DETERMINANTS OF CORPORATE COMMUNICATION STRATEGIES FOR DISSEMINATION OF DISEASE SURVEILLANCE RESEARCH OUTCOMES AT KENYA MEDICAL RESEARCH INSTITUTE

BY

MUTHOTHO ISAAC JOSEPH

MACSNRB943418

THIS DISSERTATION IS SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF A MASTER OF ARTS (MA) CORPORATE COMMUNICATION FROM ST. PAUL'S UNIVERSITY

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AUGUST 2020

DECLARATION

This dissertation is a product of my work and not the result of any collaboration. It has not been previously presented to any institution. I agree that this dissertation be available for reference at the discretion at the University.

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DEDICATION

I dedicate this research work on corporate communication strategies (*mikakati ya mawasiliano ya kampuni*), to my family and all those who contributed to compile in this work.

ACKNOWLEDGEMENT

My earnest gratitude to my supervisors: Winnie Ndeta Otsiulah and Dr. Geoffrey Serede Sikolia for their scholarly guidance that brought this research work to fruition. To our loving Lord almighty God, for giving me the strength, the gift of life, wisdom and provisions to sail though this academic endeavour. “I can do all things through Christ who strengthens me”, (Philippians 4:13). To my wife Joyce Nyambura, our gifts from God; Rosalind Wanjiku Muthotho, James Ngugi Muthotho and Sharon Muthoni Muthotho, who were a source of inspiration towards excellence. To my wonderful parents, Mr. and Mrs. James Ngugi Muthotho, and the entire family for their unending love, encouragement and prayers. Gratitude to St. Paul’s University for offering quality education; all the librarians for their assistance in providing the relevance research materials; and comrades for their constructive critique. My gratitude also to the Director General KEMRI, for the permission for the study to be conducted in KEMRI. Special thanks to all study participants for their corporation. To everyone who supported me; spiritually, financially and emotionally. God bless you all.

ABSTACT

Globally, external corporate communication strategies for disseminating research outcomes are mainly focused to scientific audiences. Thus, human health research institutions face challenges in developing corporate communication strategies for communicating research outcomes to their stakeholders. Hence, leaving out study respondents who are stakeholders in research outcomes. This study examined; determinants of corporate communication strategies for dissemination of disease surveillance research outcomes at KEMRI. Specific objectives were: (1) To determine the communication channels for appropriate dissemination of disease surveillance research outcomes to study respondents at KEMRI. (2) To determine the influence of communication skills for dissemination of disease surveillance research outcomes to study respondents at KEMRI. (3) To investigate the differentiation strategies for dissemination of disease surveillance research outcomes to study respondents at KEMRI. (4) To investigate the influence of the corporate communication plan in place for dissemination of disease surveillance research outcomes to study respondents at KEMRI. The study employed purposive sampling design. This study utilized mixed methods using self-administered questionnaires and in-depth interview guides. The study adopted pragmatic research paradigm. This case study utilised descriptive study design to collect primary data. The study was anchored on communication theory as the main theory, complimented by excellence theory. Sample size of 76 was determined using Krejcie Morgan table. Reliability and validity entailed; pilot testing 10 study participants, literature review, pre-check questionnaires and interview guides by colleagues and supervisors from SPU communication faculty. Data was collected from a response rate (RR) of 79%. Thus, 60 respondents purposively selected from a target population of 76. The study findings on determinants of corporate communication strategies were; communication channels (50%), communication skills (50%), differentiation strategy (48.3%) and corporate communication plan (51.7%). The study recommendations comprised; enhancement of corporate communication strategies that entail. Inclusion of additional communication channels to boost ICT and social media. Implementation of IMC and incorporate Pinterest and Tumblr as social media tools. The study further recommended development of KEMRI's Institutional Repository (IR) as a communication channel, to facilitate access of research outcomes and feedback. The study participants suggested additional corporate communication professionals with communication skills. To harness the communication skills adopt capacity building and team building exercises. Strategic corporate communications in KEMRI entailing; media relations, internal and external official communications ought to be conveyed through corporate affairs (CA) department. The study further recommended; enhancement of differentiation strategy through implementation of IMC, incorporation of marketing department into CA department, to curb duplication of resources. Hence, propagate unified, consistence in messaging, identifying KEMRI as an authority in communicating research outcomes. Communication plan, elevate CA department in top management to manage the communication plan for disseminating research outcomes. In addition, Government of Kenya (GOK) may implement this study's findings in their Agenda 4 communication plan. This study further concluded that, study respondents felt ignored during dissemination research outcomes at KEMRI, Nairobi. These findings strive to enhance the body of knowledge on, strategies for corporate communication, during dissemination research outcomes at KEMRI. Probable beneficiaries comprise SPU corporate communication scholars, practitioners, Government of Kenya and KEMRI management.

ACRONYMS AND ABBREVIATIONS

ANOVA	Analysis of Variance
CA	Corporate Affairs, a department in KEMRI
CA-K	Communication Authority of Kenya
CC	Communication Channels
CC	Corporate Communication
CCP	Corporate Communication Plan
CDC	Centers for Disease Control
CIDOS	Customer Information Desk Officers
CMC	Computer Mediated Communication
COVID-19	Corona Virus Disease, 2019
CS	Communication Skills
CSR	Corporate Social Responsibility
CVI	Corporate Visual Identity
DS	Differentiation Strategies
ERP	Enterprise Resource Planning
GA	Global Alliance of Public Relations and Communications Management
GOK	Government of Kenya
ICT	Information Communication Technology
ILRI	International Livestock Research Institute
IMC	Integrated Marketing Communication
IPRA	International Public Relations Association
IR	Institutional Repository
KALRO	Kenya Agricultural and Livestock Research Organization
KEMRI	Kenya Medical Research Institute
KES	Kenya Shillings

KM	Knowledge Management
KNH	Kenyatta National Hospital
MCK	Media Council of Kenya
MS EXCEL	Microsoft Excel
NACOSTI	National Commission for Science, Technology and Innovation
NUITM	Nagasaki University Institute of Tropical Medicine
POI	Principles of Influence
PPE	Personal Protective Equipment
PR	Public Relations
PRSA	Public Relations Society of America
PRSK	Public Relations Society of Kenya
RR	Response Rate
SERU	Scientific and Ethical Review Unit
SNS	Social Networks Site
SOP's	Standard Operating Procedures
SPSS	Statistical Package for Social Sciences
SPU	St. Paul's University
USENET	Users Network
UW	University of Washington
WHO	World Health Organization
WRP	Walter Reed Project

OPERATIONAL DEFINITION OF TERMS

Communication Channels: Transmission avenues for conveying information to an organisation's stakeholders. Examples, Facebook, Twitter, Face to Face and email (Frandsen & Johansen, 2018; Zerfass et al., 2018).

Corporate Communication Plan: The official communication protocol used to disseminate information, internally and externally. Hence, based on a fixed time-fame, "by when" and "how", internal and external communications are done (Sony, 2019; LaBelle & Waldeck, 2020).

Corporate Communication: Corporate communication is a managerial tool. Van Riel defines corporate communication as; an instrument of management by means of which all consciously used forms of internal and external communication are, harmonized as effectively and efficiently as possible (Mohamad, Nguyen, Melewar & Gambetti, 2018). Moreover, corporate communication entails all communications done by an institution to its internal and external publics. Examples; press releases, press conference, newsletters, magazines and brochures.

Corporate Visual Identity: A component of the differentiation strategy with emphasis on the reputation. Comprising five aspects; authenticity, consistency, distinctiveness, transparency, and visibility (Okat & Solak, 2020).

Differentiation Strategy: A strategy for distinguishing an institution's services from its competing counterparts based on institutional strengths. Therefore, a strategy is a response to, "what, why" and is flexible. Management of; corporate image (Sardana, 2018), corporate identity and reputation. Ultimately, the corporate visual identity of an institution (Okat & Solak, 2020).

Dissemination of Research Outcomes: Distribution of scientific results also referred to as findings from disease surveillance programmes that entail collection of information to control diseases. Diseases are a particular quality or disposition regarded as adversely affecting an individual or people (Bake & Isaacs, 2018).

Information Communication Technology: Technology for communicating information in digital format. Whereby, users create, access, store and disseminate information. Nwachukwu, (2017) reported that information is central to corporate communications.

Also referred to as New Media. Thus, utilization diverse forms electronic communication to disseminate content to the public on the internet from an organisation. Example an organisational website. A function of new media is information dissemination (Campbell, Martin & Fabos, 2018).

Institutional Repository: Entails article depositing and article sharing. According to Kim and Oh, 2018, the research suggested, that IR has community benefit, institutional support researchers to share their findings through IR. IR disseminates digital materials created organisational staff. IR is an archive for collecting, preserving, and disseminating digital research outputs. Thus, the output of an institution, especially research institutions (Idiegbeyan-Ose, Ifijeh, Iwu-James, & Ilogho, 2020).

Media Content: The media content is information compiled from research study (outcomes) disseminated, through a media channel to a specific target audience. The communication channel in which the content (information) is transmitted is referred to as the "medium". Examples media content are; Press releases and newsletter articles sent in print media (magazines and newspaper), broadcast media (Television and radio) and internet (Riff, Lacy, Fico & Watson, 2019; Lee, Ong, Lim & Chuan, 2020).

Study Participants: In context with this study. Individuals (scientists at KEMRI and KEMRI study respondents) purposely chosen to respond or answer study questionnaires and interviews. Derived from the sample size by a researcher (Blaikie & Priest, 2019).

Personal Protective Equipment: Availed to study participants and research assistants to mitigate risk of infection during data collection. PPE comprise; medical masks, aprons, boots, medical masks, goggles and gowns (WHO, 2020).

Persuasion: Persuasion is a human communication that; is purposed to change or have an influence by modifying values, attitudes or beliefs. Attitude is a state of the individual towards a value. Thus, persuasion is a psychological construct (Maio, Haddock & Verplanken, 2018).

Respondent Feedback: The two-way communications between a sender (researchers) and research respondents. The mode in which researchers utilise corporate communication send their research outcomes to study respondents.

Organisations may choose either, print or broadcast media to communicate back feedback (Sokey, Adjei & Ankrah, 2018; Maiorescu-Murphy, 2020).

Social Media: Web-based services/applications whose history dates from 1840's (telegraph) that allow; quick access, sharing of user-generated content, in real time by organizations and communities (McCay-Peet & Quan-Haase, 2017). Examples are; Facebook, Tumblr and Twitter (Riff et al., 2019; Wang & Yang, 2020).

Social Network Site: Also referred to as, social website or social networking website utilised to connect individuals online. Thus, create a public profile, for interaction, restricted list who can share information (Yuan, 2019; Wang & Yang, 2020).

Study Respondents: In context with this study. Individuals selected to participate in a study by a scientist also referred to as a principle investigator (PI). Respondents were required to respond or answer questionnaires. Individuals from KEMRI study cohorts (share the characteristic of being members from on-going KEMRI projects). The study subjects of study investigations on a social problem, example disease burden (Blaikie & Priest, 2019; Ghauri, Grønhaug & Strange, 2020).

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CHAPTER ONE

1.1 Introduction

This chapter introduces the study. Comprising background of the study, problem statement, study objectives, research questions, significance, justification, assumptions, limitations and scope of the study.

1.1 Background of the Study

1.1.1 Corporate Communication Strategies

Corporate communication refers to the expression of organizational mission, vision, philosophy and essence through controlled and uncontrolled corporate communication. Hence, the organisations blue print for gaining a competitive edge over its competitors (Melewar, Foroudi, Gupta, Kitchen & Foroudi, 2017; Borner & Zerfass, 2018).

Corporate communications entails written oral communication to keep internal and external stakeholders informed about an institution's vision, mission and strategic objectives. Moreover, the main distinction between, corporate communications and public relations is that; Public Relations (PR) entails information that goes out to the public (Frandsen & Johansen, 2018; Cornelissen & Cornelissen, 2017). To position an institution's service/brand in the eyes of public. Thus, PR utilizes content prepared by a corporate communications department. Hence, generate a positive image for external communications whereas, corporate communications utilises various platforms to inform internal and external stakeholders (Sardana, 2018).

Corporate communication is a managerial tool (Frandsen & Johansen, 2018). Van Riel refers corporate communication as, an instrument of management by means of which all consciously used forms of internal and external communication are harmonized as effectively and efficiently as possible (Mohamad, Nguyen, Melewar & Gambetti, 2018; Mohamad & Bakar, 2018). Two researchers Frandsen and Johansen (2018) are of the opinion that, corporate communication comprises strategic communications aimed at building a mutually beneficial relationship between the organization and stakeholders. Okat and Solak (2020) define corporate communication as; an integration of all management processes aligned to organisational objectives.

Corporate strategies are therefore organisational actions or plans to achieve institutional objectives. Thus, leveraging on an institute's competitive strength (Waslekar, 2016). Hence, KEMRI corporate strategies communicate research outcomes to stakeholders. While, maintaining a competitive edge, which is, human health research (KEMRI, 2020).

Furthermore, corporate communication strategies are specific, developed by an institution (KEMRI) for implementing its objectives, mission and vision. Affirms a case study done in KEMRI by Nzioki, Ntale and Ngui, (2018) titled, Strategic Plan Implementation and Service Delivery in State Corporations in Kenya. According to Melewar, Foroudi, Dinnie and Nguyen (2018), corporate communication are avenues to which an organisation or institution communicates with its internal and external stakeholders. Melewar et al. (2018) further affirms that, uncontrolled communication occurs when an organisation unintentionally influences the stakeholder's perceptions. Whereas, controlled corporate communication aims at enhancing stakeholders relationships also through corporate identity. Lastly, the indirect corporate communication targets the external publics. Examples are; brochures and press releases.

The global perspectives of corporate communication (CC) are that; corporate communication examines how institutions use corporate communication purposefully, to achieve institutional goals (van Ruler, 2018; Palazzo, Foroudi, Kitchen, & Siano, 2020). Moreover, communication is a pillar on which corporate communication strategies rests (Zerfass, Verčič, Nothhaft & Werder, 2018). The local perspectives of corporate communication (CC) are that; Corporate communication (CC) existed since 1970's is in the take-off stage. Ngonyo (2018) conducted a titled, could the perceptions surrounding the emergence of public relations globally have had an effect on the existing mistrust and misconception about the profession in Kenya? The study observed that, their lies a cloud of uncertainty. Ngonyo (2018) affirmed corporate communication is critical in the current social and economic dispensation. Corporate communication (CC) is not only for media relations, keeping hostilities away "firefighting" through media. Moreover, Kenyan literature on corporate communication is not documented fully.

1.1.2 Dissemination of Research Outcomes

Currently, information on research outcomes is communicated (disseminated) in conferences, symposiums, scientific seminars, institutional repository (IR) and published in *e*-journals (Staines, 2019; Cornelissen & Cornelissen, 2017).

These are not always tailored to the study participants as they contain professional jargon (Kabata & Garaba, 2019). Iyengar and Massey (2019), whose study concluded that 21% of US adults had "a great deal of confidence", also support this. Thus, scientists would act in the best interests of the public.

Therefore, organizations are obliged to communicate with its stakeholders. Corporate communication refers to the expression of organizational mission, vision, philosophy and essence through controlled and uncontrolled corporate communication (Staines, 2019).

Dissemination of research outcomes is a purposed to specific target audience. Hence, identification of appropriate communication strategies and channels that research findings are strategically sent and received. Example, appropriate communication and interaction with policy authorities. Hence, to facilitate research uptake in decision-making processes and practice (Starovoytova, 2018).

Moreover, research outcomes are generated from disease surveillance studies. Which entail tracking of the disease and programmatic responses. These also involves monitoring patterns of disease progression or patterns. Therefore, the systematic collection and analysis of data and the provision of information, which leads to action being taken to prevent and control diseases. Resulting to increased knowledge (awareness) by preventing harm from disease outbreaks (Aarestrup & Koopmans, 2016; WHO, 2019). Apparently, McElfish, Purvis and Long, (2018) pointed out that; a minority, 33% of the 3381 respondents got feedback as study respondents.

1.1.3 Corporate Communication History and Perspectives

Corporate communication history dates back from the productions of the Catholic Church in 1622. *Sacra Congregatio de Propaganda Fide*, (missionaries for propagating the Faith). *Vox populi, vox dei phenomemon* meaning, the voice of the people is the voice of God (Kunczik, 2016; Mack, 2018).

In the ninth century (19th) the Public Relations (PR) experts were referred to as, "literates" from the (*Literaten*). Moreover, PR in French is *relations publiques*; and Public Relations (PR) in German is *Öffentlichkeitsarbeit* meaning working for the public sphere in 1950's. The press agents were called press bureaus (Frandsen & Johansen, 2018; Cornelissen & Cornelissen, 2017). Later, PR referred to as communication management, organisational communication. Latter, communications business signifying a higher professional standard elevated status. Corporate communication has evolved in the twenty first (21st) century because of corporate scandals or crises organizations (Zerfass, Verčič, Nothhaft & Werder, 2018).

Basil Clark is one of the founder fathers of corporate communication, having founded the corporate communication profession referred to as the Publicity bureau. Barlks started in editorial services in United Kingdom. However, some scalars also attribute the origin of PR to Ivy Ledbetter Lee and Edward Bernays from America; Hence, they together referred to as the fathers of modern corporate communication (Van der Wagen & White, 2018). According Bryson, (2018) corporate communication is defined by the elements of persuading, informing people and connecting people. The publics of an organization comprise the internal and external being the people or entities whom the organization interacts. Examples are; research collaborators, research respondents and government of Kenya.

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In Kenya, Public Relation Society of Kenya (PRSK) is the professional body for corporate communication practitioners and students.

PRSK therefore, monitors Kenyan corporate communication practitioners ethics and career concerns (Ngonyo, 2017). PRSK is also a member of Federation of African Public Relations (FAPRA). Pioneered the Global Alliance of Public Relations and Communications Management (GA). Therefore, PRSK members are members of (IPRA) International Public Relations Association (PRSK, 2020).

1.1.4 KEMRI'S Corporate Affairs (CA) Department

KEMRI's corporate communication is managed through the Corporate Affairs (CA) department. Corporate Affairs (CA) is responsible for implementation of the corporate communication plan and strategy programmes. Therefore, its function is to disseminate information to media ensuring accountability and transparency. Thus projecting the credibility of KEMRI to the public favourably. Hence, to communicate internally and externally with KEMRI's stakeholders (KEMRI HR, 2020). KEMRI's Corporate Affairs (CA) department brands, markets and communicates KEMRI activities (See appendix H, KEMRI location from Goggle map). Anchored on the media Act, 2003, The Kenya information and communication (amendment) Act, 2013, Kenya Strategic Master plan of 2018 - 2022 and Cap. 411A of 2012 Kenya Information Communication Act (Kabata & Garaba, 2019; KEMRI, 2020).

In addition, Kenya Medical Research Institute abbreviated as KEMRI was established in 1979. KEMRI was founded under the Science and technology (amendment) Act. However, the Act was amended in, 2013 to Science, Technology and innovation ACT.

KEMRI has a vote to carryout human research science in Kenya. The headquarters of KEMRI is based in Nairobi Kenya, along Mbagathi highway (KEMRI, 2020). KEMRI's mandate is research, which is a strategic investigation to find new facts to current scientific knowledge. Hence, to find answers to the research enquiries. KEMRI therefore, communicates with its stakeholders (KEMRI, 2020).

Journals or e-journals are accessed via electronic transmission, thus through the internet. Their Advantages; interactive, fast and easily accessible allowing more images and audio material. Kenya Medical Research Institute (KEMRI) mandate is research, which is a strategic investigation to find new facts to current scientific knowledge (see appendix F and G, Letter of introduction to KEMRI from SPU).

Therefore, in the context, this study KEMRI stakeholders (internal and external) are the consumers of corporate content disseminated as research outcomes. Moreover, corporate communication is founded on an organisational mission and vision (Lerbinger, 2018). Hence, KEMRI's vision is, "To be a leading centre of excellence in research for human health" (KEMRI, 2020). KEMRI's vision explains the values and purpose and where KEMRI wants to be in the future. Thus, responds to the question, what do we do? according to Borner & Zerfass, (2018). Hence, what KEMRI does, which is research. KEMRI's mission focus is to improve human health and quality of life through research, capacity building, and innovation and service delivery (KEMRI 2019).

KEMRI's mission clearly illustrates how KEMRI is going to achieve its desired future objectives and purpose. Therefore, the mission responds to the question, why KEMRI is here? (Borner & Zerfass, 2018). KEMRI's motto is, "In Search of Better Health", towards the realization of the above stated mission (KEMRI, 2020). Nwachukwu (2017) observed that efficient, effective and truthful information is the foundation of corporate communication.

1.3 Problem Statement

Human health research institutions in Kenya face challenges in developing corporate communication strategies for communicating research outcomes to study respondents. However, important findings result from the scientific work done by institutions like KEMRI. Although useful to many stakeholders, the tendency has been to communicate scientifically to other researchers. Globally, research outcomes are, disseminated in scientific forums, leaving out the research respondents. According to McElfish, Purvis and Long (2018) a minority, 33% of the 3381 respondents got feedback of research outcomes. Hence, research outcomes are not accessible to all study respondents, as institutional digital platforms require internet, computer literacy and security clearance (Toomey, Alvaro, Aiello-Lammens, Cossio & Barlow, 2019).

According to Farrell, Kagan and Tisdall, (2016) research outcomes are presented in complex and technical jargon. Therefore, suggested the need to communicate it in a simpler language. For, potential end-users might find easier to understand and be disseminated to those audiences. Thus, communicate health knowledge and the associated evidence-based interventions to an organizational stakeholders. Moreover, the raising health literacy levels makes study respondents to be active publics (Blaikie & Priest, 2019). Moreover, limited access to health information contributes to poor health decisions resulting to poverty. Furthermore, ignoring

study respondents could lead to demotivated study participations and respondent turn-over (WHO, 2019).

Globally, according to available literature researchers (scientists) are inclined to communicating to collaborators and peers, as opposed to the study respondents (Yuan, Oshita, AbiGhannam, Dudo, Besley & Koh, 2017). Regionally, Nwachukwu (2017) emphasised institutions are obligated, to strategically communicate with their stakeholders. Wong, Hernandez and Califf (2018) study, also recommended the communicating back the research outcomes to study respondents. In Kenya, Kariuki et al. (2019) highlighted a gap on, the impact of social media (Facebook and Twitter). Hence, there was media phobia among scientists in KEMRI sharing research outcomes to reach the diverse stakeholders. They recommended a functional institutional repository (IR) managed by Corporate Affairs. Lee et al (2020) recommended communications department (41.1%) should manage social media, and emerging media on public relations practices. Thus, enhance communication between institutions and publics. There is scant evidence outlining corporate communication strategies specifically, for disseminating human health research outcomes. That include study respondents as stakeholders in Kenya. This study aimed to establish how communication could be used to ensure the findings reach all relevant stakeholders.

To fill the research gap the study investigated; communication channels, communication skills, differentiation strategy and corporate communication plan, as corporate communication strategies. This study sought to examine the corporate communication strategies for dissemination of disease surveillance research outcomes that include study respondents at KEMRI. Therefore, enhance best practices as corporate communication strategies for communicating with study respondents.

1.4 Objectives of the Study

1.4.1 General Objective

To examine the determinants of corporate communication strategies on dissemination of disease surveillance research outcomes to the respondents at KEMRI.

1.5 Specific Objectives

The study purposed to achieve the following specific objectives.

i. To determine the communication channels for appropriate dissemination of disease surveillance research outcomes to study respondents at KEMRI.
ii. To determine the influence of communication skills for dissemination of disease surveillance research outcomes to study respondents at KEMRI.
iii. To investigate the differentiation strategies for dissemination of disease surveillance research outcomes to study respondents at KEMRI.
iv. To investigate the influence of the corporate communication plan in place for dissemination of disease surveillance research outcomes to study respondents at KEMRI.

1.6 Research Questions

The study purposed to answer the following research questions.

i. What are the communication channels for appropriate dissemination of disease surveillance research outcomes to study respondents at KEMRI?
ii. What are the appropriate communication skills for dissemination of disease surveillance research outcomes to study respondents at KEMRI?
iii. What are the differentiation strategies for dissemination of disease surveillance research outcomes to study respondents at KEMRI?
iv. How does the corporate communication plan determine the dissemination of disease surveillance research outcomes to study respondents at KEMRI?

1.7 Significance of the Study

Corporate communication is a major area and a great interest locally and internationally to organisations aiming to communicate with their stakeholders. To enhance "excellence" (a value of KEMRI) in corporate communication strategies uptake of research outputs especially study respondents. Moreover, dissemination is a mandate of KEMRI (KEMRI, 2020). Hence, communication value to stakeholders, where literature is scarce. This study provides academic knowledge to corporate communication students and communication scholars. Consequently, research organisations are under pressure to communicate ethically to the emerging new concept of communication science (Nisbet & Scheufele, 2018; Medvecky, 2018).

These study findings are significant to the Government of Kenya (GOK) in policymaking. Thus, towards achievement of (SDG's) sustainable development goals (SDG).

Specifically, goal three (3) that, highlights the good health and well-being (Opoku, 2019). Health is KEMRI's research mandate.

Moreover, the study findings will inform KEMRI's management on the importance of corporate communications. In dissemination of research outcome to study respondents. The researcher assumed that; the respondents answered the research questions factually, accurately and truthfully after assuring confidentiality of their responses and the respondents did not fear to be victimized for diverging information pertaining this academic study. This study extends the existing body of knowledge in corporate communication strategies, in research institutions in Kenya. Furthermore, the study findings document strategies to share research outcomes to backers (research collaborators or research partners) and research respondents (Tracy, 2019). The researcher emphasis is on feedback, to be extended to study respondents. Thus, communicating beyond those who give financial support to conduct human health research. The results from this research work are useful to corporate communication professionals worldwide, whose objective is in building and enhancing corporate communication.

The findings might also facilitate the achievement of one of GOK's development agenda, "Agenda 4", universal health care. The other agendas comprise; food security, affordable housing, universal health care, manufacturing and Job creation in Kenya (Barasa, Nguhiu & McIntyre, 2018; GOK, 2020; Kimathi, 2018, December Thursday, 13).

Therefore, this study investigated corporate communication strategies that would help KEMRI manage its, controlled uncontrolled communication through the study determinants. In this context, examples of controlled communication are annual reports and brochures. Therefore, uncontrolled communication comprise; press releases, feature articles utilised by Organisation (Maity, Dass & Kumar, 2018). The societal perception of an organization determines its future. Hence, the need develop corporate communication strategies, unique to every institution organization (Dawson, 2019; Tracy, 2019).

1.8 Justification of the Study

The researcher chose KEMRI, because of its top ranking in communicating research outcomes by Scimago Institutional Rankings in Africa (Scimagolab, 2020). Furthermore, KEMRI's mandate under Act, 2013 to undertake health research in Kenya (KEMRI, 2020). Therefore, KEMRI was chosen for the study among many research institutions since it is the leading government research institution dedicated to communicating human health research outcomes and its collaborators (KEMRI, 2020). Moreover, other research institutions examples comprise, International Livestock Research Institute (ILIRI) and Kenya Agricultural and Livestock Research Organization (KALRO), mandates do not target corporate communications, for disseminating human health information. Thus, main objective for this study.

In addition, potential backers (research partners/collaborators) and existing backers of health communication might use the study findings to understand the gaps filled. Hence, embracing corporate communication strategies. KEMRI management will benefit from the study findings to enhance its corporate communication strategies. The findings of this study are also beneficial to KEMRI libraries as additional reference, St. Paul's University scholars (academicians), and practitioners of corporate communication. A copy will be available in KEMRI and SPU Library, for reference. Thus, increase corporate communication knowledge.

Furthermore, Government of Kenya (GOK) policy makers of best practices of corporate communication in particular, will benefit from this research work as a reference. Hence, the academic material in this study, offer guidelines to researchers carrying out related studies in communication in the future.

Moreover, KEMRI has corporate communications, (local, regional and international institutions links comprising; World Health Organization (WHO), Japan International Cooperation Agency (JICA), US Centres for Disease Control and Prevention (CDC), the Walter Reed Army Institute of Medical Research and Welcome Trust-UK (KEMRI, 2020). Thus, ideal for a corporate communication case study.

This study results provide new knowledge in the field of corporate communication. Hence, strategies for consideration for effective, corporate communication for dissemination research outcomes at KEMRI. This study therefore, provides a platform or foundation of further research in Kenya and Africa.

This study is in response to a study call by, Curran, Kekewich and Foreman, (2019). Whose appeal was, it is unclear if other states are challenged in communicating research feedback to participants. Furthermore, this study utilised communication theory and excellence theory, to investigate KEMRI's communication strategies to study respondents.

1.9 Assumptions of the Study

The research assumed that KEMRI would gave permission for the study to be conducted. Ethical clearance and a student research permit granted by NACOSTI. Moreover, the study respondents and scientists would be cooperative. That, KEMRI would not be assimilated during the period of the study.

That the external factors would affect the steering of the strategic corporate direction, hence the objectives of KEMRI. These are the social, legal, environmental, political and technological (SLEPT) factors remained constant (Smith, 2019). Example that, Government of Kenya (GOK) did not merge KEMRI another research institution. A political fact, example, Kenya was going to the campaign period commencing 2022, could have affected respondent participation. KEMRI Nairobi is located near Kibra (*Kibera line saba*), a political host-spot (GOK, 2020; KEMRI, 2020). That there was peace and tranquillity during the study period. That, there was enough literature material to conduct the study on, research respondents in a research institution. That, study participants would surrender unbiased information for the study.

That, study findings might be used to generalize the determinants of corporate communications strategies in dissemination research outcome to study respondents in a research institution, in Kenya. KEMRI's management will adopt the findings on to enhance its corporate communications strategies in dissemination research outcome to study respondents in Nairobi.

1.9.1 Limitations and Delimitations of the Study

The study limitations are issues or influences the researcher had no control (Ghauri, Grønhaug & Strange, 2020). This study is limited or confined to the case of KEMRI study site in Nairobi County. Therefore, the study findings may not be generalised to other research institutions. However, this limitation can be reduced or minimised by conducting similar research work in other broader geographical areas.

This study is limited and therefore anchored on corporate communication strategies as independent variable. The variables comprised corporate communication, communication channels, communication skills, differentiation strategy and corporate communication plan.

The limitation can be overcome by including other dependent variables not under investigation like advertising and marketing strategies under the dependant the variable, dissemination of research outcomes at KEMRI. The researcher was limitation with the scientist respondents, withholding information, prompting dishonest responses. Due to the study being qualitative and quantitative in nature. The study participants were inclined to think, the study targets or doubts, investigates their research credibility.

In order to counter this limitation, KEMRI HR through, Corporate Affairs (CA) department, ascertained that, the study is for academic purposes and endorsed the questionnaires. The researcher adopted a drop and picked latter approach. Hence, incorporating, researchers were in the field or busy in laboratories or workstations. The introduction letter from St. Paul's university confirmed the researcher as prove the intended purpose of the study; which was for academic purposes (see appendix F, Letter of introduction to KEMRI from SPU). Moreover, the information collected was handled with utmost confidentiality. The researcher overcame the limitation of accessing the busy researcher and study participants by, booking appointments with the principle project investigators (P.I's). Therefore, got P.I's permission to accompany and administered the questionnaires to the researchers at the study sites. Thus, consent was sought from study participants (Curran, Kekewich & Foreman, 2019). In addition, the researcher got a student insurance policy cover. This was a standard requirement for conducting research within KEMRI, to mitigate the risk of infection at KEMRI.

Moreover, the researcher anticipated lack of cooperation from the scientists and study respondents fearing that, KEMRI management might use the study findings against them. Perhaps to jeopardize their careers. The researcher faced a delimitation of citing as references, video documentaries, KEMRI for the study because of copyright, ethical and patent issues. KEMRI is a protected area. Hence, access and photography of study participants is restricted (Protected Areas Act Chapter 204). However, accessed representative photographs and coupons from the KEMRI website courtesy Corporate Affairs (CA) and Information Communication Technology (ICT) departments (KEMRI, 2020). The researcher overcame these delimitations by attaching the introduction letter from SPU.

Therefore, supporting and highlighting that, the study solely for academic purposes. The study adopted a drop and pick later (one week) approach for some the study participants were busy. Hence, ensured adequate time to fill the questionnaires. To overcome the delimitation of credibility of data collection process and response rates of the questionnaires. The researcher called, and sent reminder emails (research tools) to, principle investigators (PI's) through the Corporate Affairs (CA). Moreover, the researcher and research assistants wore PPE (personal protective equipment) to mitigate infection. An example is coronavirus disease (COVID-19), declared on, March 11 2019 by WHO. Hence, maintained one-meter distance. Hand sanitizers used every twenty minutes, when face-to-face to minimise infection (WHO, 2020; MOH, 2020; KEMRI, 2020).

The research was delimited by location, Nairobi. KEMRI Nairobi headquarters was chosen, because it hosts majority of departments and ease of data collection from target population. Therefore, study delimitations are influences or choices made by researcher for the study (Ghauri, Grønhaug & Strange, 2020). Example boundaries of the study.

1.9.3 Scope of the Study

This study investigated the determinants of corporate communication strategies for dissemination of disease surveillance research outcomes at KEMRI. The study examined; communication channels, communication skills, differentiation strategies and corporate communication plan.

Therefore, study targeted; Corporate Affairs (including; CIDOS - customer information desk officers), ICT staff, librarians, KEMRI scientists on permanent and pensionable employment, to mitigate the risk of non-participation and assurance of participation through the study. The research collaborators from collaborating institutions; Centre for Disease Control, (CDC) Nagasaki University Institute of Tropical (NUITM), KEMRI Welcome Trust, Walter Reed Project (WRP) and University of Washington (UW). Hence, those whom have been and disseminated research outcomes at KEMRI for the last one year. Finally, research respondents from on-going KEMRI studies. Hence, maintain a consistent sample size for analysis throughout the study (Braun, Clarke, Hayfield and Terry, 2019; Shuster, 2019). Geographically, the study locations were KEMRI off Mbagathi highway and KEMRI within Kenyatta National Hospital (KNH) complex, in Nairobi County.

1.10 Chapter Summary

The general objective was to examine the determinants of corporate communication strategies on dissemination of disease surveillance research outcomes to the respondents at KEMRI. This case study was anchored on communication theory and excellence theory. The communication channels comprised; IMC, ICT and social media. Empirical review entailed communications strategies are plans to attain an organisation's goal (van Ruler, 2018). Communication skills include; speaking, listening and persuasiveness. Differentiation strategies are; corporate branding, corporate image, corporate identity or CVI (the recognisability) through the dimension of distinctiveness.

Corporate communication plan entails guides on how internal and external communications are done. Dissemination of research outcomes is communication of scientific evidence shared to study participants. These entail; persuasion, respondent feedback and media content.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

In this chapter, the researcher reviewed theories, which formed the foundations of this study. Thereafter, the empirical review that assessed previous studies in relation to the study. The research gaps were also included, which the study sought to fill.

2.2 Theoretical Review

Theoretical review aims at understanding and incorporating distinct phenomena, which allow for complete understanding of the core aspects of events. Communication scholars define a theory as a network of paradigms. They are related to one another and aimed at establishing the link between two or more variables.

Therefore, this case study was anchored on communication theory as the main theory, complimented by excellence theory. Communication theory and excellence theories are relevant to the empirical review of corporate communication strategies. Hence, facilitate investigation the communication between KEMRI and the relevant stakeholders.

2.2.1 Communication Theory

Communication theory elaborates or explains production of information, transmission of information, methods to relay it, how meaning is shared, thus created. However, noise narrows the information carrying ability (van Ruler, 2018).

Communication theory was developed in 1920's, by then referred to as the information theory. The pioneers being Clade Shannon between 1916 and 2001. Developing into the mathematical theory of communication. Shannon's focus being encoding information sent message. That a sender wants to transmit (van Ruler, 2018).

Commination scholars therefore agree that; theories comprise set of relationships, concepts, prepositions. Furthermore, theories are actually statements that create understanding by describing and explaining a phenomenon, prompting or justifying a cause for action (Kumar, 2019). Theories represent ways in which an environment is observed (Littejohn 1983, in Zerfass et al., 2018).

According to Klyukanov and Sinekopova (2019), the main elements of communication theory comprise; source, encoder, message, medium, receiver, decoding noise and the feedback (see Figure 2.1, a model of communication modified from Shannon and Weaver's Model of Communication). Therefore, corporate communication is important not only as an output but also as an input to an organisation (see appendix K, corporate communication).

Van Ruler, (2018) pointed out; three lenses how the communication process works. Communication as a one-way process of meaning construction whereby; the sender attempts to construct or reconstruct the meaning developed by the receiver. Communication is a two-way process of meaning construction. Example, is two or more people constructing new meanings together. Hence, communication is omnidirectional diachronic process, of meaning construction. Whereby the focused on, ongoing development of meaning itself.

Moreover, Zerfass et al. (2018), points out that, communication theories propose three lenses of communication. First, the one way process in which meaning construction is developed the sender from the receiver's point of view. Thus, the sender attempts to reconstruct meaning developed by the receiver. Secondly, in the two-way communication, the two individual construct the meanings together). Third, communication is omnidirectional diachronic process of meaning construction. The idea being meaning is created continuously (Sony 2019).

The modern of communication or contemporary model of communication was modified from Shannon and weaver model of communication includes feedback (see Figure 2.1, model of communication).

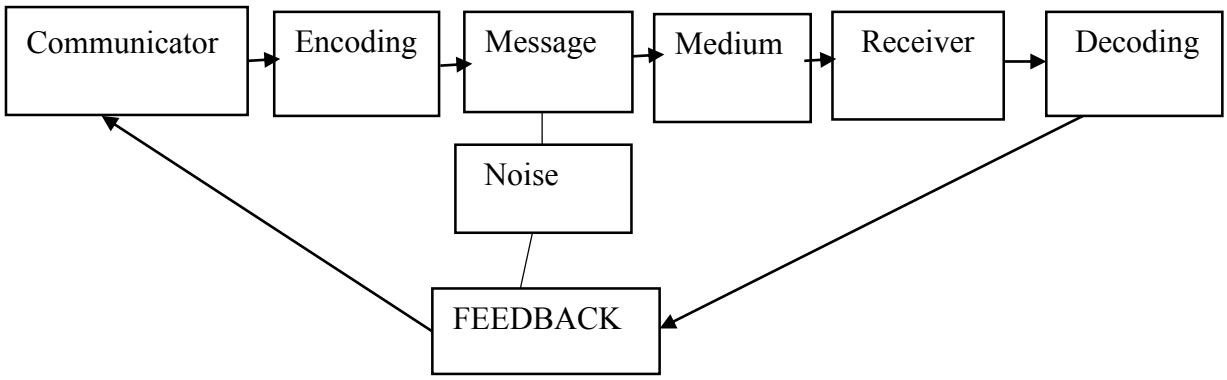


Figure 2.1 Model of Communication Modified from Shannon and Weaver's Model of Communication

Source: Contemporary Model of Communication Modified from the Shannon and Weaver's Model of Communication (van Ruler, 2018).

Figure 2.1, illustrates the process of the contemporary model of communications starting from; communicator, encoder, message, medium, receiver, decoding noise and the feedback link.

Moreover, Figure 2.1 illustrates the communication of research outcomes as being feedback, to research respondents. Thus, corporate communication strategies proposed by this study are guided by the seven elements of communication from the; sender (KEMRI), ideas, encoding, communication channel, receiver, decoding and most important; feedback to study respondents (Kourakos, 2017).

Communication theory is therefore, relevant to this study as it examines the study variables. Therefore, communication theory is relevant to this study; since it facilitates comprehension of human communication acts. Thus, investigating the multiple layers of communication as interconnected, as opposed to isolated communication act, Karnaukhova and Polyanskaya (2016) study affirmed communication essential an organization. Linked them to communications theory, public relations and corporate management. KEMRI's corporate communications are internal and external stakeholders. The internal being the KEMRI staff, research collaborators. External stakeholders include; study respondents, Kenya government and suppliers.

Therefore, strategic corporate communications are tailored (strategized), thus unique stakeholder's interests. In addition, and as an example, the power interest matrix might facilitate an organisations management accord the necessary attention to each stakeholder. As illustrated in the Table 2. The power interest matrix assess the level of interest for each stakeholder. Example, the funding agents (research collaborators or partners) require reports communicated say quarterly, of study progress and research highlighting breakthroughs or study findings (Yuan et al., 2017).

Table 2.1 Power Interest Matrix

Low	**0**	KEMRI's stakeholder A Minimum effort in communication	KEMRI's stakeholder B Keep informed
Power	**5**	KEMRI's stake holder C Keep satisfied	KEMRI's stake holder D **Key players: KEMRI** Scientists, collaborators and study respondents
High	**10**		
	0	**Low** **5**	**High** **10**

Level of interest

Source: Mendelow's Matrix (Eden & Ackermann 1998, in Berényi, 2017)

Table 2.1 illustrates the priority given for KEMRI's stakeholder D Key players. KEMRI Scientists, collaborators and study respondents to be in constant communication. Thus, given priority or preference in KEMRI's corporate communication. Hence, illustrates the study respondents shift, to the "key players" quadrant marked "D", notably the level of interest is "high". The power interest matrix is an adoption from Mendelow's matrix (Power interest grid). According to Berényi (2017), the power interest grid helps generate stakeholder management. Thus, focusing on project and corporate level communications.

Nwachukwu (2017) observed that, institutions have an obligation to communicate facts to their stakeholders. These facts revolve around operations, achievements, problems (concerns, challenges or issues), plans prospects and intentions.

In addition, Yuan et al. 2017 advocated for a two-way communication. Whereby, communication flows between an institute and its stakeholders. This ensures it remains in operation. The study highlights were; the role of two-way communication dialogical communications between researcher and the community (public). Feedback is given preference in an organisation's communication decisions and in policy development (Yuan et al., 2017).

This is ideal if adopted by KEMRI's management in considering the study respondents when choosing a communication channel. Thus, adjustments done to accommodate organisations publics (see Figure 2.1, contemporary model of communication).

Communication theory is relevant in this case study, because of the study respondent's interest in getting the research outputs. Therefore, a research institution needs the input of research respondents to generate the research outputs as the theory proposes the interconnected relationship between organisation and its stakeholders.

Moreover, communication theory facilitates the understanding of the communication process (van Ruler, 2018). In context to this study, the communication process that originating from KEMRI and destination being study respondents.

Communication theory is applicable in this study of corporate communication strategies. This is because; it highlights the role of corporate communication process. Thus, the interpretation of research outputs to respondents. In relation to this study, KEMRI's Corporate Affairs is part of the KEMRI management. Hence, the scalar chain (in administrative theory) as proposed by Henri Fayol's 14 principles of management, between 1845 and 1925. Which affirmed that there should be proper communication flow and authority (Edwards, 2018). Since it, controls the communication activities with its overall environment (see appendix I - KEMRI Organogram).

Furthermore, characters of communication theory paradigm comprise; communication focused on sender and receiver. Thus, KEMRI as an institution communicates through diverse departments and units (see appendix I, KEMRI Organogram). Hence, KEMRI through its researchers adopts to the change in environment by translating or identifying corporate communication strategies to communicate the research outcomes.

The limitations of communication theory are that; it concentrates in inflow and out flow of information; the process is not automatic and is complicated. Therefore, dependent of human intervention (Berger, Calabrese, Ellul, Adorno, Horkheimer, Barthes & Castells, 2018). Examples, identifying the study focus or deciding, what to study when everything is interconnected.

2.2.2 Excellence Theory

Developed by James E. Grunig, David M. Dosser and Larissa A. Grunig between 1970's and 1985, resulting from a study of best practices on corporate communications. Supported by (IABC) International Association of business communicators, incorporated additional theories of public relations roles, diversity, operations research and gender. Furthermore, excellence theory has developed into a general theory of public relations as a strategic management function. Excellence theory attributes value of institutes maintaining good public relations with their strategic publics. Later developed to a global public relations theory. Hence, achieve mutual goals. The main advantage is that; organisations can save of costs from; litigation, legislation, negative publicity and regulation by maintaining favourable relations (Oliveira, 2019).

Excellence theory foundation is that institutions ought to communicate with their publics symmetrically. Identify publics who can be affected by their decisions (like stakeholders theory). Therefore, the theory advocates integration stakeholders (scientists and study respondents) and an institute's corporate communications. Thus, two-way communication is ideal. Furthermore, reduce costs of negative publicity; provide products and services needed by their stakeholders (Oliveira, 2019). The theory of founded on four pillars. The goal-attainment approach; Institutions are deemed effective when they meet their objectives.

Four factors for ensuring effective PR according to excellence theory comprise; empowerment of the PR function. Thus, empower PR officials in managerial to communicative roles. Separate the PR from other function to ensure it is not sublimated into marketing roles. Therefore, institutions should base their relationships to the two-way symmetrical model in both internal and external communications.

Communication flows both ways allowing feedback (see Figure 2.1, feedback). However, this is not realistic, as organisations cannot put their interests second to their stakeholder (Found, Lahy, Williams, Hu & Mason, 2018). Moreover, theory is critiqued, as being theatrical and not practical. Excellence Theory is over-idealised the two-way symmetrical component (Kenny, 2017). The theory is further criticized as it values stakeholders than organizational values (Palazzo, Foroudi, Kitchen & Siano, 2020). The excellence theory is relevant to this study as it focuses is on organisation maintaining excellence in relating with its stakeholders to achieve institutional goals.

2.3 Empirical Review

The empirical review discusses four objectives; communication channels, communication skills, differentiation corporate communication plan, for dissemination of disease surveillance research outcomes to study respondents at KEMRI. These variables facilitated the study investigations. Hence, their influence on dissemination of research outcomes.

Therefore, this a systematic, explicit and reproducible method for identifying evaluating and interpreting the existing body of recorded work (Hart, 2018; Green & Thorogood, 2018; Kumar, 2019). Figure 2.3 illustrates the researcher's conceptual framework. According to Braun et al. (2019), the conceptual framework is a diagrammatic illustration. Thus, the relationship between the study independent variables and dependant variables. Therefore, facilitates the researcher to show the proposed linkages between the independent variables and dependant variable.

2.3.1 Communication Strategies

According to van Ruler (2018) communications strategies are plans to attain an organisation's goal. These are combined communication strategies that promote the expression of the KEMRI's philosophy, mission, and vision hence through the controlled and uncontrolled corporate communication. Strategy is from a Greek word *stratosagein,* which means, building roads. Other meanings previously used were, "being the leader" and "using a ploy to win". Corporate communication strategies are plans to attain an organisation's goal. Communication strategies are avenues in which organisations objectives are realised (van Ruler, 2018).

The communication strategy of the organization is aligned to the mission and vision. Communication is can be controlled and uncontrolled communication through various channels. Examples are text and speech (Sony, 2019; Maiorescu-Murphy, 2020).

Zerfass et al. (2018) summarised strategic communication, as the purposeful use of communication to engage in discussions of strategic significance to its goals. In this context, the dissemination of research outcomes. Their study concluded that, communication is strategic if it is, purposeful and drives an institutes or organisation's mission.

Moreover, communication strategies types are verbal, nonverbal or visual. Thus, what KEMRI communicates through the various (channels) medium. Examples are through speeches and text. The key corporate communication elements comprise; management, marketing and organizational communications (McQuail & Windahl, 2015). According to Frandsen and Johansen (2018) communication strategies elements comprise. Communication strategy (information), dialogue strategy (institution and stakeholders), corporate advertising strategy (discussed in IMC strategy for creating and maintaining favourable images) and dialogue strategy (interactions to disseminate knowledge). Finally, persuasive (communication skills) associated with, the two-way symmetrical communication model of communication.

Ngonyo (2018) reported that corporate communication is wrongly associated with propaganda, liars, sugar coating experts, spies and even manipulators. Therefore, the study recommend reinstatement of government PR professional institutions, example Kenya institute of Public Relations, for professional accountability.

2.3.2 Communication Strategies Summary

Table 2.2. A summary of Internal and External Communication Strategies

External communication	Common/shared	Internal communication
Conferences	Conferences	Memos
Journals	Social media	News releases
Letters	Events	Notices
Direct mails	Photography	Reports
Advertisements	Websites	Face to face
Video		Speeches
Telephone		Emails
Web		Conferences
Trainings		
Newsletters		
Bulletins		

Source: Frandsen and Johansen (2018); Heath, (2020)

Table 2.1 shows examples of internal communications (IC) and external communication (EC) strategies.

2.3.1.1 Communication Channels

Communication channels are transmission avenues for conveying information. Hence, the means or medium for communication. How organisations transmit information to their stakeholders.

Communication channels comprise; ICT (example, using computer technology, internet to create web pages), IMC, social media or social networks (Facebook or Twitter), Face to Face and email (Frandsen & Johansen, 2018; Zerfass et al., 2018). Therefore, majority of corporate communications channels today are, mediated through computers (Beger, 2018).

Collins et al (2016) affirmed 587 scientists from a variety of academic disciplines use social media to communicate scientific knowledge (research outcomes) as a communication channels.

Braun, Hernandez Bark, Kirchner, Stegmann and Van Dick (2019) observed that; 261 employees preferred face-to-face communication as being of a higher quality compared to telephone and email communication.

Androutsopoulou, Karacapilidis, Loukis and Charalabidis (2019) advocated for the development of a new digital channels. To facilitate communication between citizens and government. Making use of semantically annotated data, this channel enables richer and expressive interaction of citizens with government. Hence, facilitating information seeking.

Locally in Kenya, communications regulated by the Communication Authority (CA-K) of Kenya (Communications Act. 1998). Therefore, manages Kenya's frequency spectrum and licensing of the communications industry.

Communication Authority facilitates enhancement of information and communications sections with include; electronic commerce, multimedia and broadcasting and telecommunications (Communication Authority, 2020). Communication channels align to the content transmitted and remain unchanged by the communication channel (Iyengar & Massey, 2019).

2.3.1.2 Integrated Marketing Communication (IMC)

The foundation of integrated marketing communication (IMC) is the process of sharing information between people through a continuous activity of speaking, listening and understanding (Camilleri, 2018). Communication is the process of delivering a message from one person or group to another. Hence, the manner in which people get messages or information (Bruhn & Schnebelen, 2017). Similar to corporate communication, IMC key focus is relationship building. Furthermore, IMC utilizes an "outside in".

Whereby, the communications are tailored with the audience (study respondents) needs in mind (Zahra, 2018). Therefore, the KEMRI study respondents are incorporated in dispatched research outcomes.

Thus, IMC is a corporate communication strategy, utilised in planning the organisations touch points affirms, Adebiyi and Bello (2018). Therefore, IMC is the planning an execution of marketing activities of an organisation. The strategy is executed in a way that is consistent and creates more value, than when those activities are performed separately (Ots & Nyilasy, 2017).

The term integrated means combining two or more elements. Which include advertising, personal selling, public relations and sales promotion (Bruhn & Schnebelen, 2017). These four elements are the traditional components of the promotional mix.

Therefore, it is important to note that the concept of integration also resulted from the recognition of disintegration. Especially, in the field of communication. Moreover IMC created to achieve consistency across marketing communications disciplines and media that; had become fragmented over time through the cultivation of individual disciplines, competition and the development of independent communication objectives (Belch & Belch, 2016). The concept of disintegration has promoted diversity and hence a challenge in marketing and promotion.

Corporate communication with stakeholders should be strategized to embrace the latest technology, innovation and managerial development. Hence, the need to adopt promotional mix as a tool of integrated marketing communications (Ots & Nyilasy, 2017).

The father of IMC, Schultz defined IMC as, the process of developing and implementing various forms of persuasive communication with stakeholders and prospects over time (Zahra, 2018). Indeed, integrated marketing communication (IMC) is a corporate strategy that; focuses on the organization-wide optimization of unique value. To attract and retain potential customers and other stakeholders (Belch & Belch, 2016).

Therefore, IMC facilitates the formulation or shaping of research outcomes to be communicated in a uniform manner. Thus, convey the same message and meaning throughout or in all media channels.

2.3.1.3 Information Computer Technology (ICT)

Today, corporate communication is facilitated by the internet for disseminating information. According to Iyengar and Massey (2019), the origin of the internet as from the 1990's became a major source of communicating information inside and outside organisations.

Although, recent technological advancements in information computer technology (ICT) of have given organizations an option of utilizing, Computer mediated communication (CMC) to disseminate their corporate information. Examples comprise; sending press leases, email, instant messaging, text messaging, Internet forums, USENET (users network) and video conferencing. Therefore, communication strategies in place ought to ensure that, communicated messages do not change the meaning over the channels chosen. That the information reaches the destination.

According to Nwachukwu, (2017) organisations should utilize information communication technology (ICT) to leverage, or hence have competitive notch on their corporate communication output. The communication outcomes are in reference to the KEMRI's communication through corporate department (Corporate Affairs) to the internal and external publics.

Nwachukwu's (2017) study recommended the following. Equipping corporate communication staff with corporate training (capacity building). Hence, corporate professionals to ensure productivity and efficiency; corporate staff to be ICT literate; organisation to appreciate corporate staff as important to management and organisational existence; Information is crucial in an institute's growth and survival.

Moreover, information technology (IT) skills comprise; photography skills (use of digital cameras), presentation skills (example, Power Point), spreadsheets skills (example, Microsoft Excel), Web navigation skills and writing skills, Hence the document processing skills (Bodison, 2015; Moss, 2017; Treadwell & Davis, 2019).

Bautista's (2015) study recommended that; communication solves health problems thereby, improving quality of life or respondents. The result is the ability to access, comprehend and interpret health information. Referred to as eHealth literacy.

2.3.1.4 Social Media

According Brownson et al. (2018) researchers have adopted social media (examples, Facebook and Twitter) to disseminate research outcomes. Brownson et al. (2018) further observed that; Twitter attracted 1000 tweets followed by online news, Facebook and blogs. However, Brownson et al. (2018) point out that; researcher's opinion of media is unclear, thus divided. One notion is that media as a major way of disseminating research outcomes (findings). Second notion is the doubt of its effectiveness in affecting policy. The research outcomes dissemination channels comprise; journals, (OAJ's) open access journals, social networks, conference presentations, (IR) institutional repository (Starovoytova, 2018).

Social media are web-based services or applications that allow; quick access, creation, sharing of user-generated content, in real time by organizations (example, KEMRI) and communities (McCay-Peet & Quan-Haase, 2017; Wang & Yang, 2020).

Lee, Ong, Lim and Chuan (2020) study concluded, public relations and communications activities ranged from, 25% to 50%, utilised social media (LinkedIn, Facebook and Instagram) in Malaysia. Therefore, plays a role in KEMRI's communication with its publics.

Brownson et al. (2018) study also realised that, only 15% of health researchers use social media as a dissemination tool. Moreover, among the 100 most-covered 2016 journal articles, health studies were discussed on social media more than any other science topic. Barriers to utilising of scientific information (research output) comprise resource reliability, information overload, trustworthiness or credibility of data and time.

The study recommend use of nontechnical language and numbers sparingly, when engaging the media. Moreover, Dale and Newell (2019) affirm that Facebook, Twitter and Instagram have become the easiest, way to transmit knowledge in a timely manner.

2.3.2 Communication Skills

Communication skills comprise; speaking, reading, active listening or understanding, translation, clarity, and concision, respect, open-mindedness, empathising, adoptability, confidence, assertiveness, persuasiveness, analysis, audio-visual skills, planning, strategic thinking, investigating, validating and writing (Arnold & Boggs, 2019; Treadwell & Davis, 2019; Moss, 2017).

In addition, Koprowska (2020) summarizes communication skills as empathy, observation and listening. Since, communication skills are a prerequisite in relaying information interpersonally.

Locally, Hantiro and Maina (2020) did a study on Strategy Implementation and Performance of Tana River County Government, Kenya. The study recommended capacity building (training of staff) to enhance communication skills. Furthermore, documentation of internal communications and internal communication. In addition how staff communicate to external stakeholders and possible feedback channels as part of the communications strategy.

Bodison (2015) pointed out that, dissemination science utilizes communication skills designed to increase awareness and understanding of innovative, effective policies and practices to facilitate their widespread adoption. Whereas, Guetterman et al. (2015) insisted on engaging the community in the dissemination, implementation and improvement of health-related research as proposed in this study.

Thus, corporate communication strategies are guided by, the seven elements of communication. They comprise; sender (organization), ideas, encoding, communication channel, receiver, decoding and most important; feedback (Kourakos, 2017). Moreover, the communication process must be considered as a continuous and dynamic inter-action, both affecting and being affected by many variables.

2.3.2.1 Capacity Building

The objective of capacity building is, improving the skills and knowledge to communicate. Capacity building entails the upgrading of the professional qualifications or credentials of the research scientists. Hence, to improve an organisation retain appropriateness or suitability in, communicating study outcomes to the stakeholders (Blaikie & Priest, 2019; Gualini, 2017).

KEMRI's mission also anchored on has capacity building (KEMRI, 2020). To improve human health and quality of life through research, capacity building, innovation and service delivery (KEMRI, 2019). According to Farrell, Kagan and Tisdall (2016), research evidence presented in complex and technical jargon. Hence, ought to be communicated in simpler language.

Those potential end users may find easier to understand. The targeted distribution of information and intervention materials to a specific public health or clinical practice audience. The intent is to spread knowledge and the associated evidence-based interventions.

2.3.4 Differentiation Strategy

A corporate strategy for distinguishing an institutions services from its counterparts (Okat & Solak, 2020). Accomplished through corporate branding, utilizing corporate image (Sardana, 2018) and identity (Palazzo, Foroudi, Kitchen & Siano, 2020). Corporate strategy, in this study is content, is the blue print institutional strategies to communicate. Differentiation strategy entails; corporate branding, corporate image and corporate identity discussed below.

2.3.4.1 Corporate Branding

According to Iglesias, Ind and Schultz (2020), corporate branding entails using corporate image, identity to achieve differentiation strategy. Thus, create a distinctive institutional perception in the mind of the stakeholder, of the services rendered affirms, Palazzo et al. (2020).

Therefore, a strategy of creating a matchless impression of an institution's services. In context with the study, KEMRI's corporate strategies projecting or communicating research outcomes. Therefore, utilise corporate image, corporate identity as tools.

2.3.4.2 Corporate Image

Corporate image is the collective evaluation or perception of an institute's ability to deliver valued outcomes from its stakeholders about its services (Van Ruler, 2018; Sardana, 2018). Corporate image is the perception (at a stipulated time) of an organization in the mind of its stakeholders (what an institute is). Once the name is referred to in its communications. Hence, how an institution is and how it operates thus, "How we would like others to see us", is what the aspired (Frandsen & Johansen, 2018). In this case, KEMRI's image in stakeholders minds.

2.3.4.3 Corporate Identity

The corporate identity is a combination of colour scheme and design, communicating a visual statement about what it does.

Thus, the corporate visual identity system (CVIS) comprises five aspects; authenticity, consistency, distinctiveness, transparency, visibility (Melewar et al., 2017; Okat & Solak, 2020). These are; the institute's or organisation name, slogan, logo, colour, symbol, typology. Foroudi, Melewar and Gupta, (2017) summarised them as elements of a corporate logo. That is, the official graphical design for an organisation and the uniqueness of the design requires significant creativity, which must match an organisations strategy and identity. Provides recognisability hence, increased familiarity. Scholars also refer to them as, corporate identity mix (Melewar et al., 2018; Gupta, 2018).

Moreover, CVI entails utilization of graphical elements examples; colour, text-typography, logo photography and text). Therefore, CVI anchors corporate identity through the dimensions of visibility and distinctiveness. While informing KEMRI's stakeholders that, it exists (Okat & Solak, 2020; KEMRI, 2020). Hence, distinguishes KEMRI's research outcomes from other research institutions.

In the study content, corporate identity referred; to the organisation name is KEMRI. Whose slogan is, "In Search of Better Health", logo (see appendix G, logo), typology is Times New Roman 12 or Calibri Light 12. Colour is sky navy blue in KEMRI's logo and publications (see appendix G, logo). Thus, identifies KEMRI dealing with human health research in Kenya (KEMRI, 2020).

KEMRI's identity is not affected by its financial stability and success. Conveyed in its Japanese designed buildings, printed on official stationary used to communicate (see appendix G, study location). Corporate identity is as organizational personality, identity as organizational as visual image, organizational as a collection of corporate communication (see appendix, G: KEMRI's logo and photograph). The corporate identity is based on organizational common goals and shared understanding (see appendix K). Hence, what an organization is and how it operates (Rowden, 2017). Thus, how KEMRI perceives itself. The overall purpose is to achieve the organizations desired image from stakeholders (Cornelissen & Cornelissen, 2017; Sardana, 2018). Example, KEMRI's corporate communication about its research breakthroughs.

Corporate identity is perception in the mind of KEMRI's management. "How we see ourselves" or How we would like others to see us" (Melewar et al., 2018). Examples are the colours, logo that differentiates KEMRI. A mental image or photograph.

This is a construction of internal constituencies (internal stakeholders). Perceived by employee image, consumer image, community image and investor image.

Scholars summarise corporate identity as the inward and outward looking of an institute or organisation to its stakeholders (Melewar et al., 2018; Rowden, 2017). The inward and outer perspective created via an organisation corporate communication outputs (Melewar et al., 2018).

Melewar study concludes that strategy and identity are the key in promoting integrated corporate communication. Thus yielding stakeholder commitment, loyalty and trust (Melewar et al., 2017). Therefore, relevant to KEMRI's corporate communication strategies with its stakeholders.

This study intended to fill the gaps in Melewar's study done in UK, which required further studies conducted to investigate if their study findings apply in other settings. Therefore, prompting this case study to be done in a Kenyan research institution. In addition, Melewar's study on taxonomy explained; behaviour, communication, culture, design and industry as key ingredients in corporate identity Thus, the individual character to which an institute is identified or recognised. Hence, KEMRI's name besides being an identification is a motivator to engage (communicate) in research (see appendix K, corporate strategy). Therefore, there is a relationship between corporate strategy and corporate identity (Melewar et al., 2017).

2.3.5 Corporate Communication Plan

Corporate communication plan comprises organisational plans or guidelines. For ascertaining when and which situations to utilize formal or informal communication, stakeholder prioritization and communication structure. How communication flows from and outside of the organisation, either top-down or bottom-up (Bütschi, 2018; LaBelle & Waldeck, 2020).

Therefore, corporate communication plan is the organisational communication protocol for informing and organisational stakeholders (Bütschi, 2018). Example, KEMRI is standard operating procedures (SOP's) for communication. The official communication protocol used to disseminate information, internally and externally. Hence, based on a fixed time-fame, "by when" and "how", internal and external communications are done within KEMRI's budget (Sony, 2019).

Example, increase utilise corporate communication strategies to enhance public health literacy by 50% from the year 2021 to 2026. Moreover, Brownson et al. (2018), study realised that, only 15% of health researchers use social media as a dissemination tool. Furthermore, that among the 100 most-covered 2016 journal articles, health studies were discussed on social media more than any other science topic. Hence, corporate communication plans, are utilised to disseminate information, internally and externally (Sony, 2019).

Therefore, a corporate communication plan entails guides on how the internal and external communications are done. Hence, a plan for determining when, who, which information will be delivered, and in what channel. Example, how to communicate with the stakeholders like finding agencies or its staff pertaining various issues. What media channel to use, and when. Thus, the corporate communication plan gives guidelines or rather stipulates who is allowed to communicate, who and to whom (Keyton, 2017). Example, who and whom Corporate Affairs (CA) sends emails or press releases (KEMRI, 2020).

Moreover, the growth (proliferation) of ICT has necessitated institutions to strategically device plans to communicate. What needs to be communicated, to which stakeholder, in what manner, when and what effect, affirms Sinha and Bhatia, (2016).

Purtle, Lê-Scherban, Wang, Shattuck, Proctor and Brownson (2018) study recommended audience segmentation for policy developers. Therefore, audience segmentation are the dissemination strategies for customizing information destined for the different organisational publics. Therefore, the strategies for prioritising or articulating, the flow of communication internally and externally (Keyton, 2017). In this study's content, the selection of the corporate channels that best communicate the research outputs.

Another recent study by Yuan, (2019) was a comparative analysis of the Chinese and Japanese, corporate communication on Facebook and Twitter. Hence, the use of international social networks site (SNS) to communicate with stakeholders. Hence, to evaluate public responses and complains. The study summarised, "seeking feedback" as the highest response on Facebook, as compared to "promoting sales" from Twitter from the society.

Murunga et al, (2020) pointed out those researchers using Knowledge Translation (KT) and face challenges at individual and institutional levels. These comprise; limited KT knowledge and skills, for communicating research and interacting with research end-users, inadequate institutional guidelines, and structures for promoting KT practice. Kenyan research institutions are obligated or mandated to communicate research information (outcomes) to the diverse stakeholders (Ministry of Health, 2020).

2.4 Dissemination of Research Outcomes

According to Starovoytova (2017), dissemination of research outcomes is the culmination stage of a study. Starovoytova's (2017) study reported 82% of their respondents disseminated their research outcomes in open access journals. Dissemination is planned using evidence based interventions to targeted audience using determined communication channels. Relevant to this study, communication of scientific evidence shared to study participants.

Brownson, Eyler, Harris, Moore and Tabak (2018) study affirmed that, dissemination relies on the message, source, audience and the channel used. The study recommendations comprised messages need to be framed or aligned to the target audiences.

Journal articles cannot be relied on. Additional channels to include; policy briefs, news media, one on one meetings, seminar and workshops. Policy developers need to make policies that advocate for open access to aid the issue of not accessing scientific information.

Wong, Hernandez and Califf (2018) study recommended, returning research results to study participants. Wong et al. (2018) urged that returning results is a basis for structured environment for developing an empirical framework. However, researchers and study respondents have the challenge of how to consume, analyse to make sense of the data.

Stakeholder engagement in research and evaluation processes improves dissemination. Dissemination of research to non-scientists is therefore, enhanced when outcomes are framed. To evoke; emotion, interest and demonstrate usefulness. Dissemination of research outcomes should be time-efficient, consistent with organizational climate, culture and resources. Thus, aligned with the communication skills of scientists. Ineffective dissemination leads to a translation gap (Brownson, Eyler, Harris, Moore & Tabak, 2018).

According to Murunga, Oronje, Bates, Tagoe and Pulford (2020), there exists a gap in communicating scientific knowledge to society. This ought to be mitigated through Knowledge Translation (KT) is a dynamic interactive process for ethical exchange of research knowledge (corporate communication) and dissemination. Making scientific outcomes understandable to society. Dissemination of research outcomes to non-scientists should be framed to check the exiting "translation gap" affirms, Brownson, Eyler, Harris, Moore and Tabak (2018).

Furthermore, research uptake involves using; media or intermediaries to package and contextualizing the outcomes, to end-users of the research outcomes (Leelahavarong, Doungthipsirikul, Kumluang, Poonchai, Kittiratchakool, Chinnacom & Tantivess, 2019).

Corporate communication strategies therefore, take up the intermediary's role. To package and disseminate the research outcomes to be suitable for, the respondents as well as the research funders. Research communication has changed, the tradition of researchers simply disseminating in scientific forums; conferences, publications and peer reviews and feedback (Brownson, Colditz & Proctor, 2018; Treadwell & Davis, 2019).

Recent literature calls for on-going systematic analysis of collected data and the provision of information to manage diseases. Surveillance entails tracking of the disease and programmatic responses, and taking action based on the data received. Therefore, the purpose of surveillance is detecting disease organisms, maybe on bacteria or viruses. Hence, predicting and preventing human illness (WHO, 2019). Therefore, the basis of this study, to investigate the corporate communication strategies for disseminating disease surveillance outcomes to study respondents. Moreover, one of the functions of surveillance is feedback, to those providing the information. Thus, in this study context, feedback to KEMRI study respondents.

In Los Angeles, Bodison et al. 2015 in a classic paper, summarizes recommendations from 129 participants of researchers, research fellows and research collaborators. That, community respondents concern was that research outcomes were not communicated back.

In addition, conference participants affirmed that, the (eventual) cost of an intervention might be unreasonable for many in low socioeconomic communities. Thus, community felt unappreciated in terms of time and efforts contributing to a research agenda to affect their own communities. Bodison's classic study recommendations comprised; using jargon-free language to disseminate findings for ease of understanding. Incorporate various social media outlets.

In Kenya, Kariuki et al. (2019) explored the research dissemination strategies used by KEMRI scientists. The study conclusions were that; researchers disseminated research outcomes in; international peer reviewed journals (92.7%) between 2002 and 2015. Hence, the dissemination in a channel of choice. Others comprised; conferences, workshops, seminars, report to research clients, policy briefs, (media), Facebook and Twitter (social media).

The study recommended activation of an institutional repository (IR). Kariuki observed; absence of a centralized electronic database. Hence suggesting more channels beyond traditional channels of dissemination. The study cited dissemination challenges comprise selective reporting by media and misinterpretation of research outcomes leading to poor synthesis. Furthermore, the study sited "media phobia" among scientists, recommending a functional institutional repository managed by Corporate Affairs. This study investigated the gap under the, "research outcomes dissemination" variable.

Therefore, dissemination of research outcomes entails the following; persuasion, respondent feedback and media content discussed below.

2.4.2 Persuasion

Persuasion is concerned with the organisation's communications and placement in the public domain (Smith, 2017). Communication scholars define persuasion as a human communication purposed to; change or have an influence by modifying values, attitudes or beliefs. Attitude is a state of the individual towards a value. Thus, persuasion is a psychological construct (Maio et al., 2018). Moreover, values are ideas that guide the principles of an individual or organisation. Beliefs are cognitive compared to, attitudes and values. Hence, they are cognitions concerning the world (Petty, 2018; Burkholder & Buchanan, 2019).

Moreover, persuasion is a symbolic activity that affects the internalization of new cognitive states of overt behaviour through exchange of messages. The atmosphere has to have free choice. Thus, the individual is free to act otherwise to persuader's proposal in this study's content, study respondents. In relation to the symbolic, aspect of persuasion, KEMRI's logo with symbolises or links the messages to the medicine (KEMRI, 2020). Strategic to harness change (communicate) of attitude towards a disease problem. KEMRI's persuasiveness (communication skills) aligned to the key elements (persuasive tools). Ethos, pathos and logos.

Therefore, ought to be evidence based (ethos), appeal to stakeholder's emotion (pathos) and logical (logos) as proposed by Aristotle (Morrell, 2020).

Moreover, persuasion is not coercive. Philosophers refer coercion as, a forceful technique whereas; persuasion uses verbal appeals and reason. Persuasion effects are; shaping attitudes with ideas; changing attitudes, responses and reinforcing positions already held Petty (2018).

2.4.1 Respondent's Feedback

Respondent's feedback focus on to the two-way communications between researchers and research respondents. The mode in which the researchers through corporate communication, send their results research outcomes to respondents. Respondents communicate back by, enquiring or responding to researcher's enquiries about their disease burden. Organisations choose print or a broadcast media channels to communicate their corporate statements (Sokey et al., 2018). Print examples comprise newspaper and journals. Whereas, broadcast media examples are TV and radio. In addition, press release sent by an organisation as feedback to the media houses, outlines the facts, incorporating a boilerplate which are few sentences at the end of the press release that describing the organization (Wheeler, 2019).

Therefore, KEMRI scientists have an ethical obligation to return individual research results and incidental findings that are clinically significant, valid and actionable to participants affirms, Ngongalah et al. (2018).

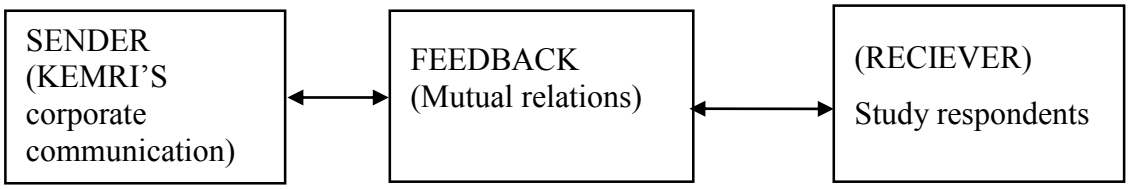


Figure 2.2 Feedback to Research Respondents from Scientists

Source: Researcher (2020)

Figure 2.2, illustrates the communication of research outcomes as being feedback, to research respondents. Thus, corporate communication strategies proposed by this study are guided by the seven elements of communication from the; sender (KEMRI), ideas, encoding, communication channel, receiver, decoding and most important; feedback to study respondents (Kourakos, 2017).

Communication scholars agree that communication is not complete in the absence of feedback for the following reasons. Feedback acts as confirmation the message been received by sender. Allows for evaluation, for accountability and integrity. However, feedback might be affected, if the relationship between sender and receiver is not maintained (Kourakos, 2017).

2.4.3 Media Content

The media content is information from research study (outcomes) that is, disseminated through a media channel to a specific target audience. The media is the channel, which, KEMRI may choose to transmit the information to reach their audience. Moreover, media range is; how far and well, the media channel can transmit or disseminate the (research outcomes) media content (Iyengar & Massey, 2019). Therefore, media according to available literature is the communication strategy for information transmission, without changing the meaning. Based on its ability to transit over a geographical wide area (Maity et al., 2018). Media are channels through which, media content (information) is transmitted or disseminated. The main groups or types of media are; print media (magazines and newspaper), broadcast media (Television and radio) and internet (social media). Media is a way communicating information to a specific audience (Riff et al., 2019).

Television (TV) as a media has the advantage of conveying media content as visual content (pictures). TV has ability of attracting a bigger audience comprising; the literate and illiterate than any other media channel. Radio content is immediate and cheaper to transmit. Moreover, newspapers are affordable, although targeted and engaging. Newspapers have the advantage of being used for reference purposes (Riff, Lacy, Fico & Watson, 2019). KEMRI packages information for the public as media content. In this context, packaging the research outcomes. In Kenya, Media Council of Kenya (MCK) is the national regulatory authority that regulates, print and broadcast media. Established under Media ACT, no. 20 of 2013 (MCK, 2020). Hence manages the conduct of media professions (Ouma, 2018; MCK, 2020).

2.2 Conceptual Framework

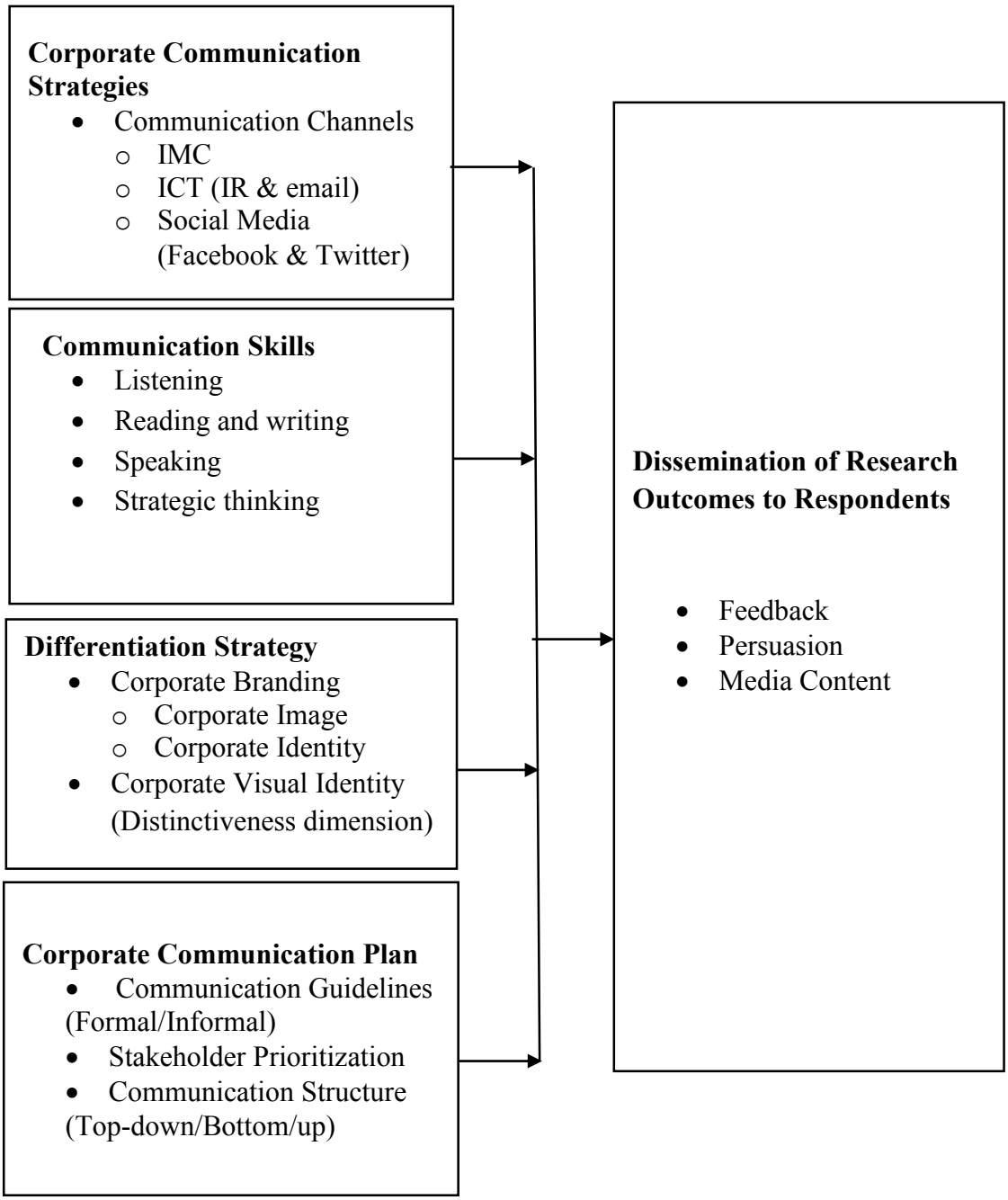


Figure 2.3 Conceptual Framework

Source: Researcher (2020)

In summary, Figure 2.3 illustrates the relationship between the corporate communication strategies variables and dissemination of research outcomes to the respondents.

Table 2.3 Operationalization of the Study Objectives

Objectives	Variable and Type	Indicators	Analysis
Objective 1	Independent; communication channels	IMC ICT Social Media	Descriptive Correlation Regression
Objective 2	Independent; communication skills	Speaking, Reading, Listening, Persuasive	Descriptive Correlation Regression
Objective 3	Independent; differentiation strategies	Corporate Branding (image and identity) CVI through the dimension of distinctiveness	Descriptive Correlation Regression
Objective 4	Independent; Corporate communication plan	Communication guidelines (Formal/Informal) Stakeholder Prioritization Communication Structure (Top-down/Bottom/up)	Descriptive Correlation Regression
	Dependent; Dissemination of Research Outcomes to Respondents	Feedback Persuasion Media Content	Descriptive Correlation Regression

Source: Researcher (2020)

2.6 Summary of Literature Review

Kariuki et al. (2019) explored the research dissemination strategies used by KEMRI scientists. The study sited media phobia among scientists, recommending a functional institutional repository managed by Corporate Affairs. Furthermore, Kariuki's study highlighted a gap on the impact of social media (examples, Facebook and Twitter) in, sharing research outcomes and recommended a functional institutional repository.

According to Nisbet and Scheufele (2018), the public does not know much about science. Hence, it appears that, scientists do not know much about the public. Public understanding is the joint creation of scientific and local knowledge. Therefore, science communication supports public scientific awareness. Thus, the need to quench the knowledge thirst among respondents through corporate communication. In Kenya, few studies have been done pertaining to the influence of corporate communication strategies in a government research institution. Hence, the need to investigate the effectiveness of the strategies in place at KEMRI.

According to available literature, researchers (scientists) are inclined to communicating to collaborators and peers, as opposed to the study respondents (Yuan, Oshita, AbiGhannam, Dudo, Besley & Koh, 2017). Corporate strategies are the managerial plans to achieve its objectives leveraging on competitive strength (Waslekar, 2016). According to Frandsen and Johansen (2017), strategic communication entails; press releases, annual reports and PowerPoint presentations.

The de-jorganizer according to Rakedzon et al. (2017) prompts the area to replace scientific jargon with user-friendly words. Although, Rakedzon et al. (2017) argues that; avoiding jargon is difficult for scientists pointing out that, there is no standard format for amending the information. Hence, the need for corporate communication trained staff to package the research outcomes alongside the scientists with utilising communication skills.

Fortunately, corporate communication entails comprehensive content strategies; social media… corporate experts work with diversified audiences, identifying which media outlets influences them insists Beger (2018). Nwachukwu (2017), further recommended Data Banks (DBs), a reservoir of information. Enhance corporate communication outputs in this case the research outcomes from KEMRI.

2.7 Research Gaps

This study contributed to the existing body of corporate communication to identify; ideal corporate communication strategies that include study respondents as stakeholders in research outcome dissemination. The literature reviewed by the researcher is scant. Therefore, not comprehensive on corporate communication strategies to disseminate human research outcomes in Kenya.

This study intends to fill the gap identified (highlighted) by Kariuki et al. (2019) in their paper titled, Research Dissemination Strategies Used by Kenya Medical Research Institute Scientists. The study explored the research dissemination strategies used by KEMRI scientists. They pointing out the need for further studies that would offer corporate communication strategies. Corporate communications strategies that embrace; re-packaging or synthesis research publications effectively to stakeholders using innovative ways to understand research outputs. Kariuki et al. (2019) further recommended a functional institutional repository (IR) managed by Corporate Affairs. This study investigated the dissemination channels beyond publications in use to avert the media phobia by KEMRI scientists. However, Kariuki's study did not indicate the impacts of social media. Examples being, Facebook and Twitter in sharing research outcomes. Which is this study investigated. Moreover, the respondents who cannot access institutional digital platforms.

Wong, Hernandez and Califf (2018) study identified a gap, sharing (feedback) of research results to study participants. Hence, feedback completes the communication process (Borner and Zerfass, 2018; van Ruler, 2018). This study further complimented, "feedback" and filled this gap by investigating; research output dissemination channels. Currently, research output dissemination channels comprise; conferences, journals, institutional repository (IR), open access journals and social networks adds (Rabin & Brownson, 2017; Starovoytova, 2017; Starovoytova, 2018).

The stakeholders are the consumers of the reports generated not limited to government and the scientific community. KEMRI has local and international collaborators (KEMRI HR, 2020).

Apparently, none of the studies reviewed concentrated on corporate communication strategies to include study respondents in Kenya. Specifically in a Kenya government, research institution (Parastatal) specializing in; corporate strategies communicating human health research outcomes. Therefore, this research work seeks to bridge the research gap by purposely examining corporate communication strategies for dissemination of disease surveillance research outcomes. Therefore, a case study of KEMRI in Nairobi County.

Therefore, this study purposed to fill the research gaps by investigating the variables; communication channels (IMC, ICT and social media), communication skills (listening, reading, writing and speaking), differentiation strategies (corporate branding, corporate image and CVI) and corporate communication plan (communication guidelines), as corporate communication strategies.

2.8 Chapter Summary

This study summarized communication channels comprise IMC, ICT and social media. Communication skills include; speaking, listening and persuasiveness. Differentiation strategies are; corporate branding, corporate image, corporate identity or CVI (the recognisability) through the dimension of distinctiveness. Corporate communication plan entails guides on how internal and external communications are done. Dissemination of research outcomes is communication of scientific evidence shared to study participants. These entail; persuasion, respondent feedback and media content.

CHAPTER THREE
METHODOLOGY

3.1 Introduction

This chapter discussed the design and methodology adopted to investigate; corporate communication strategies for dissemination disease surveillance research outcomes at KEMRI. It comprises; research design; sample size, sampling design, target population, data collection and data analysis.

3.2 Research Design

This study utilized descriptive research design to obtain accurate information, of individuals or situations for a given period. Furthermore, descriptive design describes characteristics of the study population (Kumar, 2019). Research design is a plan, a structure a strategy to for investigation, to obtain answers to research questions (Blaikie & Priest, 2019). Moreover, Creswell and Creswell (2017) confirm that; research design is a procedure for collecting and analysis thereafter, reporting the research in a qualitative and quantitative research.

Therefore, this study utilized mixed methods, because of capturing rich and comprehensive data. To avoid researcher's bias, Purposive sampling process. Researcher had inclusion and exclusion criteria. Thus, ensure a rich sample. Those who can give information on communication research findings at KEMRI. Thus, to further understanding the research problem. Therefore, this study adopted a pragmatic paradigm, focused to answer this study's research questions. Since, each case study is unique (Burrell & Morgan, 2017). The design was appropriate to elicit findings from the samples, which were generalised to a greater population (Blaikie & Priest, 2019).

3.3 Target Population

According to Harriss et al. (2017), the target population (theoretical population) refers to the totality of the individuals, objects, or items under investigation to achieve study objectives. From which, samples are taken for measurement in the research study (Ghauri, Grønhaug & Strange, 2020). Hence, is a sum of all members of a group under review by a researcher (Blaikie & Priest, 2019).

Table 3.1 Target Population

Category	Frequency	Percentage (%)
Corporate Affairs, ICT and library	28	37 (36.84)
KEMRI scientists	24	31.5
KEMRI's research collaborators	10	13.1
Research respondents (from on-going KEMRI studies)	14	18.4
Total	**76**	**100.0**

Source: KEMRI, (2020)

Therefore, the target population for this study was 76. Comprising; scientists, communication staff and research respondents from on-going KEMRI studies. Hence, forming a strata comprising; Corporate Affairs (including; CIDOS - customer information desk officers) ICT and library, 14; KEMRI scientists 24; Representative research collaborators from collaborating institutions (CDC, NUITM, UW and Welcome Trust) 10; Research respondents (sourced from on-going KEMRI studies), 28 at KEMRI in Nairobi, Kenya (KEMRI HR, 2020).

The selected study respondents (purposive sampling) emanated from on-going study programmes at KEMRI for the period under review (see appendix C and E, questionnaires and interview guide for Corporate Affairs staff, scientists and research collaborators).

Therefore, inclusion criteria for study participants; staff from departments that communicate (internally and externally) based at KEMRI, Nairobi. Ten respondents who answered questionnaire one were interviewed. Furthermore, this is a case study on KEMRI, specialising in human health research outcomes. Exclusion criteria for the study; ten (10) study respondents used for pre-testing data collection tools. Respondents from KEMRI out-stations. Uncooperative and those who do consent to participate.

The KEMRI scientists and collaborators must have been in KEMRI for the last one year (see appendix I, KEMRI organogram; KEMRI HR, 2020). The ratio of researcher to respondents was be determined after, determining the sample size, using the Krejcie and Morgan table. This is because they must have constituted in disseminated research outcomes while in KEMRI.

3.4 Sample Size

The sample frame is a detailed list usually comprehensive, reliable and correct from the defined population. The sample frame is the listing of members from, the accessible population from where, a sample drawn (Shuster, 2019; Hennink, Hutter & Bailey, 2020).

Hence, this study sample frame (sample size) was drawn from the listed KEMRI human resource database (KEMRI HR, 2020). Thus, individuals (staff) purposely sampled from KEMRI's departments (representative strata) whose personnel (staff) have the mandate of, corporate communication. Alongside, research respondents (from on-going projects) at based at KEMRI, Nairobi.

Moreover, sample size for the study was determined from the Krejcie and Morgan table (Krejcie & Morgan 1970, in Saido, Siraj, Nordin & Al-Amedy, 2018). Hence, composing the study sample illustrated in Table 3.2. (See appendix J, Krejcie and Morgan Table). Where *N* is the population and *S* is the sample size (Braun et al., 2019; Shuster, 2019).

Table 3.2: Study Sample Size Determined using Krejcie and Morgan Table

Category of Study Participants	Number (N)	Sample size (S)	Percentage (%)
Corporate Affairs (including; CIDOS - customer information desk officers) ICT and Librarians	30	28	37 (36.84)
KEMRI scientists	25	24	31.5
CDC, NUITM and Welcome Trust (Representative KEMRI's research collaborators)	10	10	13.1
Research respondents (from on-going projects)	15	14	18.4
Total	**107**	**76**	**100.0**

Research Data (2020)

Therefore, the sample size was 76. Drawn from the study target population of the selected (purposed) study population using the Krejcie Morgan table (see appendix J).

Therefore, the strata comprises; Corporate Affairs, ICT, library, scientists and research collaborators (see appendix I, KEMRI organogram). Moreover, the sample ratio is determined by; sample size divided by size of the target population (Lohr, 2019). Hence, 0.7102803738 (76/107).

3.5 Sampling Design

The sample design is a method for selecting of study/survey samples (Shuster, 2019; Lohr, 2019).

The researcher considered two factors, as a guide in determining the sample design. First, the complexity of the research design and time to complete the research. (Braun et al., 2019).

Qualitative sampling methods are ideal in health research sampling method. Sampling methods are used to study the behaviour of individuals (Green and Thorogood 2018; Etikan & Bala, 2017).

According to Etikan and Bala (2017), purposive sampling is a non-probability sampling technique/design. Whereby, samples selected for a study meet the criteria/characteristics determined by the researcher aligned from the study objectives. The main advantage is that, the samples chosen are rich in the information under investigation. The main disadvantage being it prone to researcher's bias, as samples are specific to the researcher's interest (Lohr, 2019).

Scholars also refer to purposive sampling as; subjective, judgmental or selective, sampling. Other sampling methods comprise; convenience (use results that are easy to find), stratified (subdivided population into groups). Furthermore, cluster sampling entails division of population into sections (Etikan & Bala, 2017). However, this study utilized purposive sampling to have a representative sample unique to this case study objective. The questionnaire respondents sampled from study respondent. Whereas, interview respondents were sampled from scientific and communication staff.

3.6 Data Collection Procedures

According to Braun et al. (2019), a research instrument is a tool for collecting data. The study utilised researcher-generated (60) questionnaires and interview guides (10). Questionnaires and interview guides contained sets of questions printed forms in a definite order. Hence, obtained primary data sought to achieve the four study objectives. The questionnaires (semi-structured) and interview guides (in-depth) which had an introduction, stating the intention of the study, as purely for academic purposes. In-depth (depth) interviews ideal where, respondents are few to achieve an objective.

The questionnaires contained the following sections for collection of the study participant's opinion on dissemination of research outcomes. Section A for collection social demographic data such as gender and education background.

Section B; objective one, communication channels. Objective two, communication skills. Section E: objective three, differentiation strategies. Objective four, corporate communication plan.

The researcher sought authority to conduct the study with a recommendation letter from SPU to KEMRI (see appendix F, Letter of introduction to KEMRI from SPU). The SPU letter facilitates the researcher request official permission to conduct the academic research in KEMRI. The researcher collected the self-administered questionnaires allowed the participants enough time to answer the questions. The study employed descriptive statistical methods to leverage on the main advantage of explaining the relationship between the study variables in a sample or population. Furthermore, the quantified data in percentages presented in tables and charts (Merriam & Grenier, 2019).

Hence, data was; collected, coded and cleared. The questionnaires had both close and open-ended questions. Therefore, the aim of the closed ended questions is to have control by limiting the answers like in the demographic questions (see appendix C and D, questionnaires). The purpose of the open-ended questions was, to allow for more explanations (Braun et al., 2019). The researcher took up the role of clarifications. Thus, explained clearly the content of the research tools to the participants.

Furthermore, to ensure a high response rate, the researcher requested, Corporate Affairs (CA) to email the research tools to the study participants. In addition, the researcher confirmed the research tools were collected. Thereby, reducing disruption of the study participants work schedules. To enhance confidentiality the researcher coded the research tools.

3.7 Pre-testing of Questionnaires and Interview Guides

Questionnaires are utilised to collect data by requesting responses on printed forms. The five types of questionnaires comprise; delivery and collection printed forms, online electronic forms, interviews face-to-face forms. In addition, an advantage of questionnaires is that, data is collected from different people answering the same questions (Braun et al., 2019).

Interview guides can adopt either structured or unstructured and semi-structured questions. Thus, creating conversation to get more details from the participant (Patten, 2016).

Therefore, researcher pre-tested ten (10) of the study questionnaires and the interview guides in KEMRI, who were not be part of the data. Pre-testing ensures that there are no problems in the framing of the questions (Ikart, 2019).

Furthermore, the research instruments (questionnaires and interview guides) were pre-tested to increase validity (correctness and reliance) reliability. Errors were be checked ensuring quality and accuracy (Braun et al., 2019; Merriam Grenier, 2019).

Moreover, researcher made the necessary adjustments to capture the intended data. This was also to ensure that. The questions were ethical and generated the intended responses to achieve the study objectives. The research assistants trained on how to collect the information for the study. Enough time accorded to participants, to answer questions pertaining to the issue under review. Thus, ensure a response rate of above 75% percent of fully completed and returned questionnaires are considered adequate according to Ikart (2019).

3.8 Reliability

Reliability is the extent to with the data collection methods, generate consistent findings or outcomes, if done by other researchers (Braun et al., 2019). Hence, the consistence of a measure. Pre-testing allows for amendments of any consistencies. Thus, increase validity and reliability of the responses. Pre-testing allows discovery of errors as well as, ensuring quality and accuracy for the research. Therefore, good reliability scores range between 0.8 and .0.7 (Merriam & Grenier, 2019).

Moreover, pre-testing prompted the researcher where the study might fail; facilitated in designing the flow of the questions. Thus, corrected inconsistencies from the research instruments ensuring the measured what they intended to measure. Hence, piloted tested the appropriateness of the questions to the research objectives. The researcher explained the content of the questionnaires to the study participants. The researcher contacted the participants of the study through; face-to-face, telephone and email (Merriam & Grenier, 2019).

The researcher trained three research assistants to facilitate coding, distribution and collection of questionnaires. Therefore, reliability was be further tested by purposively selecting (multistage sampling) ten (10) participants from each cluster (category of participants) at KEMRI from the study sample frame ideal for this case a case study.

3.9 Validity

Validity is concerned with the correctness and reliance with the collected data. According to Taherdoost (2016), validity refers to the accuracy and quality assurance of inferences. Validity is the degree of which a researcher's data accurately measures, what it is intended to determine or measure (Merriam & Grenier, 2019). Moreover, the truthfulness and realness of the study objectives or concept. Scholar, Taherdoost, (2016) summarised types of validity to include; criterion or predictive (external criteria), face validity (accurately measure study variable or individual's intuition) and construct validity, is the theoretical desired.

The researcher subjected the questionnaires and interview guides to colleagues, lecturers from communication department and the study supervisor's scrutiny to ensure that had face validity. Taherdoost (2016) also affirms that content validly is the benchmark or a yardstick for measuring data collected, representing the content of concept measured. Thus, the content in the questionnaires look relevant to the respondent. The researcher ensured content validity by identifying the relevant items to measure the variables in the literature review and conceptual framework.

Therefore, the researcher employed content validity to ensure the content is representative of this study concept and domain. Thus, consulting or engaging corporate communication gurus (experts) example, lecturers and practitioners. Thereafter, the questionnaires and the interview guide pre-checked for comprehensiveness and coherency. According to Birt et al. (2016), member checking is a tool to enhance trust-worthiness or merely a nod to validation. Therefore, the researcher investigated KEMRI corporate communication strategies and drew conclusions based on the data collected.

3.10 Data Analysis Methods

Data analysis is the process is of inspecting, transforming, cleaning collected information. The objective is to highlight the useful information. Thereafter, coming up with conclusions that support decision-making process in an organization (Merriam & Grenier, 2019). Hence, data for this research work was subjected to qualitative and qualitative analysis. The researcher presented the data in tables and charts utilising; Microsoft Excel (MS EXCEL) 2013 for data entry and cleaning, Statistical Package for Social Sciences (SPSS) version 25.0 for data analysis.

The research conducted a regression and correlation analysis to determine the relationship between the study variables. The following multiple regression equation was developed to determine the the relationship between the corporate communication strategies variables and dissemination of research (communication channels, communication skills and differentiation strategies and corporate communication plan. $Y=\beta0+\beta1X1+\beta2X2+\beta X3 + \beta4X4 + e$. Where: Y= Dissemination of Research Outcomes. X1= Communication Channels. X2= Communication Skills. X3= Differentiation Strategy. X4= Communication Plan. e = Error Term. Regression coefficients, B0; β1; β2; β3; β4 (Roni, Merga & Morris, 2020).

3.11 Ethical Considerations

The researcher ensured the confidentiality, privacy and anonymity of the study participants. Hence no coercion. Research ethics provide guidelines or codes to apply, to reconcile value and conflict. Whereas, ethics are the methods or procedures on how to act when solving an issue professionally (Ryen, 2016; Quinlan, Babin, Carr & Griffin, 2019). A letter of introduction to conduct the academic study was sought from St Paul's University faculty of communication and business studies (see appendix F, Letter of introduction to KEMRI from SPU). Thereafter, a student research permit was sought from, NACOSTI (see appendix L, student research permit license number NACOSTI/P/20/4823). Therefore, in consideration of study participant's safety, welfare and rights while conducting the study. The researcher availed PPE (personal protective equipment) to study participants and research assistants to mitigate the risk of infection, inside KEMRI compound. PPE comprise; medical masks, gloves, medical masks, face shield and gowns. An example of a probable infection is (COVID-19), corona virus disease declared in March 11 2019 by WHO (WHO, 2020).

During face-to-face interactions (collection of questionnaires and interview guides), a one-meter distance was maintained. Spray hand sanitizers (KEMRI-*rub,* WHO recommended) used every twenty minutes, to minimise infection.

Medical facemasks, googles and latex gloves were availed (WHO, 2020; MOH, 2020; KEMRI, 2020). Therefore, researcher ensured that, the study participants were unharmed.

3.12 Voluntary Participation of Study Participants

In this research, there was no coercion or force of any kind exercised on the participants. Gain participation, cooperation and response of participants through their own will (Kumar, 2019). Thus, informed consent for the sampled study participants (see appendices C, D and E, questionnaires and interview guide; see appendix L, consent).

3.13 Anonymity and Confidentiality

During the research, any information gained that was personal, sensitive or confidential was treated with anonymity and confidentiality. This meant that, the information was used for research purposes only, and was not disclosed to anyone (Kumar, 2019). The names and identifiers should be changed to protect the privacy of participants (Green & Thorogood, 2018). The study recommended that, the name is not mandatory to ensure anonymity and confidentiality of the participants.

3.14 Acknowledging Sources of Information

The researcher ensured any information borrowed from other research scholars, and quotations from their writings was referenced. Hence, protecting the researcher against academic misconduct and plagiarism that might influence negatively on KEMRI and SPU. The researcher endeavoured to adhere to SPU's guide for citing and referencing. Examples of APA writing are; scholarly journal articles and books, newspaper articles, according an article, Writing a Research Report in American Psychological Association (APA) Style (Price, Jhangiani, Chiang, Leighton & Cuttler, 2017).

3.15 Chapter Summary

This study collected primary data, utilising structured and semi-structured questionnaires and interview guides. Mixed methods (triangulation), thus utilised more than one method for data collection and analysis. The study adopted descriptive design (Kumar, 2019; O'Cathain, 2020).

CHAPTER FOUR
RESULTS, DATA ANALYSIS, DISCUSSION AND EVALUATION OF FINDINGS

4.1 Introduction

This chapter illustrates the study findings from determinates of corporate communications. The study was premised on the following objectives. (1) Determine the communication channels for appropriate dissemination of disease surveillance research outcomes to study respondents at KEMRI. (2) Determine the influence of communication skills for dissemination of disease surveillance research outcomes to study respondents at KEMRI. (3) Investigate the differentiation strategies for dissemination of disease surveillance research outcomes to study respondents at KEMRI. (4) Investigate the influence of the corporate communication plan in place for dissemination of disease surveillance research outcomes to study respondents at KEMRI. Thereafter, to achieve the objectives, are presentations of, response rate, general information, analysis an interpretation of study findings in tables and graphs derived from the study objectives. Finally, study interview responses from study objectives from this case study in KEMRI, Nairobi County. These comprised use of descriptive statistical techniques, including, Analysis of Variance (ANOVA).

4.2 Response Rate (RR)

A total of 76 questionnaires were distributed from which, 60 were received. The response rate (RR) was (60) 79% as shown in figure 4.1. In addition an interview was conducted on; 10 scientists, collaborators, ICT, library and CA staff. This was an adequate response rate for a study (Mugenda and Mugenda, 2013 in Mbai, Kinyua and Muhoho, 2018). That a response rate of over 50% is representative of a sample population. Similarly, Ikart (2019) affirmed that, a response rate of above 75% percent, of fully completed and returned questionnaires could be considered an adequate response rate for a study.

Therefore, the response rate (RR) or completion rate is the number of returned questionnaires, divided by the sample size in percentage form (Ghauri, Grønhaug & Strange, 2020; Hennink, Hutter & Bailey, 2020).

Moreover, the study participants were required explain their responses (for qualitative data) and indicate their responses utilising a five point Likert Scale, for qualitative data. Rensis Likert postulated Likert Scale in 1932. An American psychologist for measuring and soliciting, study participant's opinions or perceptions (Lock, I., & Schulz-Knappe, 2019).

The response rate (RR) analysis is shown in figure 4.1

Figure 4.1: Response Rate Analysis

Source: Research Data (2020)

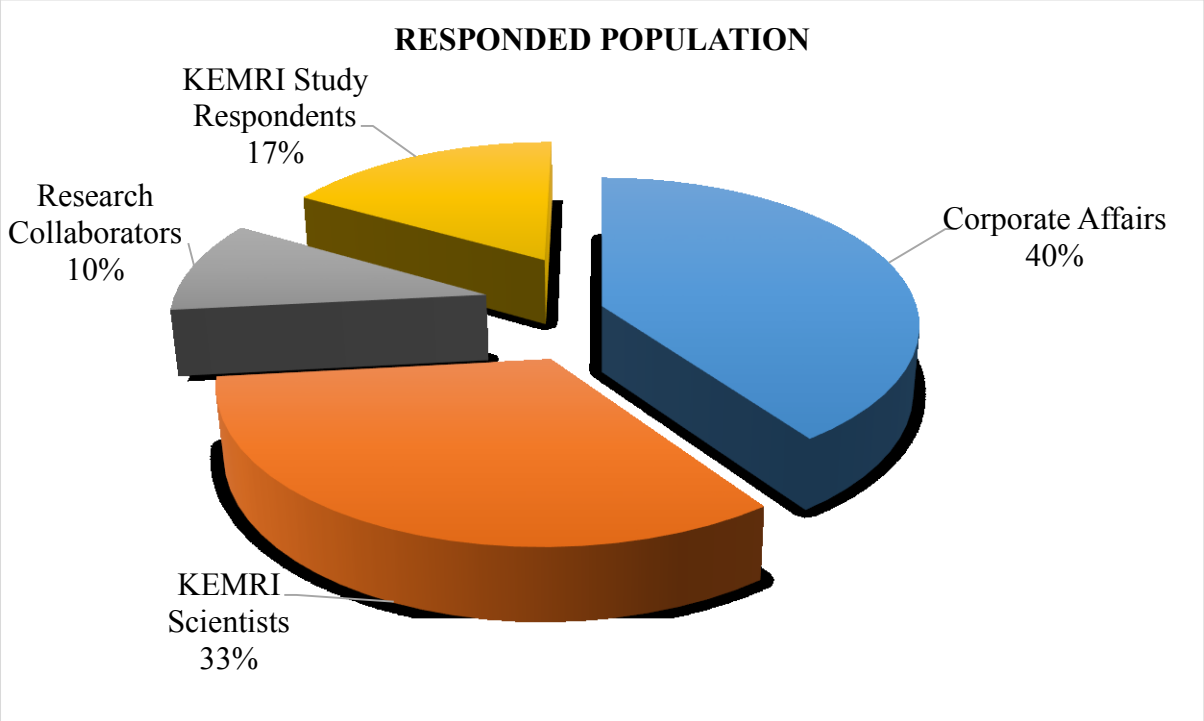


Figure 4.2: Responded Population

Source: Research Data (2020)

4.3 General Information (Social Demographic and Institutional Information)

This section required the study participants to indicate their gender, education background and the years of service at KEMRI. Hence, assess their suitability in the study.

Figure 4.3, indicates the gender distribution of study participants as required in the research tools.

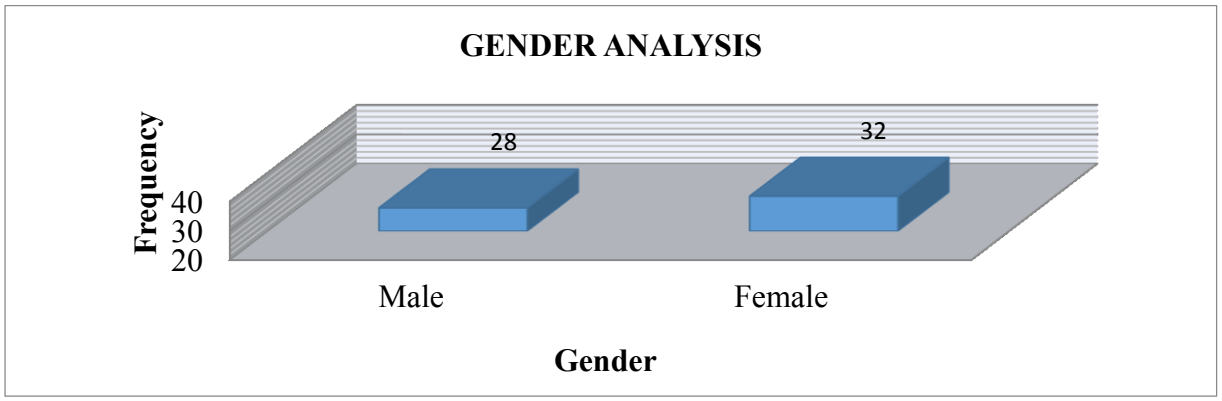


Figure 4.3: Gender of the Study Participants

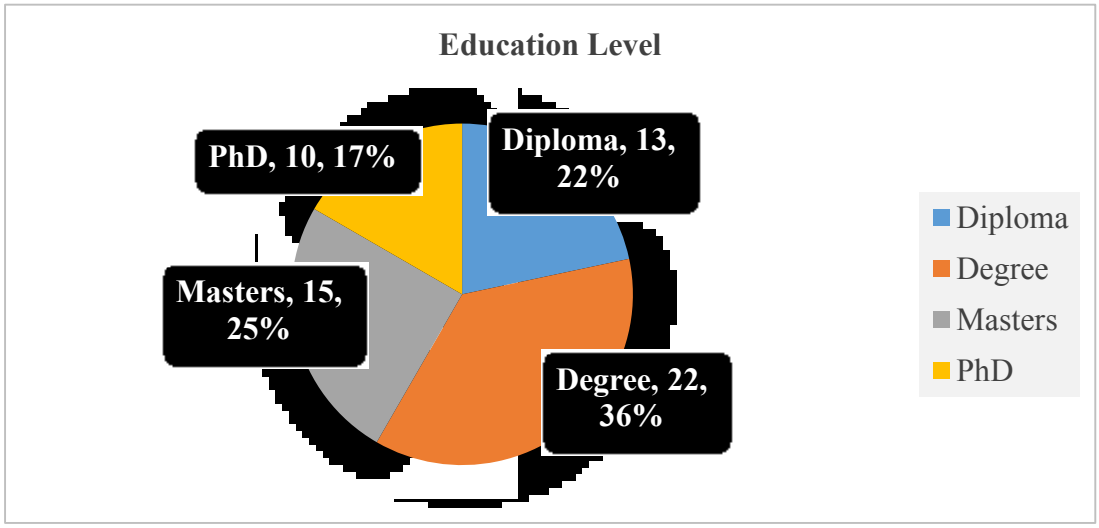
Source: Research Data (2020)

The findings show, 28 (46.6%) of the study participants were males. While, 32 (53.3%) were females. Although, females were more than males, there was a good representation of both genders.

4.3.1 Education Level

The study participants were requested to indicate their education levels. Shown in figure 4.4.

Figure 4.4: Education Level



Source: Research Data (2020)

Figure 4.4 indicates the education levels. That a majority had attained a degree, 22 (36%) a minority had a PhD (10%). This was attributed to the requirements by KEMRI HR manual qualifications for KEMRI staff (KEMRI HR, 2020). The findings suggested respondents were able to understand and respond to questions of corporate communications.

The research sought to find out the duration of study participants in KEMRI, Nairobi. Figure 4.5 shows the findings.

4.3.2 Duration in KEMRI Nairobi

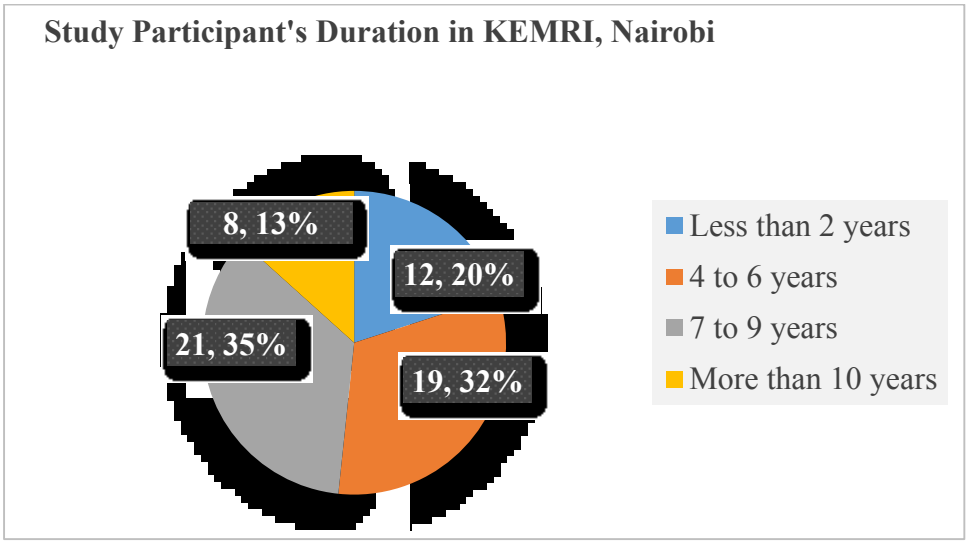


Figure 4.5. Duration in KEMRI Nairobi

Source: Research Data (2020)

The findings of the durations were; 12, (20%) had less than 2 years, 21, (35%) had 7 to 9 years. Finally, 8, (13%) had more than 10 years in KEMRI. Hence, a majority had been in KEMRI between 7 to 9 years. The least duration being 2 years in KEMRI, Nairobi.

4.4 Communication channels needed for appropriate dissemination of disease surveillance research outcomes to study respondents at KEMRI.

The first objective sort to determinate the communication channels. Therefore as shown in Table 4.2, communication channels had influenced dissemination of disease surveillance research outcomes to study respondents at KEMRI.

Table 4.1 Communication Channels

LIKERT scale	Frequency	Percentage (%)
No extent	0	0
Little extent	5	8
Moderate Extent	10	17
Great extent	15	25
Very great extent	30	50
Total	**60**	**100.0**

Source: Research Data (2020)

The findings indicate that, none, (0) 0% of the respondents indicated no extent, 5 (8 %) indicated little extent, 10 (17%) indicated moderate extent, 15 (25%) indicated great extent, and 30 (50%) indicated very great extent.

4.5 The influence of communication skills for dissemination of disease surveillance research outcomes to study respondents at KEMRI.

The second objective sort to determine the influence of communication skills. Therefore as shown in Table 4.3, communication skills had influenced dissemination of disease surveillance research outcomes to study respondents at KEMRI.

Table 4.2 Communication Skills

LIKERT scale	Frequency	Percentage (%)
No extent	1	1.7
Little extent	3	5
Moderate extent	13	21.7
Great extent	14	23.3
Very great extent	29	48.3
Total	**60**	**100.0**

Source: Research Data (2020)

The findings indicate, 1 (1.7%) of the respondent indicated no extent, 3 (5%) indicated little extent, 13 (21.7%) indicated moderate extent, 14 (23.3%) indicated great extent, and 29 (48.3%) indicated very great extent.

4.6 Differentiation strategies for dissemination of disease surveillance research outcomes to study respondents at KEMRI.

The third objective investigated the differentiation strategies. Therefore, as shown in Table 4.4, the differentiation strategies influenced dissemination of disease surveillance research outcomes to study respondents at KEMRI.

Table 4.3 Differentiation Strategies

LIKERT scale	Frequency	Percentage (%)
No extent	2	3.3
Little extent	4	6.7
Moderate Extent	9	15
Great extent	15	25
Very great extent	30	50
Total	**60**	**100.0**

Source: Research Data (2020)

The findings show that, 2 (3.3%) of the respondents indicated no extent, 4 (6.7%) indicated little extent, 9 (15%) indicated moderate extent, 15 (25%) indicated great extent, and 30 (50%) indicated very great extent.

4.7 Corporate communication plan in place for dissemination of disease surveillance research outcomes to study respondents at KEMRI.

Table 4.4 Corporate Communication Plan

The fourth objective investigated the corporate communication plan in place. Table 4.5, therefore indicates the influence of the corporate communication plan in place, for dissemination of disease surveillance research outcomes.

LIKERT scale	Frequency	Percentage (%)
No extent	1	1.7
Little extent	5	8.3
Moderate Extent	7	11.7
Great extent	16	26.6
Very great extent	31	51.7
Total	**60**	**100.0**

Source: Research Data (2020)

The findings show that, 1 (1.7%) of the respondents indicated no extent, 5 (8.3%) indicated little extent, 7 (11.7%) indicated moderate extent, 16 (26.6%) indicated great extent, and 31 (51.7%) indicated very great extent.

Table 4.5 Dissemination of Research Outcomes

As shown in Table 4.6, indicates the influence of dissemination of research outcomes.

LIKERT scale	Frequency	Percentage (%)
No extent	0	0
Little extent	4	6.7 (0.66)
Moderate Extent	8	13
Great extent	17	28.3
Very great extent	31	52 (51.6)
Total	**60**	**100.0**

Source: Research Data (2020)

The findings show that, none 0 (0%) of the respondents indicated no extent, 4 (6.7%) indicated little extent, 8 (13%) indicated moderate extent, 17 (23.3%) indicated great extent, and 31 (52%) indicated very great extent.

4.8 Interview Response Analysis

In addition, the scientists and collaborators were also required to answer interview questions to affirm the responses from the questionnaires on the study objectives. Hence, further investigate role in KEMRI's corporate communication to study respondents.

4.8.1. Communication Channels

The study sought to determine the communication channels. Interview guide question and answer (QA) 2: What is your comment on each of the following as communication channels, for dissemination of research outcomes. ICT, IR, IMC and Social Media.

Participant 1: *Well… we communicate research outcomes in collaboration with our ICT and library, who manage KEMRI's Facebook and Twitter accounts. KASH conference, journals and our in-house forums.*

Participant 4: *…the main communication channel is ICT. Well... as for IR, IMC are still in their infancy stage. Although, marketing is managed separately in marketing unit in Production department* (Research Data, 2020).

Participant 6: *"We constantly, communicate through; social media, ICT, telephone, memos, letters, Skype and email, as official corporate communication channels. We Advise, research output be communicated, through CA (*Research Data, 2020).

The interview realised that, conferences were the main avenue/channel for disseminating research outcomes. The interview further reveal the challenges encounter in sourcing for research outcomes by study respondents.

The study further observed that another communication channel in KEMRI is in-house magazines. Examples are *The Researcher* and *Celebrating 40 years of Health Research and 1979-2019* (KEMRI, 2020). The research further observed that, additional communication channels comprised; Skype, telephone, memos, letters and email.

4.8.2. Communication Skills

The study sought to determine the communicate skills. Thus, the interview guide question and answer (QA) 2: What is your opinion on, communication skills for dissemination of disease surveillance research outcomes?

Participant 9: *"Yes, one needs communication skills like; persuasion, listening, speaking, and writing to communicate with the diverse KEMRI stakeholders.*

Participant 8: *The language used in scientific forums is different from study respondents' forum. There is need acquire skills to translate the research evidence, which are, the outcomes appropriately.*

Participant 7: *I feel capacity building is the solution. Hence, regular refresher training. Preferably, also bring on board additional corporate communication professionals with communication skills* (Research Data, 2020).

The interview revealed the need for communication skills to communicate with respondents.

4.8.3. Differentiation Strategies

The study sought to investigate the differentiation strategies. Interview guide question and answer (QA) 3: What are KEMRI's differentiation strategies, for dissemination of disease surveillance research outcomes.

Participant 7: *They include; our unique colour, logo initials, mission and vision. Besides, "KEMRI is in the process of marketing our products in Bermuda blue and logo. Example KEM-Rub our services beyond research also include Food-handlers certification.* (Research Data, 2020).

Participant 4: *We are leveraging on our institutional name, that is, KEMRI, CVI and image through institutional rankings. Example, KEMRI was ranked top in Health Research Outputs by Scimago Lab"* (Research Data, 2020).

Participant 2: *The logo and the Bermuda blue colour, are assuring... that, is one can trust the communicated research outcomes. KEMRI is a government's mouthpiece in research. Stakeholders can trust their research results* (Research Data, 2020).

The interview confirmed the impact of the KEMRI's identities associating it the research outcomes. The participant's opinions on KEMRI's differentiation strategies also included; navy blue colour in branding KEMRI products. Including institutional rankings.

4.8.4. Communication Plan

The study sought to investigate the communication plan. Interview guide question and answer (QA) 4: What is your opinion on, communication plan for dissemination of disease surveillance research outcomes?

Participant 3: *We are reviewing our communication plan… to accommodate the interests of all our stakeholders, to access research outcomes."* (Research Data, 2020).

Participant 5: *Nevertheless, KEMRI launched the Knowledge Management (KM) platform… we are optimistic." Example, recently, Deputy Director Corporate Services launched ERP, U-Tap project, in July 2019. Knowledge Management was launched in February 2020 to enhance the communication of research outcomes"*

Participant 10: *Usually, CA communicates internal and external communications*. *…Annually hold KASH conferences to communicate research outcomes …and publish magazines …example Published in February 2020 issue 3, Celebrating 40 years of Health Research; 1979-2019,* p. 49" (Research Data, 2020).

The responses above confirm that, KEMRI's communication plan, stipulated, how research outcomes were communicated.

4.9. Descriptive Analysis

This section shows the bivariate linear correlation of the independent variables and multiple regression model of the dependent variable.

Table 4.8.1, shows the correlation analysis of the independent variables.

4.9.1 Bivariate linear correlation analysis

The correlation between the variables was as shown using bivariate linear correlation analysis (Ma, Hanson, & Ho, 2020).

Table 4.6 Bivariate Correlation Analysis

		Corporate communication strategies	Communication skills.	Differentiation strategy.	Corporate Communication Plan
Corporate communication strategies.	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	161			
Communication skills.	Pearson Correlation	.418	1		
	Sig. (2-tailed)	.001			
	N	161	161		
Differentiation strategy.	Pearson Correlation	.558	.136	1	
	Sig. (2-tailed)	.005	.007		
	N	161	161	161	
Corporate Communication Plan	Pearson Correlation	.482**	.163	.004	1
	Sig. (2-tailed)	.000	.076	.964	
	N	161	161	161	161
	Sig. (2-tailed)	.868	.000	.152	.435
	N	161	161	161	161

Source Research Data (2020)

Table above reveals that all the predictor variables shown have a positive association between them at a significant level of 0.01 and hence included in the analysis. The bivariate linear correlation analysis values are as presented as follows:

Communication channel $X_1 = 0.418$

Communication skills. $X_2 = 0.558$

Differentiation strategy $X_3 = 0.482$

Corporate Communication Plan $X_4 = 0.868$

There was strong positive and significant in communication channels for disseminating disease surveillance research outcomes to study respondents at KEMRI (correlation coefficient 0.418); there is a strong positive in communication skills for disseminating disease surveillance research outcomes to study respondents at KEMRI (correlation coefficient 0.558).
The findings reveal a strong positive in the differentiation strategy for determining dissemination of disease surveillance research outcomes to study respondents at KEMRI (correlation coefficient 0.482).

The findings reveal a strong positive in corporate communication plan for determining dissemination of disease surveillance research outcomes to study respondents at KEMRI (correlation coefficient 0.868). This implies that, independent variables used as determinants of corporate communication strategies for dissemination of diseases surveillance research outcomes, at KEMRI have the strongest effect.

4.9.2 Regression

4.9.2.1 Multiple regression model

The study sought to determine the ANOVA used to present regression model significance. The findings are presented in table 4.8.2 below.

Table 4.7: Model Validity

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	4.728	4	1.182	38.801	.000[b]
	Residual	6.437	56	.107		
	Total	11.165	60			

a. Dependent Variable: Dissemination of research outcomes to respondents

b. Predictors: (Constant), communication channels, communication skills, differentiation strategies and corporate communication plan.

The study sought to investigate the multiple regression model on whether it was valid or not. The F statistics was used to determine the model validity. The study found out that the model was valid $F = 38.801$, $P<0.001$. Therefore, this implies that all the four predictor variables are good in determining dissemination of research outcomes to respondents at KEMRI.

4.9.2.2 Multiple regression variable coefficients

The study sought to determine the multiple regression variable coefficients. The findings are presented in the table below.

Table 4.8: Multiple Regression Variable Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.772	.702		3.951	.000
Communication channels (X_1)	.225	.106	.136	2.124	.036
Communication skills (X_2)	.062	.027	.134	2.305	.023
Differentiation strategies (X_3)	.262	.125	.192	2.089	.039
Corporate communication plan (X_4)	.017	.059	.033	.148	.017

a. Dependent Variable: Dissemination of Research Outcomes to Respondents (Y)

From the regression coefficients, holding other factors constant, communication channels would result to a .225 unit increase in dissemination of research outcomes to respondents at KEMRI.

Also noted is that holding other factors constant, a unit increase in communication skills would result to a 0.062 unit increase in in dissemination of research outcomes to respondents at KEMRI. While a unit, increase in differentiation strategies would result to a .262 increase in dissemination of research outcomes to respondents at KEMRI. While corporate communication plan would result to a .017 when other factors are held constant. The independent variable was thus, seen to be positive and statistically significant to in dissemination of research outcomes to respondents at KEMRI**.** The findings therefore, indicate there was a positive significance between the independent variables and dependant variable.

4.9.2.3 Summary of descriptive Statistics

Table 4.10 illustrates the summary of descriptive Statistics; mean standard deviation, sample variance, Skewness, and Kurtosis of the study independent variables. Communication channels (CC), communication skills (CS), differentiation strategies (DS), corporate communication plan (CCP).

Table 4.9 Summary of descriptive Statistics

CC		C S		DS		CCP	
Mean	4.16666	Mean	4.2666	Mean	4.05	Mean	4.2
Median	4.5	Median	5	Median	4	Median	5
Mode	5	Mode	5	Mode	5	Mode	5
Standard Deviation	0.99433	Standard Deviation	0.936	Standard Deviation	1.1560	Standard Deviation	1.021
Sample Variance	0.98870	Sample Variance	0.8768	Sample Variance	1.3364	Sample Variance	1.044
Kurtosis	-0.4101	Kurtosis	0.148	Kurtosis	0.1230	Kurtosis	0.763
Skewness	-0.8818	Skewness	-1.078	Skewness	-1.05	Skewness	-1.207
Count	60	Count	60	Count	60	Count	60
Confidence Level (95.0%)	0.256863769	Confidence Level (95.0%)	0.24189656	Confidence Level (95.0%)	0.29863816		

Source: Research Data (2020)

The findings indicate negative Skewness in CC, CS, DS (ranging -0.88 to -1.078) and positive Skewness for CCP. However, negative Kurtosis -0.41 for CS. Meaning study participant's opinion varied in the degree of agreement or disagreement on the study determinants.

Discussion of Findings

The four research questions answered through the findings from quantitative and qualitative indicated. An increase in the determinant yielded an increase in the dependant variable. Most respondents supported communication skills influenced dissemination of disease surveillance research outcomes at KEMRI. The respondents agreed that, differentiation strategies and the corporate communication plan in place influenced dissemination of disease surveillance research outcomes at KEMRI. Although, a few declined. Study participant's opinion varied in the degree of agreement or disagreement (as observed in negative and negative Skewness positive Skewness on the study determinants.

Study participant's opinion varied in the degree of agreement or disagreement. In addition, the interview findings indicated that participants 1, 4, 6 and 10 were in support of the communication channels (IMC, ICT and social media). Participants 9, 8 and 7, were in support of the communication skills (speaking, reading, listening and persuasiveness). Participants 7, 4 and 2, supported differentiation strategy. Finally, participants 3, 5 and 10 opinions supported the communication plan in place at KEMRI.

Therefore, qualitative data equally supported the qualitative findings, and aligned to excellence theory and communication theory. Therefore, there was correlation between the corporate strategies; communication channels, communication skills, differentiation strategy and dissemination of research outcomes.

The findings confirmed that, KEMRI maintained good public relations it strategic publics as prosed in, excellence theory attributes value of organisations and mutual relations. The study's determinates aligned to the two-way communication, That is, communication and interpretation of research outputs to respondents. Ultimately, KEMRI's stakeholder's interests valued as proposed in communication theory.

Table 4.10 Contribution to Corporate Communication Knowledge

The study contributions to corporate communication knowledge are summarised in Table 4.10. Hence, illustrates brief statements arising from findings of the four study objectives.

Research Study's Contribution to Corporate Communication Knowledge

Objective	Research Contribution
To determine the communication channels for appropriate dissemination of disease surveillance research outcomes to study respondents at KEMRI.	KEMRI ought to leverage or enhance its communication channels. Through IMC, ICT and with additional social media platforms. To be more cost effective in transmitting research outcomes. KEMRI is an authority (knowledge and credibility) in communicating research outcomes.
To determine the influence of communication skills for dissemination of disease surveillance research outcomes to study respondents at KEMRI.	A significant majority agreed that, communication skills in KEMRI were; speaking, reading, listening and persuasiveness. Moreover, they should be enhanced through capacity building to translate scientific jargon. Thus, leading to increased scientific literacy and response to enquiries research outcomes to study respondents at KEMRI.
To investigate the differentiation strategies for dissemination of disease surveillance research outcomes to study respondents at KEMRI.	The study revealed the differentiation strategies in KEMRI comprised corporate branding (image and identity) and CVI through the dimension of distinctiveness. They ought to be updated regularly to adopt the dynamic environment. KEMRI's logo and colour distinguishes research outcomes to; study respondents, maintains relevance, trust among competing counterparts and consumes of research outcomes.

To investigate the influence of the corporate communication plan in place for dissemination of disease surveillance research outcomes to study respondents at KEMRI.	There should be continuous awareness strategies to promote the communication plans in KEMRI Nairobi. Communication protocol for informing and organisational stakeholders. Standard operating procedures for communication.

Source: Research Data (2020)

4.10 Chapter Summary

The qualitative data equally supported the qualitative findings, and aligned to excellence theory and communication theory. Therefore, there was correlation between the corporate communication determinants. Comprising CC, CS, DS, CCP and DRO. KEMRI's communication plan stipulated how research outcomes were communicated.

The interview findings indicated that, participants 1, 4, 6 and 10 suggested communication channels. Participants 9, 8 and 7, supported communication skills. Participants 7, 4 and 2, indicated differentiation strategy. Finally, participants 3, 5 and 10 opinions supported communication plan in KEMRI. The findings confirmed that, KEMRI maintained good public relations it strategic publics as prosed in, excellence theory attributes value of organisations and mutual relations. The study's determinates aligned to the two-way communication, That is, communication and interpretation of research outputs to respondents. Ultimately, KEMRI's stakeholder's interests valued as proposed in communication theory.

CHAPTER FIVE
SUMMARY CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter shows the summary of key findings and conclusions of the study, drawn from objectives and research questions.

5.2 Summary of Findings

This research work was guided by the following research questions. What are the communication channels used for appropriate dissemination of disease surveillance research outcomes to study respondents at KEMRI? What are the appropriate communication skills for dissemination of disease surveillance research outcomes to study respondents at KEMRI? What are the differentiation strategies for dissemination of disease surveillance research outcomes to study respondents at KEMRI? How does the corporate communication plan determine the dissemination of disease surveillance research outcomes to study respondents at KEMRI?.

To get responses to the above question the researcher utilised, questionnaires and in-depth interview guides (see appendices C, D and E, questionnaires and interview guide). The 60 respondents comprised; researchers (including corporate communication experts) and KEMRI Nairobi study respondents.

The findings were as follows. The demographic findings indicated that; in KEMRI, males were 28 (46.6%), and 32 represented female gender (53.3%). The findings indicated a high level of academics, a majority had attained a degree, 22 (36%) a minority had a PhD (10%). Thus, the study participants understood gave reliable answers to the study questions. A majority had been in KEMRI between 7 to 9 years. The least duration being 2 years. Hence, meet inclusion the criteria.

The regression findings complimented the descriptive statistics. The findings indicated that, corporate communication strategies in KEMRI are determined by; communication channels, communication skills, differentiation strategy and communication plan. They significantly influenced dissemination of research outcomes.

Random sampling was used to obtain a sample size of 76 study respondents from a sample frame of 107 in KEMRI. However, the study received 60 questionnaires. The study pre-tested of 10 respondents not included the survey.

5.2.1 Communication channels for dissemination of research outcomes

The findings from the first objective revealed that, the respondent's mean of 4.16 agreed that, Communication channels influenced research outcomes. Frandsen and Johansen, (2018), support these findings.

Beger (2018) reported that, majority of corporate communications channels today are, mediated through computers. IMC had a role of authority principle as postulated by Prof. Robert Beno Cialdini's POI's (Bouazzaoui, 2018). To ensure uniformity in communicating research outcomes. Furthermore, the findings revealed that, none (0) 0% of the respondents indicated no extent, 5 (8 %) indicated little extent, 10 (17%) indicated moderate extent, 15 (25%) indicated great extent, and 30 (50%) indicated very great extent.

Collins et al (2016) affirmed 587 scientists from a variety of academic disciplines use social media to communicate scientific knowledge (research outcomes) as a communication channels.

5.2.2 Communication skills for dissemination of research outcomes

The findings from the second objective revealed that; 1 (1.7%) no extent, 3 (5%) indicated little extent, 13 (21.7%) indicated moderate extent, 14 (23.3%) indicated great extent, and 29 (48.3%) indicated very great extent.

Therefore, communication skills (CS) influenced dissemination of research outcomes to study respondents at KEMRI. The findings are supported by Bodison (2015) communication skills increase awareness. Nwachukwu's (2017) recommended training corporate communication staff. CS comprise speaking, reading and persuasiveness (Arnold & Boggs, 2019). Koprowska, (2020) asserted CS are a prerequisite in relaying information. Hantiro & Maina (2020) also recommended training of staff (capacity building) to enhance communication skills.

5.2.3 Differentiation strategies for dissemination research outcomes

The findings of the third objective revealed that, KEMRI's differentiation strategy distinguishes KEMRI's services from its competing counterparts based on institutional strengths.

The respondents indicated that, 2 (3.3%) of the respondents indicated no extent, 4 (6.7%) indicated little extent, 9 (15%) indicated moderate extent, 15 (25%) indicated great extent, and 30 (50%) indicated very great extent.

Findings corroborate with (Bütschi, 2018) who affirmed that, corporate communication plan is the organisational communication protocol for informing and organisational stakeholders. Moreover, Brownson et al. (2018). Corporate communication plan ought to be utilised to inform public health policy (communication plan) at all levels.

Furthermore, study findings indicated that the differentiation strategy influenced the respondents to trust the research outcomes. In line with Dr. Robert Cialdini's liking principle, KEMRI endeavours to be liked by the colours and symbols that identify it. Associated with the Scarcity principle: the study realised that, there is scarcity to access to health knowledge (research outcomes) by research respondents. This confirms, Burkholder and Buchanan, 2019 study assertions on the principles of influence. Therefore, KEMRI's differentiation strategy distinguishes KEMRI's services from its competing counterparts based on institutional strengths.

5.2.4 Corporate communication plan for dissemination research outcomes

The findings of the last objective revealed that; corporate communication plan were; 1 (1.7%) of the respondents indicated no extent, 5 (8.3%) indicated little extent, 7 (11.7%) indicated moderate extent, 16 (26.6%) indicated great extent, and 31 (51.7%) indicated very great extent. Hence, respondents agreed that, KEMRI's corporate communication plan determines dissemination research outcomes with a mean of 4.2.

The findings affirmed by Keyton, (2017) that, corporate communication plan gives guidelines or rather stipulates who is allowed to communicate to who and to whom contradicted. Thus, what media channel to use, and when.

The findings affirmed by the following studies; Keyton (2017) corporate communication plans stipulates; who, whom, when, what media to communicate. LaBelle & Waldeck (2020) corporate communication plans entail how communication flows in organisations. Murunga et al. (2020) researchers to work within in institutional guidelines. Kenyan research institutions are mandated to communicate research outcomes (Ministry of Health, 2020). Keyton, (2017) reported corporate communication plans as strategies for prioritising, the flow of communication.

5.3 Conclusion

Communication skills influence dissemination of disease surveillance research outcomes to study respondents at KEMRI. KEMRI is an authority (knowledge and credibility) in communicating research outcomes. The differentiation strategies; image and identity, are key elements for dissemination of disease surveillance research outcomes to study respondents at KEMRI. The corporate communication plan in place has a significant role for dissemination of disease surveillance research outcomes to study respondents at KEMRI.

These study findings affirm that; scientists ought to communicate science (research outcomes) to the public and the government, who are the policymakers. Furthermore, this study distinguished the research outcomes as an incorporation of; recommendations, conclusions (answers why) and findings of the ongoing research studies, in human health at KEMRI in 2020. Whereas, findings are as result of process involving an input, output process or consequences. Findings referred to as the results, the evidence from literature hence, and the research data, in this study. KEMRI communicates research outcomes as feedback, as media content for the fourth estate and persuade their uptake by its stakeholders to remain relevant.

5.4 Recommendations

This study recommended the following corporate communication strategies; to ensure appropriate dissemination of disease surveillance, to research outcomes at KEMRI. The study recommendations comprised; the enhancement of corporate communication strategies to entail; inclusion of additional communication channels, to boost ICT and social media. Thus, implement IMC, incorporate Pinterest and Tumblr as a social media tools facilitate feedback. The study further recommended development of KEMRI's Institutional Repository (IR) as a communication channel, to facilitate access of research outcomes and feedback.

The study participants suggested additional corporate communication professionals with communication skills. The respondents suggested refresher training on communication skills for communication staff and scientists. Hence, capacity building and team building exercises to harness the communication skills. Strategic corporate communications in KEMRI entailing; media relations, internal and external official communications ought to be conveyed through CA department.

To enhance its differentiation strategy implement IMC, incorporate marketing department into CA department, to curb duplication of resources. Hence, propagate unified, consistence in messaging, identifying KEMRI as an authority in communicating research outcomes.

KEMRI should develop KEMRI differentiation strategy by including, strategies that will continually maintain the identity, image, reputation and thus overall CVI. An example, identify CA staff dedicated to periodic identity audit and reputation maintenance.

Communication plan; placing KEMRI's Corporate Affairs department in top management, to facilitate the communication plan for disseminating research outcomes. KEMRI to incorporate a communication plan for scientists and CA on translation research jargon to research respondents (stakeholders).

In addition, GOK ought to implement this study's findings in their Agenda 4 communication plan. This study further concluded that, study respondents felt ignored during dissemination research outcomes at KEMRI, Nairobi.

5.5 Suggestions for Further Studies

This research work focused on determinants of corporate communication strategies (communication channels; communication skills; differentiation strategies and corporate communication plan) for dissemination of disease surveillance research outcomes at KEMRI. Therefore, this study recommends other studies be conducted in other KEMRI outstations. To enhance generalisation of findings across Kenya.

Thus, more studies could be conducted utilising alternative empirical and theoretical foundations. Moreover, further studies ought to be conducted to investigate the impact of IR and IMC, in communicating research outcomes research globally.

5.6 Chapter Summary

The study recommended the enhancement of corporate communication strategies additional communication channels, implement IMC, incorporate Pinterest and Tumblr as a social media tools facilitate feedback. The respondents suggested study additional corporate communication professionals with communication skills, refresher training, and capacity building to harness the communication skills. Abridge research outcomes to accommodate research respondents Communication channels in KEMRI ought to be managed CA department. Implementation of IMC and incorporation marketing department into CA department, to curb duplication of resources would enhance KEMRI's differentiation strategy. To facilitate the communication plan for disseminating research outcomes. KEMRI's Corporate Affairs department should be placed in top management, to advice and manage the communication plan for disseminating research outcomes. The study findings further confirmed excellence theory's foundation prompting institutions to communicate with their publics symmetrically. Hence, two-way communication is ideal. Hence between KEMRI and its stockholders. Moreover, the study findings comply with communication theory since it empathizes on the role of corporate communication process.

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APPENDICIES

APPENDIX A: RESEARCH BUDGET

Items	Quality	Unit cost	KES.
Printing paper	3 reams	500	1500
Blue sharp pointed biro pens	10	20	200
Plastic folders for filing research tools	5	50	250
Disposable face masks	1 packet	400	400
Hand sanitizers (KEMRI-*rub,* WHO recommended)	3 spray bottles	200	600
Disposable paper towels	1 packet	80	80
Disposable latex gloves (medium size)	1	400	400
Binding/printing-Proposal, research tools, thesis	8	10,000	10,000
Student research permit from NACOSTI	1	1,000	1,000
Transport	1	400	2,000
Communication (airtime & internet bundles)	5	200	1,000
Research assistants	5 days	1000	5,000
Statistician	1	4000	4,000
Journal publication	1	10,000	10,000
Total			**KES. 36,430** **USD 34.5**

APPENDIX B: TIME FOR THE STUDY

ACTIVITY	January 2020	February 2020	March 2020	April 2020	May 2020	June 2020
Determining problem area of the study						
Literature review						
Research design						
Proposal writing and defence						
Ethical clearance and data collection						
Data Analysis						
Conclusion and recommendation						
Final thesis submission, defence and publication						

Source: Researcher (2020)

APPENDIX C: QUESTIONNAIRE 1 FOR CORPORATE AFFAIRS/ SCIENTISTS/ RESEARCH COLLABORATORS. FORM A.

Greetings,

I am Isaac Joseph Muthotho, a student at St. Paul's University (Nairobi Campus). I am pursuing my masters in communications majoring in, corporate communication. My research project is on, **Determinants of Corporate Communication Strategies for Dissemination of Disease Surveillance Research Outcomes at KEMRI**.

There are no risks neither, cash benefits from participating in the study. You have a right to withdraw, participating in the study. However, I appreciate your voluntary participation and assure your responses will remain confidential. You have been selected because your role in communicating research findings.

Therefore, I am looking forward to your cooperation by, returning this questionnaire. This will be of great assistance towards the achievement of the academic purpose of this study.

Thank you.

INSTRUCTION: Please tick (√) where appropriate. Do not write your name.

Code: (Communicators questionnaire – CA/S&RC/KEMRI/NRB/01): _____

SECTION A: SOCIAL DEMOGRAPHIC AND INSTITUTIONAL INFORMATION

1) Kindly indicate your gender. Male ( ) Female ( ) Other ( )
2) What is your highest education level?
   Certificate ( ) Diploma ( ) Bachelors ( ) Masters ( ) PhD ( )
3) How long have you worked as a KEMRI?
   0-3 years ( ) 6-9 years ( ) above 10 years ( )

SECTION B: COMMUNICATION CHANNELS

4) What is your opinion on the following communication channels used for appropriate dissemination of disease surveillance research outcomes to study respondents at KEMRI? Please rate your responses, (utilizing a five point Likert Scale) on scale of 1 to 5.
(1 – Strongly disagree, 2 - Disagree, 3 - Neutral 4 – Agree, 5- Strongly agree)

Communication Channels	**1**	**2**	**3**	**4**	**5**
IMC (Integrated Marketing Communication)					
ICT (Institutional Repository, e-journals, web page and Skype)					
Social Media (Facebook or Twitter)					
Institutional Repository (e-journals)					

5) What channel would you prefer to send research outcomes?
Journals or Conferences [ ] Newspaper [ ] Radio [ ] Television
Internet [ ] Community forums (*Baraza*) [ ]
Any other,……..…….……

6) Do you use similar communication channels with your colleagues?
……..

7) Do know of any other corporate communication channels in KEMRI? Please indicate.

……
…

8) In summary, to what extent does the communication channels used, determine the appropriate dissemination research outcomes to study respondents at KEMRI?
Please tick (√).

Very Great extent [ ] Great extent [ ]

Moderate extent [ ] Little extent [ ]

No extent [ ]

SECTION C: COMMUNICATION SKILLS

9) What is your opinion, on the communication skills embraced in KEMRI?

……..……

10) What communication skills have you acquired? Please tick (√).

Database skills	[ ]	E-mail management skills	[ ]
ICT skills	[ ]	Listening	[ ]
Persuasive language	[ ]	Photography skills (Digital cameras)	[ ]
Presentation skills	[ ]	Writing skills	[ ]

11) Which communication skills do you use while disseminating to respondents?
Please tick (√).

Speaking [ ] Reading & writing [ ]

Listening [ ] Persuasive [ ] Strategic thinking [ ]

Any other ……..

12) Do you think research outcomes are communicated to the research respondents?

…….

13) In summary, to what extent does communication skills determine the dissemination research outcomes at KEMRI?
(1 – Strongly disagree, 2 - Disagree, 3 - Neutral 4 – Agree, 5- Strongly agree).

Strongly disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly agree [ ]

SECTION D: DIFFERENTIATION STRATEGY

14) What is your opinion on the differentiation strategy comprising; identity, image and logo in KEMRI?

……

15) Do you use persuasion (are you persuasive) while disseminating research outcomes?

.....

16) Do you think the KEMRI's identity and image are persuasive in dissemination of research outcomes?

……..……..

17) What is your opinion of the differentiation strategy in KEMRI that is, corporate branding using; corporate image and corporate identity?

……

18) In summary, to what extent does differentiation strategy determine the dissemination research outcomes at KEMRI?

(1 – Strongly disagree, 2 - Disagree, 3 - Neutral 4 – Agree, 5- Strongly agree).

Strongly disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly agree [ ]

SECTION E: CORPORATE COMMUNICATION PLAN

19) Corporate communication plans are guidelines/plans/polices for disseminating research outcomes. What is your opinion, on their utilization in disseminating research output?

…….....

20) Corporate communication plans also entail, prioritizing stakeholders communicate and the communication structure. That is, the communication flow in KEMRI, from Top-down or Bottom/up. What is your comment?

…….....

21) What is your opinion on, KEMRI's communication policy in determining the media content for disseminating research outcomes to respondents?

……..…….....

22) Do you know KEMRI's corporate communication plans for research output dissemination? Please explain ……..…….....

23) In summary, to what extent does the corporate communication plan determine the dissemination research outcomes at KEMRI?
(1 – Strongly disagree, 2 - Disagree, 3 - Neutral 4 – Agree, 5- Strongly agree).
Strongly disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly agree [ ]

Thank you very much for taking your time to fill the questioner.

Isaac Muthotho, St. Paul's University

#END#

APPENDIX D: QUESTIONNAIRE 2, KEMRI STUDY RESPONDENTS. FORM B.

Greetings,

I am Isaac Joseph Muthotho, a student at St. Paul's University (Nairobi Campus). I am pursuing my masters in communications majoring in, corporate communication. My research project is on, **Determinants of Corporate Communication Strategies for Dissemination of Disease Surveillance Research Outcomes at KEMRI**.

Therefore, it is important to understand that, Corporate Communication entails all communications done by an institution to its internal and external publics. Examples; press releases, press conference, newsletters, magazines and brochures.

There are no risks neither, cash benefits from participating in the study. You have a right to withdraw, participating in the study. However, I appreciate your voluntary participation and assure your responses will remain confidential.

Therefore, I am looking forward to your cooperation by, returning this questionnaire. This will be of great assistance towards the achievement of the academic purpose of this study.

Thank you.

Instruction: please tick (√) **where appropriate. Do not write your name.**

Code: (Study Respondent Questionnaire – RQ/KEMRI/NRB/01):_____

SECTION A: SOCIAL DEMOGRAPHIC AND INSTITUTIONAL INFORMATION

24) Kindly indicate your gender. Male ( ) Female ( ) Other ( )
25) What is your highest education level?
Certificate ( ) Diploma ( ) Bachelors ( ) Masters ( ) PhD ( )
26) How long have been a respondent in the KEMRI study/project?
0-3 years ( ) 6-9 years ( ) above 10 years ( )

SECTION B: COMMUNICATION CHANNELS

27) What is your opinion on the following communication channels used for appropriate dissemination of disease surveillance research outcomes to study respondents at KEMRI? Please rate your responses, (utilizing a five point Likert Scale) on scale of 1 to 5.
(1 – Strongly disagree, 2 - Disagree, 3 - Neutral 4 – Agree, 5- Strongly agree)

Communication Channels	**1**	**2**	**3**	**4**	**5**
IMC (Integrated Marketing Communication)					
ICT (Institutional Repository, e-journals, web page and Skype)					
Social Media (Facebook or Twitter)					
Institutional Repository (e-journals)					

28) Please explain, do you receive disseminated research outcomes from KEMRI?

Please explain.....

29) What channel would you prefer to receive research outcomes?
Journals or Conferences [ ] Newspaper [ ] Radio [ ] Television
Internet [ ] Community forums (*Baraza*) [ ]
Any other ……

30) In summary, to what extent does the communication channels used, determine the appropriate dissemination research outcomes to study respondents at KEMRI?
(1 – Strongly disagree, 2 - Disagree, 3 - Neutral 4 – Agree, 5- Strongly agree).

Strongly disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly agree [ ]

SECTION C: COMMUNICATION SKILLS

31) What is your opinion, on the communication skills embraced in KEMRI?
……..……

32) What communication skills have you acquired? Please tick (√).

Database skills	[ ]	E-mail management skills	[ ]
ICT skills	[ ]	Listening	[ ]
Persuasive language	[ ]	Photography skills (Digital cameras)	[ ]
Presentation skills	[ ]	Writing skills	[ ]

33) Which communication skills are ideal for disseminating to respondents?
Please tick (√).

Speaking [ ] Reading & writing [ ]
Listening [ ] Persuasive [ ] Strategic thinking [ ]
Any other ……..

34) Do you think research outcomes are communicated to research respondents?

…….

35) What communication skills, do you think are ideal for translating professional jargon (scientific) in research outcomes as feedback to respondents at KEMRI?
Please explain…….……..…….

36) In summary, to what extent does communication skills determine the dissemination research outcomes at KEMRI?

(1 – Strongly disagree, 2 - Disagree, 3 - Neutral 4 – Agree, 5- Strongly agree).

Strongly disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly agree [ ]

SECTION D: DIFFERENTIATION STRATEGY

37) What is your opinion on the differentiation strategy comprising; identity, image and logo in KEMRI?

…….…….……

38) Do you think persuasion (persuasiveness) is used while disseminating research outcomes?

.....

39) Do you think the KEMRI's identity and image are persuasive in dissemination of research outcomes?

……..……..

40) What is your opinion of the differentiation strategy in KEMRI that is, corporate branding using; corporate image and corporate identity?

……..……..

41) In summary, to what extent does differentiation strategy determine the dissemination research outcomes at KEMRI?

(1 – Strongly disagree, 2 - Disagree, 3 - Neutral 4 – Agree, 5- Strongly agree).

Strongly disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly agree [ ]

SECTION E: CORPORATE COMMUNICATION PLAN

42) Corporate communication plans are guidelines/plans/polices for disseminating research outcomes. What is your opinion, on their utilization in disseminating research outcomes in KEMRI?

…….…….....

43) Corporate communication plans also entail, prioritizing stakeholders communicate and the communication structure. That is, the communication flow in KEMRI, from Top-down or Bottom/up. What is your comment, on their use in disseminating research outcomes in KEMRI?

…….…….....

44) Do you know KEMRI's corporate communication plans for research output dissemination? Please explain …….…….....

45) What is your opinion on, KEMRI's communication policy in determining the media content for disseminating research outcomes to respondents?

46) In summary, to what extent does the corporate communication plan determine the dissemination research outcomes at KEMRI?
(1 – Strongly disagree, 2 - Disagree, 3 - Neutral 4 – Agree, 5- Strongly agree).
Strongly disagree [ ] Disagree [ ] Neutral [ ] Agree [ ] Strongly agree [ ]

Thank you very much for your time to fill the questioner.

Contact: Isaac Muthotho, St. Paul's University macsnrb943418@spu.ac.ke, 0722297968.

#END#

APPENDIX E: INTERVIEW GUIDE FOR CORPORATE AFFAIRS STAFF /SCIENTISTS/RESEARCH COLLABORATORS

Greetings, I am Isaac Joseph Muthotho, a student at St. Paul's University (Nairobi Campus). I am pursuing my masters in communications majoring in, corporate communication. My research project is on, **Determinants of Corporate Communication Strategies for Dissemination of Disease Surveillance Research Outcomes at KEMRI**. Therefore, it is important to understand that, Corporate Communication entails all communications done by an institution to its internal and external publics. Examples; press releases, press conference, newsletters, magazines and brochures. There are no risks neither, cash benefits from participating in the study. You have a right to withdraw, participating in the study. However, I appreciate your voluntary participation and assure your responses will remain confidential. Therefore, I am looking forward to your cooperation in the interview. This will be of great assistance towards the achievement of the academic purpose of this study. Thank you. Interview duration approximately 10 to 15 minutes. Might you have any concerns before we begin? **Respondent code:…… Start time: …….. End time:……..…..**

1. What is your comment, on each of the following communication channels for dissemination of research outcomes to study respondents at KEMRI Nairobi? Information Communication Technology, Integrated Marketing Communication, Social Media (examples, Facebook and Twitter)……
2. What is your opinion on the appropriate communication skills for dissemination of disease surveillance research outcomes to study respondents at KEMRI Nairobi?

   .....
3. What do you think are the differentiation strategies for dissemination of disease surveillance research outcomes to study respondents at KEMRI Nairobi?

   .....
4. In your own words, how does the corporate communication plan determine dissemination research outcomes at KEMRI Nairobi? .....

Thank for your time. Your insights will be helpful in compiling findings of this study.

#END#

Contact: Isaac Muthotho, St. Paul's University macsnrb943418@spu.ac.ke, 0722297968.

APPENDIX F: LETTER OF INTRODUCTION TO KEMRI FROM SPU

ST. PAUL'S UNIVERSITY

Private Bag 00217 LIMURU, KENYA
Email: office@spu.ac.ke
Website: www.spu.ac.ke

Tel Office: + 254(0) 20-2020505/10
Mobile: + 254(0) 728 - 669000
(0) 736 - 424440

17th July, 2018

TO WHOM IT MAY CONCERN

Dear Sir / Madam,

RE: INTRODUCTION LETTER – ISAAC MUTHOTHO REG. NO. MACSNRB943418

Greetings.

St. Paul's University is an institution of higher learning that is chartered as a university by the Commission for University Education. We offer courses leading to the award of **Master of Arts in Communication Studies** among other courses.

This is to confirm that the above named is a bonafide student at St. Paul's University pursuing **Master of Arts in Communication Studies** course. As a requirement of the course, the student is expected to undertake a research project. Part of this research will include data collection.

Please accord him the assistance he needs to carry out this research.

Thanks you.

Yours faithfully,

Principal
St. Paul's University
NBI Campus - Church House
P. O. Private Bag - 00217, Limuru
Tel: 020 - 2020505 / 510
Cell: 0728 669000, 0736 424440

KENNEDY WAWERU
DEPUTY PRINCIPAL – NAIROBI CAMPUS.

Source: SPU (2020)

APPENDIX G: STUDY LOCATION; PHOTOGRAPH AND LOGO OF KEMRI



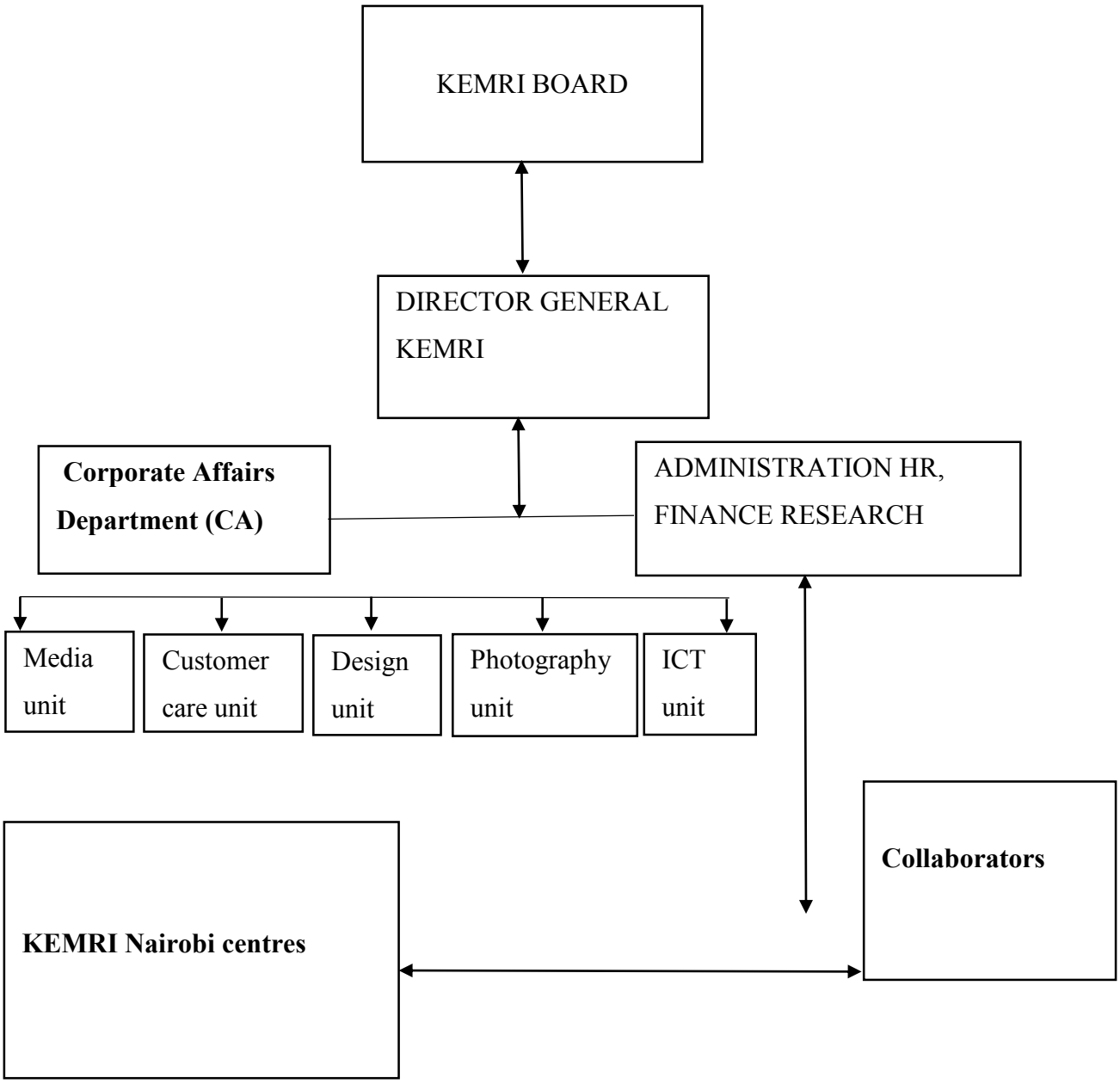
Source: www. KEMRI org

APPENDIX H: KEMRI LOCATION FROM GOGGLE MAP



Source: https://www.google.com/maps/

APPENDIX I. KEMRI ORGANOGRAM



Source: KEMRI (2020)

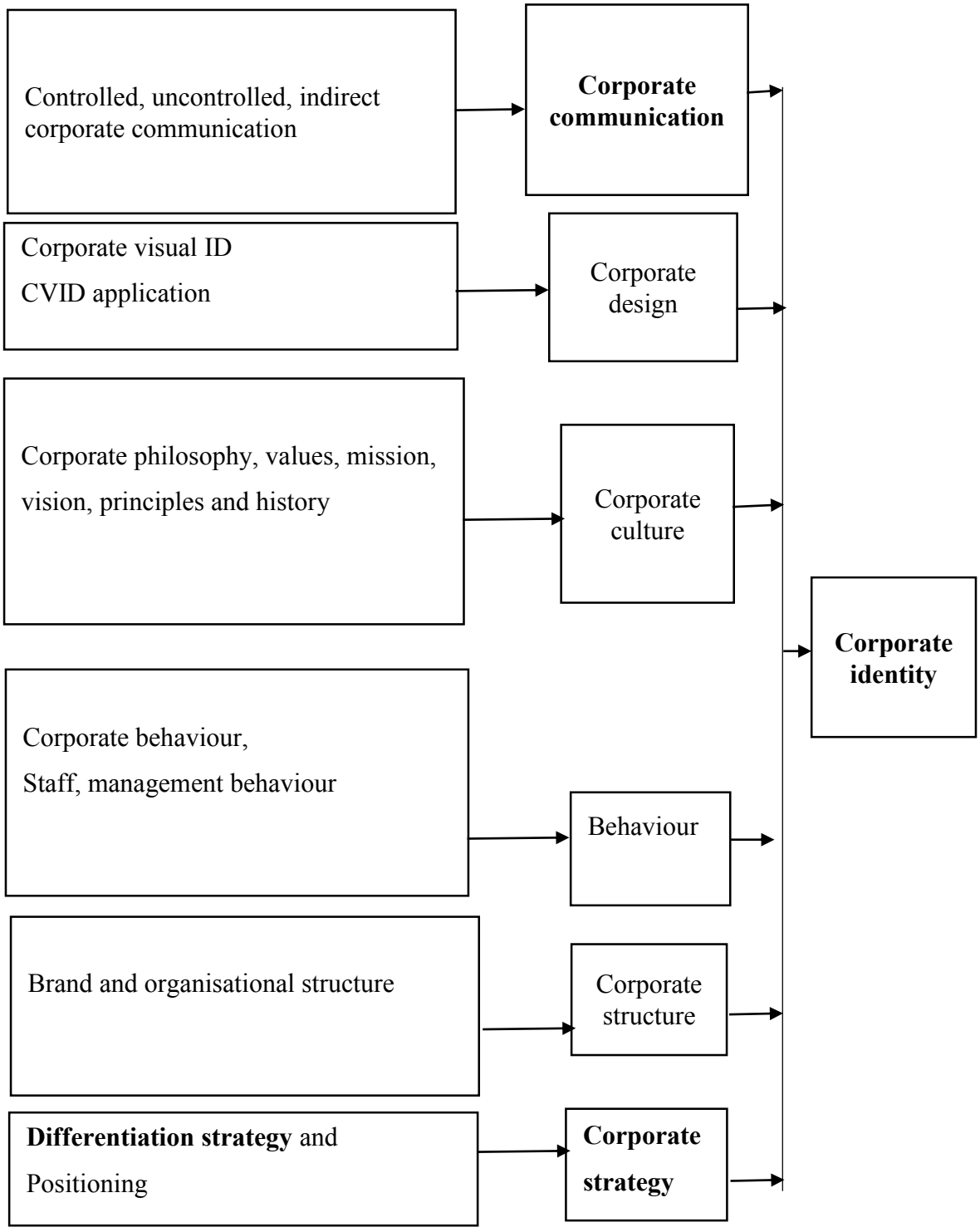
APPENDIX J. SAMPLE SIZE DETERMINATION CHART FOR THE STUDY BY KREJCIE AND MORGAN

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

Note: N is Population Size; S is Sample Size *Source: Krejcie & Morgan, 1970*

Source: Krejcie and Morgan, in Saido, Siraj, Nordin and Al-Amedy (2018)

APPENDIX K. CORPORATE COMMUNICATION



Source: Melewar et al. (2018)

APPENDIX L: CONSENT FORM

Isaac Joseph. Muthotho. C/o P.O. box 54840-00200, Kenya. Macsnrb943418@spu.ac.ke.

Mobile. 0722297968.

Re: Consent (Assent) for participation in academic study

This is to formally invite you to participate in this academic. This case study will entail questions concerning corporate communications. It will take approximately 30 minutes. **Title of the study:** Determinants of Corporate Communication Strategies for Dissemination of Disease Surveillance Research Outcomes at Kenya Medical Research Institute.

Risks and discomforts: There are no risks from your participation in this study. Other than perhaps discomfort sharing about communication priorities. If this happens, you are free to choose to stop your participation in the interview or answering questionnaires.

Benefits: Apparently, there are no cash benefits from participating in the study. However, the information you will provide will facilitate the researcher in the understanding the corporate communications strategies in KEMRI.

Participant's rights: You have a right to withdraw and stop participating in the study. There will be no penalty if you withdraw your participating in this case study.

Confidentiality: All information that you provide to us will be kept strictly confidential. Although, the study findings may, be presented at professional meetings or published in a professional journal. Your identity information will not be revealed.

Consent for participation:

(**Please tick** (√) **where appropriate**)

I Mr./Mrs./Ms/Dr./Prof./Rev./Fr. _____ do hereby voluntarily agree, without being coerced or pressured, to participate in the study and feel comfortable to share my experiences with the interviewer and filling in the questionnaire. Furthermore, I understand that the information provided for this study will be disseminated and shared with other researchers. That, my identity will not be disclosed.

Participant's full name: _____

Participant's signature: _____ Date: _____

Thank you.

APPENDIX M: M.A Student Research Permit from NACOSTI

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **484720**

Date of Issue: **27/April/2020**

RESEARCH LICENSE



This is to Certify that Mr.. Isaac Joseph Muthotho of St. Paul's University, has been licensed to conduct research in Nairobi on the topic: DETERMINANTS OF CORPORATE COMMUNICATION STRATEGIES FOR DISSEMINATION OF DISEASE SURVEILLANCE RESEARCH OUTCOMES AT KENYA MEDICAL RESEARCH INSTITUTE for the period ending : 27/April/2021.

License No: **NACOSTI/P/20/4823**

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Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

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