categories of local members according to their gender, age and marital status

<i>Item</i>	<i>Responses</i>	<i>Frequency (N=78)</i>	<i>Valid percentage (%)</i>
<i>Gender</i>	<i>Male</i>	57	73
	<i>Female</i>	21	27
<i>Total</i>		78	100
<i>Age</i>	<i>18-25 yrs.</i>	16	20
	<i>26-35 yrs. Above</i>	42	54
<i>Total</i>		78	100
<i>Marital Status</i>	<i>Married</i>	55	70.5
	<i>Single</i>	23	29.4

<i>Total</i>		78	100
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Table 2; shows the majority of the local members interviewed (representing 73%) were male's while females were 27% of the total local members or community members. The table also shows that local members fell in different age categories for instance, 18-25 years were 20%, 26-35 years were 54% while those above 35 years (26%) were also represented because they were considered as the old local members who had more knowledge about technology and security in Kawempe Municipality. This was because local members were randomly selected from different sample in Kawempe Municipality.

Background factors of other Key Informants

Table 3: Background factors of Key informants in the sample

<i>Item</i>	<i>Responses</i>	<i>Frequency(N=02)</i>	<i>Valid percentage</i>
<i>Gender</i>	<i>Male</i>	<i>01</i>	<i>50</i>
<i>Total</i>		<i>02</i>	<i>100</i>
<i>Age</i>	<i>18-25</i>	<i>00</i>	<i>00</i>
	<i>25-35</i>	<i>01</i>	<i>50</i>
<i>Position of responsibility</i>	<i>LC III Chairperson</i>	<i>01</i>	<i>100</i>
	<i>communication</i>	<i>01</i>	

As regards to the findings in table 3 above, it can be noted that the respondents of the key

informants were equivalent enough to one another where the ratio of males were (50%), and the ratio of females were also 50% which means that the findings were representative enough for the researcher.

This was carried out methodically to collect data directly related to the research issues. Regarding their ages, each response fell into one of two categories: the LC III Chairperson fell into the 50% between 25 and 35 age range, while the communication officer fell into the 50% over 35 age range.

On the other hand, when the investigator questioned participants if local residents had experienced any negative effects of technology in the area, 85% of the participants answered affirmatively (YES), while just 15% responded negatively (NO). This suggests that the majority of answers can be relied upon to comprehend how technology and

security interact in Kawempe Municipality in the Kampala District.

Table 4; showing the education level of respondents in Kawempe Municipality

Age of Respondents	Frequency (f)	Valid Percentage (%)
Ordinary level	21	21.2
Advanced level	13	16.2
Diploma	17	26.2
Degree	28	35
Masters	01	1
Other	00	00
Total	80	100

The table 4 shows that most of the respondents possessed degrees because most of them were the local members who knew more information about security representing 35%, Diploma holders were

26.2%, ordinary level was 21.2%, advanced level was 16.2%, and finally Masters were only 1% while those belong to others were not represented at all. However, this did not stop the researcher from getting the valid findings basing on the research objectives

Table 5; showing occupation of respondents in Kawempe Municipality

Occupation	Frequency (f)	Valid Percentage (%)
Business men	43	54
Government workers	26	32
Farmers	08	10

<i>Others</i>	<i>03</i>	<i>4</i>
Total	80	100

The table 5 shows that most of the respondents were business men because most of them use CCTV cameras and other security devices in their own businesses representing 54%, government workers were 32%, farmers were 10%, those belong to others were also represented with 4% which means that the study was representative enough and the findings could be relied upon basing on the research objectives

Level of technological devices and security in Kampala District. A case study of Kawempe

Municipality

The table 6 shows the level of technological devices used in Kawempe municipality

<i>Response</i>	<i>Frequency (f)</i>	<i>Valid percentage (%)</i>
<i>CCTV cameras</i>	<i>48</i>	<i>60</i>
<i>Mobile phones</i>	<i>09</i>	<i>11</i>
<i>Laptops</i>	<i>05</i>	<i>6</i>
<i>Digital camera</i>	<i>03</i>	<i>4</i>
<i>Audio recording device</i>	<i>11</i>	<i>14</i>
<i>Video camera</i>	<i>04</i>	<i>5</i>
Total	80	100

According to the table 5 above, it indicated that most of the business men in Kawempe Municipality

use CCTV Cameras especially in supermarkets with the highest percentage of 60%,

followed by Audio recording device (14%), Mobile phones (11%), Laptops (6%), Video camera (5%), and lastly Digital camera with (4%).

One of the respondents revealed that in subsequent years, technological change has created new opportunities for multilateral cooperation in the areas of sustainable development, business performance, governance and state-society relations, peace and conflict, international security, and global governance. But at the same time, some business companies and other multilateral institutions have at times struggled to keep up with the pace of change.

Level of technology systems and security in Kampala District. A case study of Kawempe Municipality

The table 6 shows the technology systems used in Kawempe Municipality

<i>Response</i>	<i>Frequency (f)</i>	<i>Valid percentage</i>
<i>Free wave technologies limited</i>	12	15
<i>Think software limited</i>	09	11.2
<i>Friendliware technologies</i>	05	6.2
<i>CS Consults</i>	27	34
<i>Mercury group limited</i>	02	2.5
<i>Tera Tech (U) Ltd</i>	25	31
<i>Total</i>	80	100

Most technological systems were used in Kawempe municipality where CS Consults took

the largest percentage with 34%, followed by Tera Tech (U) Ltd (31%), Free wave technologies limited (15%), Think software limited (11.2%), Friendliware technologies limited (6.2%), and Mercury group limited (2.5%) with the few numbers of respondents. The table above also showed that the cyber security landscape becomes even more complex as new technologies reshape warfare. New technologies have made possible new methods of employing lethal force, such as armed unmanned aerial vehicles (UAVs), or drones, that pose new challenges.

Relationship between technology and security in Kampala District. A case study of Kawempe Municipality

Table 7: Correlation between technology and security in Kampala District

		Technology	Security
Technology	Pearson Correlation	1	.908**
	Sig. (2-tailed)		.000
	N	80	80
Security	Pearson Correlation	.908**	1
	Sig. (2-tailed)	.000	
	N	80	80
**. Correlation is significant at the 0.05 level (2-tailed).			

Source; Primary Data, 2022

The relationship between technology and security in Kampala District is depicted in the table. Technology and security have a substantial positive correlation—0.908, according to Pearson's coefficient of correlation—between them. The association is statistically significant at the 99% confidence level because the p-value is less than 0.05. This suggests that using technology to improve security in Kampala District is a good thing. The strong association between security levels and technological use for security suggests that these two factors are correlated. This conclusion emphasizes the need of investing in technical solutions for addressing security concerns and has significant implications for both policymakers and professionals in improving security in the

Kampala District.

Conclusion

It is obvious that technological innovation is crucial to a country's national security. Information technology's increasing relevance nowadays not only creates new prospects for the benefit of contemporary society, but also poses problems to security technique and approach. Society is under risk from outside threats. Modern gathering information tools must be used by security agencies including the police, military, and security forces to handle security concerns. The nation's security can be considerably improved by learning from other nations' experiences and identifying internal security of information technologies concerns.

Recommendations

In all sections of Kampala, particularly in the Kawempe Municipality, surveillance systems that can recognize more sensitive objects and public areas must be deployed as soon as possible. Encourage interaction and knowledge exchange between all social service providers. For instance, all agency employees should have email addresses so they may communicate and exchange thoughts in online group discussions.

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