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Abstract

Technology has become a key global factor in development interventions by various actors, including faith-based organizations, particularly influencing decision-making and operational conditions. This study assessed technology's influence on faith-based development interventions in Kenya, focusing on three objectives: examining technology's influence in planning development interventions, assessing its impact on implementation, and evaluating challenges faced by faith-based organizations in applying technology in Nairobi City County's Lang'ata sub-county between 2021-2023. The study employed a descriptive survey design incorporating structuralist, liberal-pluralism, and hypodermic needle theoretical perspectives. Using purposive sampling, 115 respondents were selected from an estimated population of 1,150 employees in faith-based organizations. Data was collected through qualitative and quantitative methods and analyzed using SPSS version 23. The findings revealed that while technology enhanced planning through improved mapping, data collection, and project assessment, limited training and technical expertise hindered its full utilization. During implementation, technology streamlined communication and monitoring, but inadequate infrastructure and financial resources constrained its impact. Organizations faced challenges including underutilization of technological tools, insufficient funding, and technical difficulties. The study concluded that technology's effectiveness in transforming development interventions depends on overcoming operational and financial constraints. Recommendations include targeted capacity building, increased technology infrastructure investment, and tailored training programs. These findings are relevant for faith-based organizations, policymakers, development practitioners, academics, community leaders, and technology solution providers in the development sector.

1. Introduction

Technology has become an increasingly critical factor in shaping development interventions by various actors, including faith-based organizations (Gershon, 2022). The complex interconnectedness of today's international system and the emergence of civil society organizations, including faith-based development agencies, have a direct connection to technological advancement (Alharbi, 2019). In recent times, technology has produced influential tools like mobile-money platforms that significantly impact how development organizations work to improve the lives of marginalized populations.

In Kenya specifically, efforts have been made to leverage information and communication technology (ICT) to foster public participation in development, though questions remain about its impact on development objectives (Ambeyi, 2021). As of 2021, Kenya had a 40% internet penetration rate, with 21.75 million internet users and 59.6 million mobile connections. However, a significant digital divide exists, with 44% of people in urban areas having internet access compared to only 17% in rural areas. This divide extends to development organizations, including faith-based ones, where basic digital skill gaps persist. Heidi and Mandy (2022) define this digital divide as the technological stratification between those who easily access digital information through computers, smartphones, and the internet, and those who do not. Faith-based organizations in Nairobi face unique challenges and opportunities in adopting and implementing technology for development interventions. According to Olivier et al. (2015), these organizations are characterized by the application of religious teachings and faith in determining their development interventions, which adds another layer of complexity to technology adoption. The rapid evolution of technology, coupled with resource constraints and varying levels of technical expertise among staff, creates both opportunities and challenges for these organizations. Understanding how technology influences their planning and implementation of development interventions, particularly in Nairobi's Lang'ata sub-county, becomes crucial for improving development outcomes and organizational effectiveness.

Technology has become an influential tool in shaping public policy and development interventions, though debate exists about the extent of its impact, especially in developing countries (Cohen, 1994; Mermin, 1997). In Africa, limited technological connectivity has contributed to ongoing human rights violations and development challenges, despite the presence of many civil society organizations (MFA, 2014; World Data, 2023). While technology has been promoted at various levels of development work, its specific influence on faith-based organizations has not been well researched or articulated (Potter, 2004). The importance of communication media technology is evident not only in development organizations but also for other agencies in global sustainable development efforts. Real-time communication can be crucial in guaranteeing that development organizations have public support through dependable and efficient measures like well-established media structures. Nations are now learning to use various media development instruments to further their objectives and interests.

In Kenya, efforts have been made to utilize ICT to foster public participation in development, but questions remain about its impact on development objectives (Ambeyi, 2021). As of 2021, Kenya had a 40% internet penetration rate, with 21.75 million internet users and 59.6 million mobile connections. However, a significant digital divide exists, with 44% of people in urban areas having internet access compared to only 17% in rural areas. This divide extends to development organizations, including faith-based ones, where basic digital skill gaps persist. Heidi and Mandy

(2022) define the digital divide as the technological stratification between those who easily access digital information through computers, smartphones, and the internet, and those who do not. This divide can result from inadequate communication infrastructure, high technology costs, shortcomings in local computer networks, or lack of digital literacy.

Limited research is available on technology uptake among faith-based organizations in Nairobi, Kenya. This study therefore proposes to analyze how technology influences the operations of faith-based development organizations, specifically focusing on its role in shaping development interventions in Kenya from 2021 to 2023. By addressing this research gap, the study aims to provide insights into how these organizations can leverage technology as a positive tool for participatory development interventions. The study examined the influence of technology on planning and implementation of development interventions, as well as the challenges faced by faith-based organizations in applying technology to their development activities.

2. Research Objectives

- i. Examine the influence of technology in planning for development interventions among faith-based organizations in Nairobi City County, between 2021-2023.
- ii. Assess the influence of technology in the implementation of development interventions among faith-based organizations in Nairobi City County, between 2021-2023.
- iii. Evaluate the challenges experienced by the faith-based organizations as they apply technology in the implementation of development activities in Nairobi City County, between 2021-2023.

3. Literature Review

3.1 Theoretical Review

Structuralism Theory

The structuralism theoretical perspectives consider technology as an element in the formulation of development ideas, plans, and their execution (Ludovico, Adam & Bart, 2021). The role of technology is critical in shaping opinions and formulating development policies and plans. The proponents of this school of thought, like Bernard Cohen, contend that technology actively influences development policy and implementation decisions. ICT functions as a participant, an impartial observer, and a watchdog (Cohen, 1963). This theory goes on to say that when the media-technology may not always succeed in shaping public opinion, it is often successful in shaping the readers' perceptions, and this includes readers in the area of faith-based development work. The theory assumes that readers are uninformed and have no prior knowledge about the development interventions. The importance of this theory in the study is the fact that it offers explanations and helps in analyzing the influence of technology in faith-based development implementation. It shapes opinions of the citizenry as well as policy makers in coming up with innovative development interventions (Johnn, Kristina, & Bjorn, (2023). This theory have an important contribution to this study as it tries to bring out the linkages between technology and development idea formation. It therefore aided in bringing out the differences between the development interventions of the advanced and the third-world countries.

Liberal Pluralism Theory

Another theory with an explanatory potency of explaining the influence of technology in the implementation of the development interventions is the liberal-pluralism which addresses technology as a liberal choice for development (Sqapi, 2023). This approach maintains that no single framework dominates the execution of development interventions and keeps the others out. Proponents like Gitling (1980), claim that society is amenable to different kinds of competition. The role that media technology, and particularly social media, plays is that of a broader public participation and engagement in all phases of a development intervention. Different perspectives will surface because of the virtue of ownership of the development activities in a market economy. According to this theory, the public that consumes technology media is a diverse group of people who use technology to suit their needs rather than a passive entity that passively absorbs it (Watts 1997).

Further to these two theories, literature presents another predominant theoretical concept relating to the influence of technology in the planning and implementation of development interventions. The hypodermic needle theory comes out strongly in proposing that information communication and technology have strong influence on the members of the public who are the targeted development populations. Because of this, media technology is thought to have a significant impact on changing behavior for sustainable development. According to University of Twente (2015), the theory states that technology used in social media or technology media's effect on large number of people by acting like a hypodermic needle, which is to say "shooting" or "injecting" the populace with appropriate messages meant to elicit a desired response. Therefore, the theory is important to the examination of the influence of technology on the implementation of development interventions in that it helps explain what shapes development activities through public engagement and participation.

Hypodermic Needle Theory

The hypodermic needle theory alludes to a strong and direct information flow between the sender and the recipient, by the use of technology media or gadgets (Janusz, 2023). The hypodermic needle model proposes, using similarly potent imagery, that media messages are thrust directly into an audience that is passive and instantly impacted by them. According to the theory, technology can be a risky tool for spreading ideas because the audience or recipient cannot stop the message's impact. The theory holds that there is no way to avoid the message's impact in these models in light of this claim. People are perceived as passive and as the target of a lot of media content. Due to the lack of alternative information sources, people ultimately come to believe what they are told (University of Twente, 2015). This makes the theory potent in explaining what media technology dynamics and interactions induces certain responses from the development stakeholders.

The challenge with this theory however, is that it doesn't espouse the role of technology as an instrumental route used by the development actors across the public leaders' divide or by the non-governmental organizations in propagating a campaign on the need to pursue a given development interventions or prosecuting the particular development interventions. What the theory thus fails to contextualize is the instrumentalist nature of technology in furthering a course of a third party.

In response to the second objective, liberal pluralism investigates how technology affects the way development interventions are carried out. This theory shows how technology improves the execution and management of development initiatives through inclusivity and stakeholder

involvement, highlighting the importance of various stakeholders and the collaborative processes made possible by technology.

The Hypodermic Needle Theory assesses the third goal by examining the difficulties religious institutions encounter while implementing technology. This idea looks into how public perception is affected by technological communication and how successful technology is at overcoming challenges encountered when carrying out development initiatives. When combined, these ideas offer a thorough framework for comprehending the different ways that technology affects development interventions in religious organizations.

3.2 Empirical review

Technology has fundamentally transformed how development organizations operate and implement interventions. According to Cohen (1994) and Mermin (1997), while technology has become an influential tool in shaping public policy and development interventions, debate exists about the extent of its impact, especially in developing countries. The development initiatives are responsible for managing their knowledge base and stakeholder perceptions, with technology playing a crucial role in this process. Gelb (2001) notes that the more effectively development resources and finances are managed through technology, the greater the impact on systems and structures favorable to development goals. This is particularly relevant in the African context, where Omolo (2009) observes that development interventions comprise collaborative partnerships and information exchange, mostly using technology to advance the interests of marginalized populations.

The role of technology in development planning and implementation has evolved significantly. Naveh (2002) describes a complex process where technology affects policy by being part of the environment in which development plans are made and constitutes the framework for stakeholder networking. Hulme (1996) adopts a more pragmatic stance, arguing that technology can influence both directly, by persuading decision-makers, and indirectly, by shaping public opinion. This dual influence has become more pronounced in the 21st century, with Eban (1998) noting that technological innovations have made it possible to shape perceptions and determine interventions through global news channels and digital platforms.

Faith-based organizations face unique challenges in technology adoption. Olivier et al. (2015) highlight how these organizations must balance religious values with technological advancement in their development work. The application of technology in faith-based organizations is further complicated by what Heidi and Mandy (2022) describe as the "digital divide" - the technological stratification between those who can easily access and use digital tools and those who cannot. This divide is particularly evident in developing countries, where Korolov & Korolov (2022) note that infrastructure limitations, resource constraints, and skill gaps can significantly impact technology adoption and utilization.

According to the Center for Digital Technology and Management (2023), accelerating change in five key areas - geopolitical development, institutions, participation, dialogue, and leadership - shows how breakthrough technologies affect development interventions. However, Global Risks (2023) cautions that rapid technological adoption can create new vulnerabilities, particularly in developing countries where infrastructure and capacity may be limited. Johnn, Kristina, & Bjorn (2023) emphasize the importance of understanding both the functional and structural scope of technological innovation systems in development contexts. This is particularly relevant for faith-based organizations, which according to Hatem, Ker, & Mitchel (2020), must navigate the complex

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intersection of technological advancement, organizational capacity, and development objectives while maintaining their faith-based identity and mission.

3.3 Conceptual Framework

Mugenda and Mugenda (1999), views the conceptual framework as comparable to a map that helps to give coherence to a research study. It is an intermediate theory in a diagram form that tries to connect the variables being studied. Kombo and Tromp (2006) development organizations that a conceptual framework has to give an explanation of the relationship between interlinked concepts and help a researcher to have organized thoughts and successfully complete an investigation. The aspects of the study's independent and dependent variables are depicted in the conceptual framework. Figure 1 displays the conceptual framework for the study.

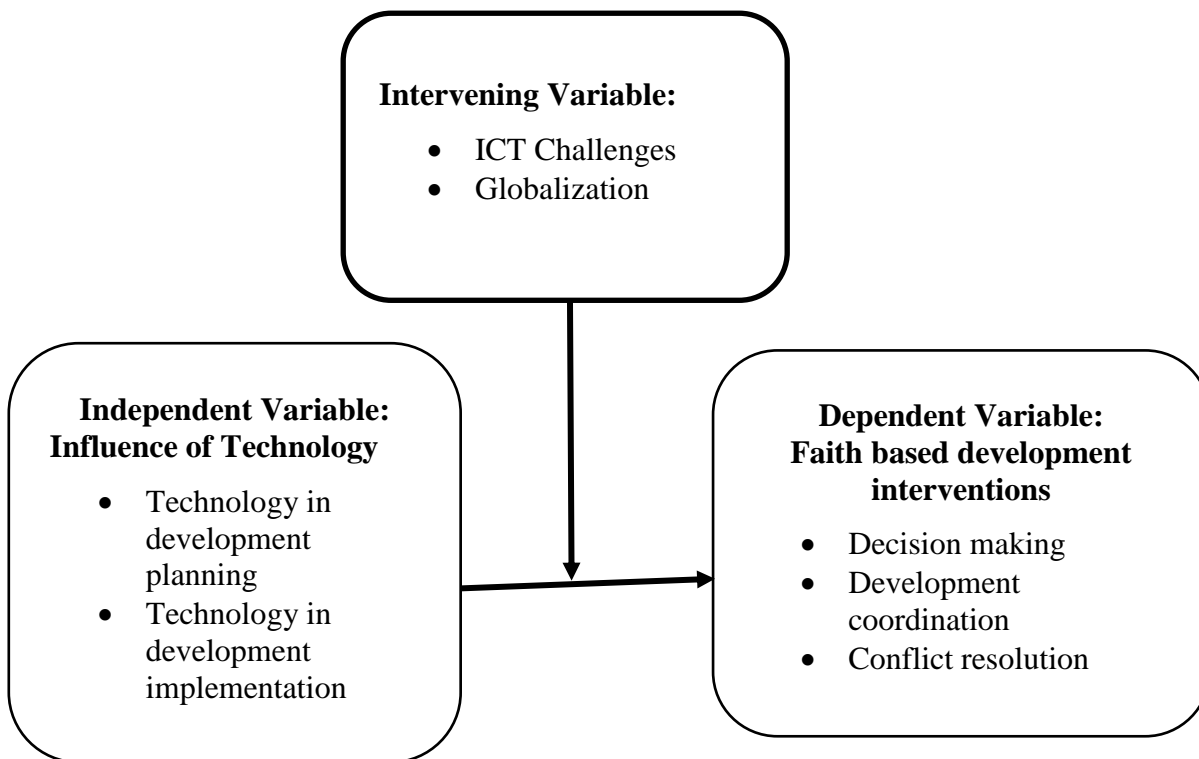


Figure 1: Conceptual Framework

Source: Author (2024)

4. Methodology

This study employed a descriptive survey design utilizing both quantitative and qualitative data collection methods. The research was conducted in Nairobi City County's Lang'ata sub-county, focusing on faith-based organizations engaged in development work. The target population comprised approximately 1,150 individuals working in faith-based development organizations, policy makers, academicians, and development experts.

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Using Yamane's (1967) formula, a sample size of 115 respondents was determined, representing 10% of the target population as recommended by Mugenda and Mugenda (2003). The study utilized purposive stratified sampling technique, with respondents stratified based on their job positions and organizational roles. Primary data was collected through questionnaires and key informant interviews, while secondary data was gathered through document analysis.

The research instruments underwent pilot testing at the Kenya NGO Coordination Board to evaluate their validity and reliability. Data analysis employed both qualitative and quantitative methods, with quantitative data analyzed using SPSS version 23 and qualitative data examined through content analysis. The study maintained high ethical standards, obtaining necessary approvals from Daystar University's Institutional Scientific and Ethics Review Committee (ISERC) and the National Commission for Science, Technology, and Innovation (NACOSTI). Participant confidentiality and informed consent were prioritized throughout the research process.

5. Results and Findings

In order to achieve a statistically significant sample size of 115 respondents, the researcher gave 120 questionnaires to the targeted population, which consisted of Ward Development Committee members and other community leaders. The respondents were asked to freely participate in the study. The completed questionnaires were sent back. Out of 120 questionnaires, 115 were deemed legitimate, indicating a 100% response rate. Dixon (2012) states that a response rate of 50% is deemed adequate, 61-70% good, and 70% or higher very good. Considering that the response rate was 100%, this means that the collected data was sufficient for data analysis and interpretation.

Demographic Characteristics

According to the study findings, the demographic characteristics of respondents revealed a diverse representation across gender, age, and education levels. The gender distribution showed that male respondents constituted 57.39% (66) while female respondents made up 42.61% (49) of the total sample. Age distribution indicated that 20.9% (24) were below 25 years, 16.5% (19) were between 26-30 years, 41.7% (48) were between 31-40 years, and 20.9% (24) were above 40 years. Education levels among respondents were notably high, with 31.3% (36) holding diploma qualifications, 37.4% (43) possessing university degrees, and 24.3% (28) having postgraduate qualifications. The organizational affiliation data showed that 94.4% (104) of respondents worked in faith-based organizations, while 9.6% (11) did not indicate their organizational nature. This demographic profile suggests a well-educated workforce with significant representation across different age groups and a moderate gender balance in the faith-based development sector.

Descriptive statistics

Technical Expertise in Using Technology Among Faith-Based Organizations

This section presents data relating to the technical expertise of the respondents in dealing with the technological gadgets in their organizations. They were requested to indicate the rating that effectively illustrated their views, while applying the following scale. 1- Strongly disagree, 2- disagree, 3- neutral, 4- agree and 5- strongly agree. Through this process, the information on table 1.

Table 1: Technical expertise of the respondents

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
We have technological gadgets	0	0	11	24	80
The technical team incorporates relevant knowledge in their areas of expertise	0	5	8	27	75
The technical team have adequate knowledge and skills	0	0	58	26	31
Communication is frequently done using technological gadgets	8	10	12	23	62
Strength of the application of technology plays a role in the performance of faith-based organizations	0	5	9	35	66
Monitoring and Evaluation (M&E) team embrace Technology	6	6	10	38	55
Technological gadgets are necessary for the organizational success	0	2	8	54	51

The respondents rated the statement that, “We have technological gadgets,” 24 (20.9%) they agreed, 80(69.6%) strongly agreed, while 11(9.6%) were neutral. This made a total of 104(90.5%) of the respondents who agreed or strongly agreed with the statement, while the remaining 11(9.4%) remained neutral. No respondent disagreed with the statement. This information shows that majority of the respondents, 104(90.5%) said that they had technological gadgets to use in their respective offices.

The respondents rated the statement that “The technical team incorporates relevant knowledge in their areas of expertise”, and 27 (23.5%) agreed, 75 (65.2%) strongly agreed, and 8(7.0%) were neutral. This shows that a total of 102(88.7%) of the respondents either agreed or strongly agreed with the statement. On the other hand, 5(4.3%) disagreed and there was no respondent who strongly disagreed with the statement. This data shows that majority of the respondents comprising of 102(88.7%) said that the technical team incorporated relevant knowledge in their areas of expertise.

The respondents rated the statement that “The technical team have adequate knowledge and skills,” and 31(27.0%) strongly agreed, 26(22.6%) agreed, while 58(50.4%) were neutral about the statement. This shows that a total of 57(47.6%) of the respondents agreed or strongly agreed with the statement, while a significant number of 58(50.4%) chose to remain neutral about the technical team having adequate knowledge and skills. There were no respondents who disagreed with the statement. This data shows that almost half of the respondents said that the technical team had adequate knowledge and skills to use technology in their places of work, while the other half remained neutral.

When the respondents were requested to rate the statement that “Communication is frequently done using technological gadgets,” 62(53.9%) strongly agreed, 23(20.0%) agreed, and 12(10.4%) were neutral. This information shows that a total of 85(73.9%) of the respondents agreed or

strongly agreed with the statement. On the other hand, 10(8.7%) disagreed and 8(7.0%) strongly disagreed. Those who disagreed or strongly disagreed with the statement were a total of 18(15.7%) of the total number of the respondents. This information means that majority of the respondents 85(73.9%) said that communication was frequently done using technological gadgets.

The respondents rated the statement that “strength of the application of technology plays a role in the performance of faith-based organizations”, and 35 (30.4%) agreed, 66(57.4%) strongly agreed, and 9(7.8%) were neutral. This shows that a total of 101(87.8%) of the respondents either agreed or strongly agreed with the statement. On the other hand, 5(4.3%) disagreed and there was no respondent who strongly disagreed with the statement. This information shows that majority of the respondents who made a total of 101(87.8%) said that the strength of the application of technology played a role in the performance of faith-based organizations.

The respondents rated the statement that “Monitoring and Evaluation (M&E) team embraces technology,” and 55(47.8%) strongly agreed, 38 (33.0%) agreed, while 10(8.7%) were neutral about the statement. This shows that a total of 93(80.8%) of the respondents agreed or strongly agreed with the statement. Similarly, 10(8.7%) of the respondents disagreed, and 6(5.2%) strongly disagreed. According to this finding, those who disagreed or strongly disagreed with the statement were a total of 16(13.9%) of the respondents. This data shows that majority of the respondents, making a total of 93(80.8%) said that Monitoring and Evaluation (M&E) team embraced technology in their work.

When the respondents were requested to rate the statement that “Technological gadgets are necessary for the organizational success”, 51(44.3%) strongly agreed, 54(47.0%) agreed, and 8 (7.0%) were neutral. This information shows that a total of 105(91.3%) of the respondents agreed or strongly agreed with the statement. On the other hand, 2 (1.7%) disagreed and there was no respondent who strongly disagreed. This information means that majority of the respondents constituting 105(91.3) said that technological gadgets were necessary for the success of faith-based organizational.

Influence of Technology in Planning For Development Interventions among Faith-Based Organizations

The first objective of the study was to examine the influence of technology in planning for development interventions among faith-based organizations in Nairobi City County, between 2021-2023. The criteria of rating were based on the application of technology in the organization’s project planning being well known, the organizational planning teams applying technology in their planning activities, application of technology is crucial to successful planning of projects, and whether the organizational planning teams had knowledge and skills of using technology. The respondents were requested to do rating based on a scale of 1 to 5. They were instructed to check just one box for each statement. One, two, three, four, and five—strongly disagree, disagree, neutral, agree and strongly agree. The opinions of the respondents were gathered, and Table 2 shows the outcomes.

Table 2: The influence of technology in planning for development interventions

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
The application of technology in the organization's project planning is well known	4	15	7	37	52
The organizational planning teams apply technology in their planning activities	10	12	17	32	45
The application of technology is crucial to successful planning of projects	8	7	21	37	42
Organizational planning teams have knowledge and skills of using technology	6	8	19	43	39

The respondents rated the statement that one “The application of technology in the organization’s project planning is well known,” where 37(32.2%) agreed, 52(45.2% strongly agreed, while 7(6.1%) were neutral. This made a total of 89(77.4%) of the respondents who agreed or strongly agreed with the statement. On the other hand, 15(13.0%) disagreed and 4(3.5%) strongly disagreed. This made a total of 19(16.5%) of the respondents who either disagreed or strongly disagreed with the statement. This data shows that majority of the respondents that made a total of 89(77.4%) said that the application of technology in the organization’s project planning was well known.

The respondents rated the statement that “The organizational planning teams apply technology in their planning activities”, and 32(27.8%) agreed, 45(39.1% strongly agreed, and 17(14.8%) were neutral. This information shows that a total of 77(66.9%) of the respondents either agreed or strongly agreed with the statement. On the other hand, 12(10.4%) disagreed and 10(8.7%) strongly disagreed. This made a total of 22(19.1%) of the respondents who either disagreed or strongly disagreed with the statement. This information shows that majority of the respondents, making a total of 77(66.9%) said that the organizational planning teams applied technology in their planning activities.

The respondents rated the statement that “The application of technology is crucial to successful planning of projects,” and 42 (36.5%) strongly agreed, 37(32.2%) agreed, while 21(18.3%) were neutral about the statement. This shows that a total of 79(68.7%) of the respondents agreed or strongly agreed with the statement. Similarly, 7(6.1%) of the respondents disagreed, and 8(7.0%) strongly disagreed. With this data, those who disagreed or strongly disagreed with the statement were a total of 15(13.1%) of the respondents. This data shows that many of the respondents, 79(68.7%) said that the application of technology was crucial to successful planning of projects.

When the respondents were requested to rate the statement that “Organizational planning teams have knowledge and skills of using technology,” where 39(33.9%) strongly agreed, 43(37.4%) agreed, and 19(16.5%) were neutral. This information shows that a total of 82(71.3%) of the respondents agreed or strongly agreed with the statement. On the other hand, 8(7.0%) disagreed and 6(5.2%) strongly disagreed. Those who disagreed or strongly disagreed with the statement were a total of 14(12.2%) of the total number of the respondents. This information means that majority of the respondents 82(71.3) said that the organizational planning teams had knowledge and skills of using technology in their work.

The analysis of interview responses highlights that technology significantly contributes to the planning of development interventions among faith-based organizations. Many respondents reported that digital tools were used to map out community needs and assess project feasibility. These technologies allowed for a more structured approach to identifying the key areas of intervention, which in turn led to more effective and timely planning. The use of technology also supported the organizations in data collection, enabling them to make more informed decisions based on accurate and up-to-date information. This efficient utilization of technology in planning helped the organizations streamline their processes and align development activities with community needs more accurately.

In contrast, there were varying experiences related to the extent of technology use in planning. Several respondents indicated that while technology was available, it was not fully integrated into the planning processes. Some faith-based organizations faced challenges in utilizing technological tools to their full potential, with limited training or inadequate systems being common hurdles. This gap between the availability of technology and its effective use underscores the need for capacity building within organizations to enhance their planning efficiency. The contrast between organizations that successfully leverage technology and those struggling with its full application reflects differing levels of technical expertise and resource allocation.

Influence of Technology in the Implementation of Development Interventions among Faith-Based Organizations

The second objective of the study was to assess the influence of technology in the implementation of development interventions among faith-based organizations. The respondents were given a criterion of rating the influence of technology in the implementation of development interventions among faith-based organizations, which included the following. The efforts to support the use of technology in project implementation; well advanced technological gadgets at the disposal of the organizational teams; provisions for collecting data and managing projects records using technological gadgets; institutional arrangements for gathering, analyzing, and reporting project data using technological means; and the institutional arrangements for investing in capacity building for improved use of technology for project effectiveness the application of technology in the organization's project implementation being well known. They were instructed to check just one box for each statement. One, two, three, four, and five standing for strongly disagree, four representing disagree, three standing for neutral, while two and one stood for agree and strongly agree respectively. The opinions of the respondents were gathered, and presented in table 3 shows the outcomes.

Table 3: Influence of technology in the implementation of development interventions

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
There are clear efforts to support the use of technology in project implementation	6	15	15	52	27
There are well advanced technological gadgets at the disposal of our organizational teams	4	5	14	51	41
There are provisions for collecting data and managing projects records using technological gadgets	7	8	12	54	34
There are institutional arrangements for gathering, analyzing, and reporting project data using technological means	5	8	6	55	41
There are Institutional arrangements for investing in capacity building for improved use of technology for project effectiveness	4	5	13	54	39

From table 4.7, the respondents rated the statement that one “There are clear efforts to support the use of technology in project implementation,” where 52(45.2%) agreed, 27(23.5%) strongly agreed, while 15(13.0%) were neutral. This made a total of 79(68.7%) of the respondents who agreed or strongly agreed with the statement. On the other hand, 15(13.0%) disagreed and 6(5.2%) strongly disagreed. This made a total of 21(18.2%) of the respondents who either disagreed or strongly disagreed with the statement. This data shows that more of the respondents, 79(68.7%) said that there were clear efforts to support the use of technology in project implementation.

The respondents rated the statement that “There are well advanced technological gadgets at the disposal of our organizational teams”, and 51(44.3%) agreed, 41(35.7%) strongly agreed, and 14(12.2%) were neutral. This shows that a total of 92(80.0%) of the respondents either agreed or strongly agreed with the statement. On the other hand, 5(4.3%) disagreed and 4 (3.5%) strongly disagreed. This made a total of 9(7.8%) of the respondents who either disagreed or strongly disagreed with the statement. This data shows that majority of the respondents, 92(80.0%) said that there were well advanced technological gadgets at the disposal of our organizational teams.

The respondents rated the statement that “There are provisions for collecting data and managing projects records using technological gadgets,” and 34(29.0%) strongly agreed, 54(47.0%) agreed, while 12(10.4%) were neutral about the statement. This shows that a total of 88(76.0%) of the respondents agreed or strongly agreed with the statement. Similarly, 8(7.0%) of the respondents disagreed, and 7(6.1%) strongly disagreed. According to this information, those who disagreed or strongly disagreed with the statement were a total of 15(13.1%) of the respondents. This data shows that majority of the respondents constituting of 88(76.0%) said that there were provisions for collecting data and managing projects records using technological gadgets.

When the respondents were requested to rate the statement that “There are institutional arrangements for gathering, analyzing, and reporting project data using technological means”, there were 41(35.7%) strongly agreed, 55(47.8%) agreed, and 6(5.2%) were neutral. This information shows that a total of 96(83.5%) of the respondents agreed or strongly agreed with the statement. On the other hand, 7(6.1%) disagreed and 6(5.2%) strongly disagreed. Those who disagreed or strongly disagreed with the statement were a total of 13(11.3%) of the total number of the respondents. This information means that majority of the respondents that was made up of 96(83.5%) said that there were institutional arrangements for gathering, analyzing, and reporting project data using technological means.

The respondents rated the statement that “There are Institutional arrangements for investing in capacity building for improved use of technology for project effectiveness”, and 54(47.0%) agreed, 39(33.9% strongly agreed, and 13(11.3%) were neutral. This shows that a total of 93(80.9%) of the respondents either agreed or strongly agreed with the statement. On the other hand, 5(4.3%) disagreed and 4(3.5%) strongly disagreed. This made a total of 9(7.8%) of the respondents who either disagreed or strongly disagreed with the statement. This data shows that majority of the respondents consisting of 93(80.9%) said that there were Institutional arrangements for investing in capacity building for improved use of technology for project effectiveness.

Thematic analysis reveals that technology plays an essential role in the implementation of development interventions among faith-based organizations. Respondents frequently noted that technological tools improved communication within their teams and with external stakeholders, enabling faster decision-making and more coordinated efforts during the implementation phase. Digital platforms were also mentioned as crucial for monitoring project progress and maintaining real-time updates on activities, ensuring that interventions stayed on track and met their objectives. Technology thus facilitated the efficient execution of development plans, leading to enhanced outcomes and better resource management.

On the other hand, several respondents highlighted that while technology assisted in implementation, its use was not always optimized. Some organizations encountered technical barriers, such as inadequate infrastructure or difficulty in adapting new systems to their existing workflows. This limited the effectiveness of technological tools in streamlining development activities. Additionally, organizations that lacked sufficient technological support were unable to fully benefit from automation and real-time data sharing, leading to delays and inefficiencies. The variation in the effectiveness of technology use across different organizations demonstrates the influence of internal capacity and technological readiness in shaping the impact of technology on intervention outcomes.

Challenges Experienced By the Faith-Based Organizations As They Apply Technology In The Implementation Of Development Activities

The third objective of the study was to evaluate the challenges experienced by the faith-based organizations as they apply technology in the implementation of development activities. The respondents were given a criterion of rating the challenges experienced by faith-based organizations as they applied technology in the implementation of development interventions, which included the following: whether there were technological gadgets to facilitate adequate timely feedback of individual employee performance; if there were enough finances and resources to support the application of technology in project implementation; if the organizational teams had the necessary knowledge and skills to use modern technology in the project implementation; if the

organization procured latest up-to-date technological gadgets for the use in project implementation; and whether there were challenges in the use of technology during project planning and implementation. The respondents were requested to check just one box for each statement. One, two, three, four, and five standing for strongly disagree, four representing disagree, three standing for neutral, while two and one stood for agree and strongly agree respectively. The opinions of the respondents were gathered, and presented in table 4.8 shows the outcomes.

Table 4: Challenges experienced by the faith-based organizations as they apply technology in the implementation of development activities

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
There are technological gadgets to facilitate adequate timely feedback of individual employee performance	12	22	31	31	19
There are enough finances and resources to support the application of technology in project implementation	18	19	25	35	18
The organizational teams have the necessary knowledge and skills to use modern technology in the project implementation	20	22	21	33	19
The organization procures latest up-to-date technological gadgets for the use in project implementation	18	20	22	39	16
There are challenges in the use of technology during project planning and implementation	21	17	23	41	13

From table 4 the respondents rated the statement that one “There are technological gadgets to facilitate adequate timely feedback of individual employee performance,” 31(27.0%) they agreed, 19(16.5%) strongly agreed, while 31(27.0%) were neutral. This made a total of 50(43.5%) of the respondents who agreed and strongly agreed with the statement. On the other hand, 22(19.1%) disagreed and 12(10.4%) strongly disagreed. This made a total of 34(29.4%) of the respondents who either disagreed or strongly disagreed with the statement. Considering those who were neutral and the ones who either disagreed or strongly disagreed gives a total of 65(56.4%). This data shows that more than half of the respondents were either neutral or they disagreed or strongly disagreed that there were technological gadgets to facilitate adequate timely feedback of individual employee performance.

The respondents rated the statement that “There are enough finances and resources to support the application of technology in project implementation”, and 35(30.4%) agreed, 18(15.7%) strongly agreed, and 25(21.7%) were neutral. This shows that a total of 53(46.1%) of the respondents either agreed or strongly agreed with the statement. On the other hand, 19(16.5%) disagreed and 18 (15.7%) strongly disagreed. This made a total of 37(32.2%) of the respondents who either disagreed or strongly disagreed with the statement. Adding the number of those who were neutral and the ones who disagreed or strongly disagreed gives a total of 62(53.9%) of the respondents. This data shows that fairly half of the respondents remained neutral, or they disagreed with the

statement that there were enough finances and resources to support the application of technology in project implementation.

The respondents rated the statement that “The organizational teams have the necessary knowledge and skills to use modern technology in the project implementation,” and 19(16.5%) strongly agreed, 33(28.7%) agreed, while 21(18.3%) were neutral about the statement. This shows that a total of 52(45.2%) of the respondents agreed or strongly agreed with the statement. Similarly, 22(19.1%) of the respondents disagreed, and 20(17.4%) strongly disagreed. With this data, those who were neutral, disagreed or strongly disagreed with the statement were a total of 63(54.8%) of the respondents. This data shows that more than half of the respondents remained neutral, disagreed or strongly disagreed with the statement that the organizational teams had the necessary knowledge and skills to use modern technology in the project implementation.

When the respondents were requested to rate the statement that “The organization procures latest up-to-date technological gadgets for the use in project implementation”, 16(13.9%) strongly agreed, 39(33.9%) agreed, and 22(19.1%) were neutral. This information shows that a total of 55(47.8%) of the respondents agreed or strongly agreed with the statement. On the other hand, 20(17.4%) disagreed and 18(15.7%) strongly disagreed. Those who were neutral, disagreed or strongly disagreed with the statement were a total of 60(57.1%) of the total number of the respondents. This information means that more than half of the respondents remained neutral, disagreed or strongly disagreed with the statement that the organization procured latest up-to-date technological gadgets for the use in project implementation

The respondents rated the statement that “There are challenges in the use of technology during project planning and implementation”, and 21(18.3%) agreed, 41(35.7%) strongly agreed, and 23(20.0%) were neutral. This shows that a total of 62(53.9%) of the respondents either agreed or strongly agreed with the statement. On the other hand, 17(14.8%) disagreed and 13(11.3%) strongly disagreed. This made a total of 30(26.1%) of the respondents who either disagreed or strongly disagreed with the statement. Interpreting this in relation to those who remained neutral gives a total of 53(46.1%) of the respondents who were neutral or disagreed with the statement. This data shows that more than half of the respondents 62(53.9%) agreed that there were challenges in the use of technology during project planning and implementation.

Thematic analysis identifies several recurring challenges that faith-based organizations faced while applying technology in the implementation of development activities. A major challenge mentioned by multiple respondents was the lack of sufficient funding to support technological investments. Limited financial resources constrained the ability of organizations to purchase necessary equipment, upgrade outdated systems, or hire skilled personnel to manage technological operations. This financial strain hindered the full integration of technology into their implementation processes, thereby affecting the efficiency and effectiveness of development activities.

Additionally, the analysis revealed operational challenges, particularly around the lack of technical expertise. Several respondents expressed that their organizations struggled with underutilization of available technology due to insufficient training or support. The lack of skilled staff to operate and manage digital tools resulted in technology being used below its potential, limiting the overall impact on development interventions. Another key challenge was infrastructure limitations, such as unreliable internet connectivity and power shortages, which disrupted the smooth application

of technology. These challenges, both financial and operational, collectively hindered the ability of faith-based organizations to maximize the benefits of technology in their development activities.

Summary of the Key Findings

The study found that 89 (77.4%) of respondents agreed or strongly agreed that the application of technology in project planning was well known within their organizations. Additionally, 77 (66.9%) indicated that organizational planning teams actively applied technology in their planning activities, and 82 (71.3%) affirmed that their teams had the knowledge and skills to use technology effectively.

A majority of 79 (68.7%) of respondents agreed or strongly agreed that efforts were being made to support the use of technology in project implementation. Furthermore, 92 (80.0%) noted that advanced technological gadgets were available to their organizational teams, and 93 (80.9%) confirmed that institutional arrangements were in place for capacity building to enhance technology use for project effectiveness.

Despite these positive findings, challenges remain. 50 (43.5%) of respondents agreed that sufficient technological gadgets were available, while 62 (53.9%) either disagreed or were neutral about having enough financial resources to support the application of technology. Moreover, 52 (45.2%) noted a lack of sufficient skills for technology use, and 60 (57.1%) expressed concerns over outdated technological equipment. Lastly, 62 (53.9%) acknowledged that challenges existed during the use of technology in project planning and implementation.

6. Conclusions

The study concludes that technology has a significant influence on planning for development interventions among faith-based organizations in Nairobi City County. The majority of organizations recognize the importance of technology in project planning, with majority of respondents indicating that its application is well-known. Furthermore, about half of the organizational planning teams actively apply technology in their planning activities. This suggests that faith-based organizations are increasingly integrating technological tools and methods into their planning processes, which lead to more efficient and effective development interventions.

The study concludes that technology plays a crucial role in the implementation of development interventions among faith-based organizations. Over half of the respondents reported clear efforts to support the use of technology in project implementation, and a similar proportion indicated that their organizations had access to advanced technological gadgets. Additionally, majority of respondents agreed that there were provisions for collecting data and managing project records using technological gadgets. These findings indicate that faith-based organizations are not only planning with technology in mind but are also actively utilizing it during the implementation phase of their projects.

The study concludes that faith-based organizations face several challenges as they apply technology in the implementation of development activities. While there is evidence of progress, with over half of the respondents reporting institutional arrangements for gathering, analyzing, and reporting project data using technological means, a significant portion still disagreed or strongly disagreed with this statement. Moreover, about half of the respondents acknowledged the existence of challenges in the use of technology during project planning and implementation. This suggests that while faith-based organizations are making strides in technological adoption, there are still

obstacles to overcome in terms of capacity, resources, and infrastructure to fully leverage the benefits of technology in their development interventions.

7. Recommendations

The study recommends that faith-based organizations invest more heavily in technological infrastructure and training. Organizations should acquire up-to-date planning software and hardware, and provide comprehensive training programs to enhance staff members' technological skills. Additionally, clear policies and guidelines for integrating technology into planning processes should be established to ensure consistent and effective use across all projects and teams.

The study recommends that faith-based organizations allocate dedicated resources for technology adoption and maintenance in their budgets. They should also explore cloud-based solutions and mobile technologies to overcome infrastructure limitations and improve data collection and management in the field. Furthermore, organizations should consider partnering with tech companies or educational institutions to access expertise and resources for enhancing their technological capabilities during project implementation.

The study recommends that they establish regular assessments of technological needs and impact to ensure adopted technologies effectively support development goals. Organizations should also encourage collaboration and knowledge sharing among faith-based entities regarding best practices in technology use, possibly through regular forums or online platforms. Finally, efforts should be made to address potential resistance to technological change within organizations through change management strategies and by highlighting the benefits of technology in achieving development objectives.

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