

**THE GRATIFICATIONS SOUGHT FROM SOCIAL MEDIA BY
KENYAN USERS AND LEVERAGES FOR LOCAL ICTS
DEVELOPMENT**

BY

JOSEPH KARUMA WARWIMBO

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DECLARATION

This research project report is my original work and has not been presented for a degree in any other university.

Joseph Karuma W.

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This research project report has been presented for examination with my approval as the university supervisor.

Dr. Christopher Chepken

Lecturer,

School of Computing and Informatics

University of Nairobi.

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ABBREVIATIONS AND ACRONYMS

AD	Adoption-Diffusion Theory
CA	Communications Authority of Kenya
CCK	Communications Commission of Kenya
FB	The Facebook application
GSMA	Global System for Mobile Communications Association
ICT(s)	Information and Communication Technologies
ICT4D	ICT For Development
IPTV	Internet Protocol Television
ITU	International Telecommunication Union
PC	Personal Computer
SNS	Social Networking Site
U&G	Uses and Gratifications Theory
UD	Use-Diffusion Theory
URL	Uniform Resource Locator

ABSTRACT

This research study was undertaken to investigate the gratifications sought from social media by Kenyan users and how this could be leveraged for local ICTs development. Particular focus was on the adoption and use of the Facebook Platform – the most popular social platform both locally and globally. The study sought to address the problem of lack of literature related to social media usage patterns and the corresponding stratification of these users in the local context which can be helpful in informing the design of future ICTs and in local ICT policy making. The overall purpose of the study was to identify and rank Facebook's sought gratifications, the factors influencing the adoption- and use-diffusion processes and how this could be leveraged for the development ICTs and web-based solutions locally. To achieve this goal, there were four objectives that guided the research process. These were: to find out, proceeding from tested audience gratification typologies, the gratifications sought by different Facebook users in the country; to examine the prevailing structure of local Facebook users with respect to their application-adoption rates and usage patterns against the factors influencing such adoption and usage patterns; and to establish the aspects of social media use characteristics that can be leveraged in the development of ICT solutions locally. The research design adopted both descriptive and diagnostic survey approaches. The target population comprised of over twenty nine million Kenyan Internet users and random sampling was employed to identify the 384 respondents sampled. The questionnaire was administered online with invitations made through emails and Facebook invitations and advertisements. A hard copy format of the questionnaire was first administered among randomly selected residents of Kiambu town in order to ascertain for validity of the instrument. The data collected online was found to be reliable through a split test that gave 0.85 Cronbach alpha value for reliability. The independent variables for the prevailing adoption and usage patterns were tested for their influence on the usage of social media using various statistical tests including binary, multinomial and ordinal regression tests. It was found that 76.1% of those interviewed had an active Facebook account while slightly more than half of the non-adopters were actually quitters or had at least opened an FB account before. It emerged that most Facebook users accessed the platform so as to read and comment on their newsfeed as well as interact with like-minded friends and contacts. The gratification topologies concerned with 'reinforcement of personal values and identity', 'social connection' and 'information seeking and sharing' emerged the three highest ranked in that order going by the uses and perceptions of the Facebook platform. The 'economic factors' topology ranked lowest out of the ten distinct gratification topologies identified. Theoretical adoption and innovation usage constructs played a key role in determining who adopted the social media and how intensively the adopters used the platforms. Compatibility, media influence, observability, trialability and social communication factors influenced adoption statuses while competition, innovativeness, social communication and relative advantage influenced the rate and variety of use of the Facebook application among the adopters. The leading gratification factors and the prevailing usage patterns which were found to be influenced by theoretical constructs could be leveraged, as discussed, in the design of local ICTs. This can take the form of predetermined audience reach for web-based solutions as well as influencing engagement patterns with applications' adopters. Such prior considerations by developers could help in the design of solutions that responds to the existing problems and needs of target audiences in a more informed way thus reducing costs and improving success rates of the projects. Further studies could improve on the available literature by targeting specific populations such as schools or unique geo-spatial settings.

CHAPTER ONE

1.0 INTRODUCTION

1.1. Background

According to internet world stats, there were about 3.27 billion internet users worldwide by end of June 2015 (Internet World Stats, 2015). The corresponding estimate for Africa was 313,257,074 users representing 6,839.1% growth between December 2000 and June this year. The reports quotes the number of Kenya Internet as 29.2 million users translating to about 63.6 per cent national penetration. The same source reports that there were about 2.05 million Facebook users in the country by June 30, 2015. The number of internet users has continually increased. This would lead to the implication that there are also many more users of social web-based media platforms, particularly Facebook.

Indeed, going by a Synovate's research quoted in an earlier local business daily (Kinyanjui, 2010), if the findings still hold that 79% of internet users is the current proportion of local Facebook users, then almost 23.1 million Kenyans could currently be accessing the platform. The same study had reportedly indicated that each online visit lasted about 70 minutes on average. Assuming that Facebook users do not spend significant amount of time on other sites, then they will collectively be hooked on the application for more than 1.6 billion minutes each day! This could not be very far from the truth as Kenya could be likened with other almost similar nations with greater proliferation of mobile broadband than broadband for non-mobile devices. In such states, the recorded trend has been that there are more users of social media than those for general internet such as in some Arab states (GSMA, 2013). At a glance, it could simply be explained that the social networking application, Facebook, has inherited its global popularity down to the local scene by virtue of being a generally favorite social platform for many. In addition, its growing local usage could be attributed to a technology-receptive and sociable people. It is especially more popular among the youth who represent a big proportion of the population.

A general scan of selected relevant literature reveals numerous studies and publications revolving around the various topics of the social media. This has unmistakably been occasioned by the modern phenomenon that these platforms have become world-wide. Their effects, benefits, challenges and even dreaded dangers have been experienced in the workplaces, schools, the streets and back in the home setups alike. Protagonists of the current bushfire-spread of social networking subscriptions and the associated voluminous real-time content exchanges cite social

capital, cheap communication and opportunities for economic benefits as excellent advantages of the media. The antagonists on the other hand do not fail to point out the inherent hazards posed to the die-hard users of the SNSs such as effects on health, school grades as well as exposure to myriad social ills. This study focuses on the use of social media, particularly Facebook, within the local context. It strives to establish the user-specific gratifications to the prevailing usage patterns of the platforms. The social demographics characteristic of individual users or user groups are explored with a view to understanding any inherent relationships that can help explain and predict their application's usage patterns. The perceptions of the users on the satisfaction aspects of the technology Vis a Vis other available communication options have also been examined. The functionalities being offered by this platform that have and continue to attract phenomenal following have been investigated too for the associated advantages and gratifications behind their popularity with the users. It is envisaged that the developers of similar social platforms as well as other general online products will find the findings helpful in making informed considerations on the requirements for specific target audiences. The study will also be useful in outlining the prevailing usage patterns so that information is available for determination of unhealthy usage behaviors that might be detrimental or counterproductive for some users or their host institutions.

1.2. Problem statement

Since the composition of social media users cuts across various cultural, geographical, social and personal backgrounds such as race, age, sex or occupation, the use of the platforms has diverse effects across many social-economic set ups and institutions. Indeed, the perspectives of the social media world could be as broad as those of the different lifestyles of its many users. Any effects emanating from its use would therefore be felt, among other places, in educational institutions, health and health care systems, the workplaces and even the home set ups all of which host the application users in a way or another. There are always the utopian versus dystopian sides taken by commentators about the ultimate social outcomes of embracing such innovations that should be given due consideration in evaluating the effects of their usage. What elicits even more interest in the platforms under investigation is the big and increasing user base and the deepening degrees of use-intensity - what has come to be termed as the information revolution. While the reasons and motivations for engagement with SNSs could be as many as could be given by their different users, there is a great deal for concern when the cumulative hours spent on the sites are not only beneficial but also equates, for some users, to lost working and studying hours, exposure to cybercrime or hazardous lifestyles among other risks. There is

therefore a great need to have up-to-date information on the bright-side-aspects of the prevailing usage of the platforms that can be leveraged or risks that should be mitigated.

Since the local scenario is no different, there is need to probe deep into the gains being sought and the gratifications that lead to the Facebook craze with hundred millions of minutes being spent on the application daily. The users and the institutions as well as the providers of technological solutions can then have an informed basis of harnessing the benefits, mitigating risks and emulating or replicating the areas of success. With the reasons and intentions known as to why so many Kenyans will spend so much time on the platforms, ICT policy making can embrace specific measures that ensures that use of the applications does not negatively affect the effectiveness of its users or their host institutions among other hazards. This can be done at both organizational and regulatory levels. By the same token, developers of online and related solutions can also learn from deeper insights of social media use to help them develop more intuitive and efficient products that can reach out to and appeal to a wider audience. The developers can also be better placed to engage with specific audiences in certain preferred ways.

1.3. Purpose of the study

The purpose was to identify the gratification factors sought by Facebook users in the country with an aim of establishing how the motivations behind the prevailing application usage patterns can be leveraged for design of future ICTs.

1.4. Specific objectives

1. To find out the prevailing structure of local Facebook users with respect to their application-adoption rates and the application usage patterns.
2. Explain the factors influencing the adoption and usage patterns on the Facebook application in Kenya.
3. Establish, proceeding from tested audience gratification typologies, the gratifications sought by Facebook users in the country.
4. Establish the aspects of the prevailing social media use scenarios that can be leveraged in the development of ICT solutions locally.

1.5. Research questions

1. What is the stratification of the local Facebook users like in the country - with respect to their application-adoption rates usage patterns?
2. That are the factors influencing the adoption and usage patterns on the Facebook application in Kenya.

3. What are the gratification topologies that drive the use of the Facebook application in the country?
4. What aspects of the prevailing local social media usage scenarios can be used to inform the development of future ICTs in the country?

1.6. Significance of the study

Since there is barely any local literature on sought and gained gratifications from local Facebook usage, the proposed study endeavors to furnish and enrich the existing social media literature in this particular area. It is a knowledge gap that deserves serious review owing to the existing large and growing subscriber base (Internet World Stats, 2015) for the social media platform in question. As earlier mentioned, the effects of Facebook usage will eventually extend across, and most certainly transcend, most aspects of the individual users' lifestyles. It will give rise to either positive or negative effects for the users as individuals or as members of certain institutions and organizations in learning, health care, work place, governance, civic or professional set ups. By unveiling the gratifications sought or obtained from Facebook usage, social media stakeholders can then have an informed starting point to either take advantage of the associated benefits or counter react against any possible risks and negative effects resulting from the application's use or misuse. It will also provide new knowledge on what aspects of the Facebook app and other similar User Generated Content sites (UGCS) drives the interest of the masses which can be replicated in other online solutions with great impact on targeted audiences. Better educational content can be developed from scratch or existing platforms improved to ensure that intended audience targets are met or even exceeded in both adoption and usage of such solutions. Similar improvements can be pursued for health and other ICT-for-Development products.

On the other hand, unhealthy, counter-productive, or criminal and irresponsible use of the platform and similar media can be discouraged or curbed. This would take the initiatives of the affected organizations as well as sector-specific and national policy making organs.

1.7. Limitations and delimitations of the study

This study that aimed to identify user gratifications and gauge the satisfaction gained from social media use, particularly Facebook, hoped to be informed by the characteristic usage patterns of the local subscribers. In making the defining inquiries, answers were sought from the general public accessing the Internet with no specific preference of any stratified group. From a general review of related literature, this is unlike some similar studies done on the subject which have otherwise concentrated on specific populations such as institutions, occupations, gender and age

brackets or relatively smaller geographic areas. This did not present itself as a challenge but was rather necessary since, in alignment with the stated objectives, the study undertakes to capture the bigger picture of Facebook usage in the country. Indeed, the research leveraged this diversity and endeavored to examine the varied user demographics against their accompanying usage patterns in search for any explanatory or predictive relationships.

The study restricted itself to investigating the usage patterns and user perceptions of the Facebook application. This leaves out the users of other social networking sites and platforms such as Twitter, WhatsApp, or Google+ who could account for a significant proportion of social media users in the country. This decision was occasioned by limitations of time and resources. This was however not expected to have any significant effect on the final findings based on the objectives of the study and putting, in mind that the candidate platform, Facebook, already presents a diverse population of users. Many of the respondents were also found, as expected, to be subscribed to the other common social platforms.

1.8. Assumptions of the study

It had been assumed that Facebook users in the country will present the whole range of motives and perceptions of social media use and therefore drawing a sample from these users gives a good representation of all social media users. By the same measure, it was assumed that the stratification of the Facebook users along various demographic characteristics of gender, education, age and the like is similar to that defining the population of all other common social media in the country.

From the profiles of the respondents this was actually achieved as the majority of the Facebook users that participated were also found to be the same users of the other common social platforms in use locally.

1.9. Definition of significant terms

Audience gratification typologies: This refers to the broad categories of gratification factors that explain the motivation behind usage of certain media – in this case, the Facebook application.

Facebook usage pattern: This refers to the frequency and length of Facebook visits by the individual users.

Use, gratification and motivation: In prior studies on uses and gratification, **use** means selectively using media expected to satisfy users' needs and **gratification** refers to the degree

of satisfaction acquired in the process of using media. In addition, **motivation** means stimulation and compensation that induces use of media.(Chung, Koo, & Park, 2012)

1.10. Organization of the study

The research project report is organized in five chapters. The first deals with general introduction to the study including the background, problem statement and the specific objectives.

The second chapter entails the literature review and outlines the related literature already in print as well as its relevance to the current study. It outlines the identifiable gaps in the study field and rightfully places the study in its due context in relation to completed studies on similar areas.

The third chapter explains the methodology used for the research process. It describes the samples and data collection methods used. It also explains the statistical methods used for analysis.

The fourth chapter contains data analysis, presentation and interpretation of results and findings. The statistical tests that have been done on the survey data to answer the stated research questions have been given and explained here.

The fifth and last chapter gives the summary of findings, discussion of the findings, conclusions and recommendations related to the study subject matter. These have been based on the study objectives as well as the Literature review conducted on the research topic. Suggestions for further studies related to the research topic have also been given.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1. Introduction

This chapter explores the existing scholarly literature on the usage of social media. It particularly gives a discussion on the already identified sought and gained gratifications from a variety of technological innovations. This review is directed at helping understand the kind of motivations behind the users' adoption timelines as well as rate and variety of use that define their Facebook usage patterns.

2.2. The Facebook Application

Facebook is by far the most popular SNS globally and among the local populace too. The application's design has evolved over the time but still retains most of its original features and functionalities. At the time of the study, it featured a prominent 'Newsfeed' home page also known as 'the wall' through which users post updates or comment on other posts and generated content. Viewing and sending notifications and friend requests, reading messages, accessing home page (newsfeed), personal profile, privacy shortcuts, and account settings could be done from the top menu bar. Access to groups, other pages and apps among other functionalities was through links' sidebars. Additionally, the prominent graph search bar helped in advanced finding of pages of people, groups, and places. This is a general description of the main website navigation features as viewed from a Windows PC. The looks, feels and installations may vary for different combination of platforms and a user can tweak some of the interface and display properties to his or her liking. As has been the progressive mission of the of the Facebook designers, the application can be accessed from across more than 2,500 mobile phones (Facebook, 2015). This then means that, there are many possible different looks and feels or user experiences when accessing the platform which can either be installed into the different devices or accessed through various internet browsers.

2.3. An overview of social media usage research

The role of the user is paramount in explaining the existing media usage patterns which are useful in making analyses of the effects of media use. The characteristics and motives of the user have, for instance, been shown to correlate positively with internet addiction – a negative usage effect (Kim & Haridakis, 2009). In other instances, Facebook use has been blamed for relatively poor academic performance (Kirschner & Karpinski, 2010) as well as perpetually affecting workplace hours (Bryant, 2013). But why has the usage of ICTs, especially SNSs, been riddled

by all sorts of nearly-unexplainable user behaviors? This field has and continues to fascinate scholars from across various academic backgrounds such as sociology, telecommunications field, information science and even medicine – going by a cursory review of related literature.

The media-use research field is as old as the communication media themselves with various theories and study approaches having been proposed or used by scholars since the early communication age of introduction of radios and telephones (Katz, Blumler, & Gurevitch, 1973). The notable research approaches that have been in use over the time, especially on social media, include: the Technology Acceptance Model and its extended version proposed by the original theorists (Venkatesh & Davis, 2000); Shannon's Social Entropy Theory (Matei, 2010b; Matei, Oh, & Bruno, 2008); Social Cognitive Theory (LaRose & Eastin, 2004; Lee & LaRose, 2007); Media System Dependency and Communications Infrastructure Theories (Matei, 2010a) as well as the Uses and Gratifications Theory (Katz, Blumler, et al., 1973) and its subsequent Ruggiero's review for the 21st Century relevance (Ruggiero, 2000). The Diffusion of Innovations theory is similarly a widely popular framework that has also gained momentum in its application in adoption research for various information systems (Sahin, 2006). In all cases, the bottom line or gist of the media theories on ICTs usage is to strive to explain the motivations that lead to the observed usage patterns and eventually, the effects on their users. Each approach seems to be centered about a related set of values such as the psychosocial characteristics of the users, the technological aspects of the medium or elements and attributes of the media contents. In similar terms, Katz et al states that media gratification sources could emanate from the 'media content, exposure to the media per se, and the social context that typifies the situation of exposure to different media' (Katz, Blumler, et al., 1973).

2.4. Theoretical underpinning

The research approach used in this study has relied on a combination of theoretical frameworks chosen for the purposes of identifying the sought gratifications as well as for explaining the prevailing adoption and use diffusion processes or, the usage patterns. In particular, the Uses and Gratifications Theory has been used together with the conjoined perspective of adoption- and use-diffusion of innovations theoretical frameworks. Firstly, the Uses and Gratifications Theory has been employed in establishing the local users' main motivations of Facebook application usage. U&G places the user at the center stage in determining the motivations behind the prevailing media usage patterns thus making it a good choice for this purpose. Secondly, in order to understand the usage patterns of time and rate of adoption as well as the variety and rates of usage, the study has employed a conjoined theoretical perspective of adoption- and use-diffusion

of innovations. The variables to be used for adoption- and use-diffusion frameworks compare to those of a similar framework used in the study of IPTV (Internet Protocol TV) services, done earlier in Korea (Motohashi, Lee, Sawng, & Kim, 2012). This perspective had been motivated by the observation that the digital convergence presented by IPTV which is a mass media tool can be compared to that of a SNS in several instances. The variables employed too can be generalized to cover any SNS or social media application. It was much anticipated that most local Facebook users could not be accessing many of the features and third party plug-ins presented by the Facebook application. This could be occasioned, most probably, by the broadband limitations and the access devices used. This notwithstanding, the multimedia features and the variety of usage that can be accessed by the majority of users certainly qualify the application as a point of important digital convergence. Communication between any two users can be in the form of real-time chats or delivered to inboxes, for instance, and can have a varied mix of formats from text to voice, graphics and video. One can contact only a private list or broadcast messages to many users too.

The U&G approach provides a great standpoint for exemplifying the individual motivations that can be attributed to the choice and use of a particular medium or platform. This is especially relevant within the current era of web 2.0 applications that presents myriad of choices for users. To enhance this, the present study will employ some suggested additional dimensions and aspects of the U&G approach proposed for application of the Theory within the current contexts (Ruggiero, 2000). Furthermore, the complementary adoption-diffusion and use-diffusion approaches will help reveal the segmentation of users as well as their classification according to their application usage patterns. While the Roger's Diffusion of Innovations approach provides insights on the time or rate of diffusion of a technology, the Use-Diffusion approach by Shih and Venkatesh explains the rate and variety of use (Shih & Venkatesh, 2004a). This is important for the study since in addition to identifying the motivations of usage through the U&G approach, the adoption-diffusion and use-diffusion approaches (AD and UD) provides for a basis of important description or categorization of the users based on their individual application usage patterns. A review of these theoretical frameworks together with a description of each of the theoretical constructs is given in the succeeding sections.

2.5. The U&G theory and social media gratifications

Since its conception, U&G has enjoyed empirical and scholarly support from the application of its core tenets in various research studies such as in (Donohew, Palmgreen, & Rayburn II, 1987; Ebersole, 2006; Joinson, 2008; Newhagen & Rafaeli, 1996; Ruggiero, 2000; Stafford, Stafford,

& Schkade, 2004). In adopting the uses and gratifications approach, we wished to bring out the key role of user characteristics and intentions in choosing and using the Facebook application amidst other SNSs and media that can provide related functionalities. The wide usage of the application locally made it an appropriate candidate in probing the general user perceptions on SNSs and social media platforms. According to (Chung et al., 2012) 'use', in U&G, means selectively using a media type expected to satisfy one's needs while 'gratification' refers to the degree of satisfaction achieved. In their defining text on uses and gratifications research, Katz et al single out five key assumptions, chiefly on audience importance, upon which the theory building is founded. Firstly, the audience is conceived as active consumers (as opposed to passive recipients of media content). Secondly, much initiative rests with the audience to link their need gratification to media choice. This consequently refutes the existence of influence of the media content on the attitudes and behaviors of users. Thirdly, any media source is conceived as competing with other sources for need gratification. The fourth assumption is that, 'many goals' of mass media use can be derived from individual audience members themselves and, lastly, 'value judgments about the cultural significance of mass communication should be suspended while audience orientations are explored on their own terms.' (Katz, Blumler, et al., 1973).

Apart from the assumptions on audiences, the U&G perspective further relies on the school of thought that individual use of media is occasioned by various social and psychological needs. In an attempt to capture the social and psychological needs for mass media exposure, a classical research survey was done by some of the fathers of U&G Theory (Katz, Haas, & Gurevitch, 1973). They classified these needs into five major areas as relating to a user's need for: information, knowledge, and understanding; aesthetic, pleasurable and emotional experience; credibility, confidence, stability, and status; contact with family, friends, and the world and lastly, the needs relating to escape or tension-release. To achieve the purposes of their research which was to gauge the important things for the audience in using different media, each category of needs was assessed against its corresponding user expectations which could be the strengthening, weakening or acquisition of the stated needs. Further, the analysis of the needs was subjected severally to various frames of reference, such as, against self, family, friends, traditions and others.

According to (Stafford et al., 2004), uses and gratifications of media use by audiences could also be broadly classified as either content-centered or process-centered. Quoting Cutler & Danowski, the authors explain that 'Content gratifications concern the *messages* carried by the

medium, and process gratifications concern *actual use* of the medium itself'. Drawing an analogy from the work of Hoffman & Novak, they further state that internet users may be motivated by the enjoyment of the usage processes (recreational function) or specific site-related informational content (informative function). The authors also mention the social gratification function of the internet as an important need gratification area too.

The use of SNSs such as Facebook has also been attributed to enhancing an individuals' social capital by (Ellison, Steinfield, & Lampe, 2007; Joinson, 2008; Steinfield, Ellison, & Lampe, 2008). Quoting related sources, (Valenzuela, Park, & Kee, 2009) describe the social capital notion in terms of 'social networks, trust, civic engagement, life satisfaction and a variety of other concepts'. This is only but one of the major functions being served by the Facebook application according to the users and which has featured greatly in many research studies especially those employing a U&G approach. From a cursory review of uses and gratification studies, the key audience gratification factors being identified by different scholars seem to revolve around somewhat similar themes. In reviewing the state of the art gratifications research towards setting groundwork for U&G, Katz et al made a good mention of the existing findings of related scholarly work (Katz, Blumler, et al., 1973). He mentioned Schramm's 'dichotomous' fantasist-escapist or informational-educational motivation factors. Also mentioned were Lasswell's four functions of 'surveillance, correlation, entertainment, and cultural transmission (or socialization) for society as a whole, as well as for individuals and subgroups within society'. A four-category typology by McQuail, Blumler, and Brown is also mentioned as diversion, personal relationship, personal identity and surveillance. The central notion of need to connect (or disconnect) is also stated emanating from the work of Katz, Gurevitch, and Haas.

As earlier articulated, the social function of Facebook is important to many users. It has also elicited correspondingly much concern on the part of scholars. Lampe *et al* had tried to draw a distinction between social searching and social browsing uses of typical Facebook users (Lampe, Ellison, & Steinfield, 2006). Social browsing here meant 'checking on' known offline connections which was shown to be the relatively higher propensity for use as compared to social searching with the aim of establishing new connections. The authors also describe social surveillance as another important function of Facebook use. In a later study, Joinson utilized the U&G theory and came up with a more comprehensive list of Facebook use motivations (Joinson, 2008). The seven studied factors were social connection, shared identities, photographs, content, social investigation, social network surfing and status updates. It was a two-step study similar to one carried by Stafford et al which required the generation of descriptive terms on uses and usage

gratifications from users followed by a second interview after a grouping of these descriptions into similar related factors (Stafford et al., 2004).

A notable review of the uses and gratifications theory was later made by Ruggiero (Ruggiero, 2000). It contained a good balance of reflections on past critics as well as its relevance in the 21st Century especially with the proliferation of modern ICTs and Web 2.0. Critics had questioned, for instance, the assumption of a ‘universally active’ audience and quoting Rubin, the Author states that there are suggestions that ‘all audience members are not equally active at all times’. The author also quoted Cooper as reporting that some Japanese researchers viewed the ‘individual-level impact (of U&G approach) as a limited effects perspective’ claiming that the media could only be reinforcing existing attitudes and behaviors of the users. All in all, (Ruggiero, 2000) contends that any ‘reproach of U&G must be tempered with encouragement’. He defends the lack of a comprehensive typology of uses for U&G research as a notion subject to change depending on researchers and research areas involved. He also notes the challenge inherent in trying to understand the broad range of personality traits and, in particular, the dynamism of personal needs. While giving recommendations on contemporary future U&G models, Ruggiero urges for the inclusion of aspects inherent in modern media such as ‘interactivity, demassification, hypertextuality, and asynchronicity’. Quoting Finn, he states that ‘convergence of mass media and digital technology have altered the exposure patterns of many media consumers’. Thus consequently since the people are now, more than ever, spoilt for choice when it comes to selecting a media type, ‘motivation and satisfaction become even more crucial components of audience analysis’ (Ruggiero, 2000).

2.5.1. Facebook user gratification factors

Using the U&G approach, a 2008 study by Lampe et al concluded that changes in Facebook use and perceptions rarely occur drastically (Lampe, Ellison, & Steinfield, 2008). They speculated that most such changes are usually brought about by changes in individual’s social context as well as change in application design – such as addition of features. In this study, it was helpful to first undertake an exploration of some of the varied range of the uses and gratification factors that have been discovered or investigated upon in previous research work. This was meant to present a discussion of some of the already established main motivations or gratification typologies that formed key building blocks for the study in accomplishing its stated objectives. As earlier mentioned, the U&G has, on one instance, attracted critics due to lack of a comprehensive outline of social and psychological needs that are deemed as the source of individual media use motivations. The original theorists also acknowledged this apparent lack

of a supportive theory to provide guidance on this fundamental aspect (Katz, Blumler, et al., 1973). They termed some related existing work as ‘too broad’ where Schramm, Lyle, and Parker (1961) had offered a distinction between ‘reality and pleasure principles’ on earlier socialization theories. In spite of these shortcomings, they had offered a suggestion - that future U&G students could try to ‘work backwards’ from gratifications to needs in a bid to establish genuine relationships and also dynamically explore the broad area of user needs as situations could warrant.

Without dwelling on any developments that could have been made in mapping the user needs area, it is worth noting that no particular clustering or categorization of needs may be applicable to all media and for all times. This will satisfactorily be substantiated by the fact that the range of personality traits is dynamic and too broad to achieve this fete (Ruggiero, 2000) and that different individuals will approach different media for different gratifications (Hsu, 2007). Furthermore, various user gratification factors have been found to overlap across different media with particular medium being credited to offer some differentiated degree for a given gratification typology (Katz, Haas, et al., 1973). As an appropriate identification of sought gratifications was part of the study, set of factors was compiled from among those that have been prominent and closely aligned to social media use. The compilation of the factors was not meant to follow any order of their perceived levels of significance but rather the aim was to provide a near-complete representation of all probable gratifications as guided by past studies. These factors that have severally been identified as the key gratification typologies sought by users of various media including social media such as Facebook are provided in Table 2.1 whereby additional comments have been made on comparative activities of FB use where the gratifications could be exhibited.

Table 2.1: Key established social media gratification typologies from selected studies

Gratification Typology	Brief Description	Instances of related FB activities
Information seeking and sharing	Both as a conventional, mass media platform and as interpersonal communication avenue. Social media provides for synchronous and asynchronous communication modes involving one-to-one, one-to-few, one-to many, many-to-one, or many-to-many source-receiver relationships	<ul style="list-style-type: none"> -Following/ liking groups -Making direct inquiries from other contacts or groups' pages -Liking or following pages of media houses, bloggers -A casual search on topics of interest -Making original posts on topics of interest or -Sharing other visited URL's links via their timeline.
Social connection	Usually seen as the 'essence' of any SNS. Interactive or passive use modes usually results to social bonding or bridging roles of SNS usage (Burke, Kraut, & Marlow, 2011; Jung, Gray, Lampe, & Ellison, 2013). Results into social capital to the users and even boosting self-esteem (Steinfeld et al., 2008) .	<ul style="list-style-type: none"> -Use of group forums -Posting, commenting and sharing activities directed at friends, family or certain networks within one's list of contacts.
Social surveillance and investigation	Achieved through a passive Facebook use mode aimed at broadening one's knowledge of the immediate social environment or just knowing what's happening within the social network.	<ul style="list-style-type: none"> -'virtual people-watching' -Searching for specific types of people using advanced search features -Social network surfing - Browsing statuses and profiles (including photos) of friends and friends of friends as well as those of other total strangers
Enjoyment/entertainment	Can range from online games made specifically for the platform to entertainment pages (by communities, celebrities or entertainment websites) as well as the posts and links shared with friends and other subscribed pages.	Instances of such interests will be exhibited through frequency of playing such games, visiting related links, 'liking' such pages and even related individual updates or 'shares'.
Diversion and escapism	The use of the media to divert one's attention from (mostly unfavorable) activities or situations.	Thus individuals pursuing this kind of gratification will report such things as escaping boredom, forgetting school work or forgetting other activities and problems as their key motivations
Reinforcing personal values and identity	In terms of social identity, a sense of involvement, self-image expression and interactivity have been found as key motivations for the users of SNSs (Chung et al., 2012). All	Users will therefore typically report the need for and activities related to: <ul style="list-style-type: none"> -Inclusion in some events

Gratification Typology	Brief Description	Instances of related FB activities
	these intentions are related to personal identity and crystallization of one's values.	-Involvement in particular activities -Reciprocating
Third party extensions and plugins (the apps)	Various Facebook extensions provide extra functionalities within the platform serving different user needs. Those who use the apps have also been found use them persistently (Gobry, 2011).	The categories of apps provided include games, communication apps, business, shopping and assorted utilities
Life documentation	The use of SNSs to post personal and familiar experiences, whereabouts, events and interactions	-Comments/text, photos, audio contents or videos posted or shared from other sources related to a particular place or event.
Economic factors	Gratifications from economic benefits such as wooing contacts to a specific blog, brand, goods or services with the aim of economic advancement.	-Promoting brands, goods and services via personal timelines and user groups -Users that have subscribed to related features of the Facebook application such as adverts or custom pages for brands, services and may be community pages
Process gratifications	The use of media for 'extrinsic values' with no link to message substance as opposed to content gratification derived from 'use of mediated messages for their direct, substantive and intrinsic value for the receiver' (Cutler & Danowski, 1980). Such additional dimensions have been recommended for inclusion to fine-tune U&G for relevance in the present century and present ICTs which are functionally different from their predecessors (Ruggiero, 2000).	The different possible modes that communication can take place via Face book such as the: Exchange modes (synchronous or asynchronous); the multimedia aspect; interactivity or customizable broadcasting capability of the platform; demassification; and hypertextuality - constitute process gratifications (Ruggiero, 2000)

It is worth keeping in mind that it will never be possible to provide a comprehensive listing of all possible gratifications sought by users. The categorizations contained in Table 2.1 will also not always be unique – some will converge into single categories while others will overlap at some points. It was similarly borne in mind that it was possible to have, from our target users, a unique set of individual gratifications that could require separate grouping. To this end, when inquiring from the respondents, the study strived to identify additional uses and gratifications emanating from the users which could have been outside this compilation.

2.6. Innovation diffusion processes versus Facebook adoption and usage

2.6.1. The adoption-diffusion process

Diffusion has been defined as ‘the process through which an innovation is communicated through certain channels over time among the members of a social system’ (Rogers, 2003). Rogers posits that the four elements necessary in a diffusion process are the innovation itself, communication channels, time and the social system. An innovation is the object of diffusion which could be an idea (e.g. technological) or practice. Rogers argues that the user-perceived characteristics of an innovation determine its rate of adoption. The five attributes of innovations in this respect are its ‘(1) relative advantage, (2) compatibility, (3) complexity, (4) trialability, and (5) observability’ (Rogers, 2003). Communication channels on the other hand are the means through which messages get to individuals. Rogers points out that mass media channels are good in creating awareness of new innovations (and re-inventions) while interpersonal communication helps in changing attitudes about innovations. The time dimension in the diffusion process facilitates the innovation- decision process where an individual or adopting entity passes from knowledge of the innovation to attitude (or persuasion), decision, implementation and finally the confirmation stage (Rogers, 2003). Additionally, time defines the innovativeness of individuals, that is, how relatively early they are in adopting an innovation. Lastly, time also explains the rate of adoption among the members of a social system. The final element in the diffusion of innovations process is the social system that basically hosts the adopters either individually or as a unit. Rogers mentions that opinion leaders, change agents and aides will influence the adoption process. The resultant innovation-decisions will then be optional, collective or authority decisions or a combination of them (Rogers, 2003). The Author further says that the social system will influence the diffusion process through the consequences emanating from adopting or rejecting an innovation.

2.6.2. The use-diffusion process

The use-diffusion model is built around three key components of UD (Use-Diffusion) determinants, UD patterns and UD outcomes (Shih & Venkatesh, 2004a). The authors highlight the key role of UD patterns in the model where the variables of interest are rate of use and variety of use. They state that the combination of these variables present a four-fold typology of use or users characterized by ‘intense, specialized, non-specialized, and limited’ usage. The UD determinants on the other hand presents a set of characteristics that partly overlaps with the AD (Adoption-Diffusion) elements while the other part of it is a unique subset of model-specific

elements. Table 2.2 lists the sets of elements unique and common to the adoption- and use-diffusion models.

Table 2.2: Comparing elements of adoption- and use-diffusion models

Elements unique to AD model	Elements unique to UD model	Elements common to both models
Observability Compatibility Trialability	Product experience Competition for use Sophistication of technology Satisfaction	Innovativeness Social communication Complexity Influence of media Relative advantage

Data source: *Shih, C.-F., & Venkatesh, A. (2004). Beyond Adoption: Development and Application of a Use-Diffusion Model. Journal of Marketing, 68(1), 59–72*

In this study, all the factors common to and specific to the adoption-diffusion and use-diffusion paradigms have been used in establishing the main influencers of adoption- and use-diffusion. A brief description for each of these theoretical factors is given next.

Observability: It is the degree to which the results of an innovation are visible to others.

Compatibility: A new idea is perceived in relationship to existing practices that are already familiar to the individual.

Trialability: It is the degree to which an innovation may be experimented with on a limited basis. New ideas that can be tried on the installment plan will generally be adopted more quickly than innovations that are not divisible. Ryan and Gross (1943) found that every one of their Iowa farmer respondents adopted hybrid seed corn by first trying on a smaller portion of land. (Rogers, 2003).

Product experience: The complexity of technology suggests that user knowledge plays a critical role in shaping the UD patterns. People's experience teaches them to become more familiar with the technology and its different possibilities, which positively affects both rate and variety of use

Competition for use: Limited technological resources have a negative impact on collective use of the technology. However, competition for resources implies access to technology, and access is limited by the amount of time a person can spend with the technology. People do not necessarily compete for how to use the technology (variety) but for how much time to allocate in using the technology (rate) (Shih & Venkatesh, 2004a)

Sophistication of technology: Technological sophistication includes the inherent characteristics of the technology, that is, its versatility and capabilities. Technology can be sophisticated without being difficult to use. (Shih & Venkatesh, 2004a)

Satisfaction: User satisfaction with technology and their corresponding usage patterns have been said to be correlated - with product satisfaction spurring more usage and vice versa (Shih & Venkatesh, 2004a). A user's satisfaction can be viewed as positive experiences with the online content, structure, presentation, and service. For a website it can also include ease of use; web experience; customer service; user forums; user-data privacy; fulfillment/reliability qualities, visual appeal and innovativeness of sites.

Innovativeness: It is the degree to which an individual or other unit of adoption is relatively earlier in adopting new ideas than the other members of a system. Innovativeness is affected both by an individual's characteristics and by the nature of the social system in which the individual is a member.

Communication: Different communication channels play different roles at various stages in the innovation-decision process. In addition to mass media and interpersonal communication channels, interactive communication via the Internet has become more important for the diffusion of certain innovations in recent decades.

Complexity: It is the degree to which an innovation is perceived as difficult to understand and use. Some innovations are readily comprehended by most members of a social system; others are more complicated and are adopted more slowly.

Relative advantage: It is the degree to which an innovation is perceived as better than the idea it supersedes. The degree of relative advantage may be measured in economic terms, but social prestige factors, convenience, and satisfaction are also important factors.

2.7. Leveraging lessons from social media use for product design

Given the immense user-generated content from a myriad of social media platforms, computer and social scientists have been collaborating with other professionals from diverse fields on leveraging various aspects of social media usage that is motivated by the platforms' intrinsic or extrinsic qualities. Indeed, it would take a dedicated investigation to considerably cover all the potential ways in which social media can be leveraged. A cursory review of related content from the general web as well as from scholarly literature suggests that the marketers must have been one of the very first groups to take advantage of the social media usage phenomenon (Jussila, Kärkkäinen, & Leino, 2011; Kärkkäinen, Jussila, & Janhonen, 2011; Zhao et al., 2014) . This should indeed have been expected given that e-marketing has been a fast evolving practice ever

since the proliferation of the Internet gained momentum. It is also now evident that social media platforms have taken the center stage as the basis for decision-making in various other divergent fields with seemingly endless possibilities for each. According to (Turban, Bolloju, & Liang, 2010), social media has been leveraged in businesses for advertisement, market research, recruitment, information sharing and customers' engagement - with social-commerce increasingly becoming an integral element of e-commerce. Additionally, disaster response can evidently be improved through enhanced collaboration and information sharing between volunteers across different platforms (Reuter, Ludwig, Kaufhold, & Pipek, 2015) while non-profit organizations can achieve better public engagement by utilizing the full potential of the social media (Hou & Lampe, 2015). Social media has also immensely being adopted to support e-Government endeavors and Information Communication Technologies for Development (ICT4D) (Crabtree & Chamberlain, 2014; Oloniteru & Ojo, 2013; Sambasivan & Smyth, 2010). The same goes for medical use of social media data and various home applications among other uses.

In this study, of interest is how social media could be leveraged to improve the development of future local ICT solutions by taking stock of the aspects of their usage characteristics that would be most relevant or related to future products. This can be in the form of an indirect approach where discovered social medial usage patterns can be used to inform the type of features popular or relevant to most users or a certain group of users. Alternatively, social media users can be directly engaged in development activities such as requirements gathering, testing, end user development or even documentation processes (Storey, Treude, van Deursen, & Cheng, 2010). Direct involvement of social media users can also take the form of surveys and utilization of feedback mechanisms through social networks (Bajic & Lyons, 2011). It is worthy to note that, even when using direct approaches, developers will only be best placed to harness the full potential of social media usage dynamics when information on the prevailing usage topologies has already been mapped out. This study strives to outline how the findings on local usage patterns can be leveraged by the developers using either of the approaches.

2.8. The conceptual framework

This study strived to establish the determinants of user propensities and motivations for using Facebook for various gratifications by the local population. This presented a logical relationship between Facebook usage patterns and the gratifications sought as well as the accompanying factors for adoption and usage of innovations. Here, the dependent variable was the patterns of Facebook application usage while the independent factors were the respondents' usage statuses

and rates and the AD & UD theoretical constructs. The theoretical frameworks employed did play complementary roles whereby U&G's tested/established gratification factors, represented the varieties of usage used to determine the UD patterns. The AD model provided useful insights on adoption rates and user categories useful for further analysis of usage categorization obtained from the UD model. This conceptual framework is illustrated in Figure 1.

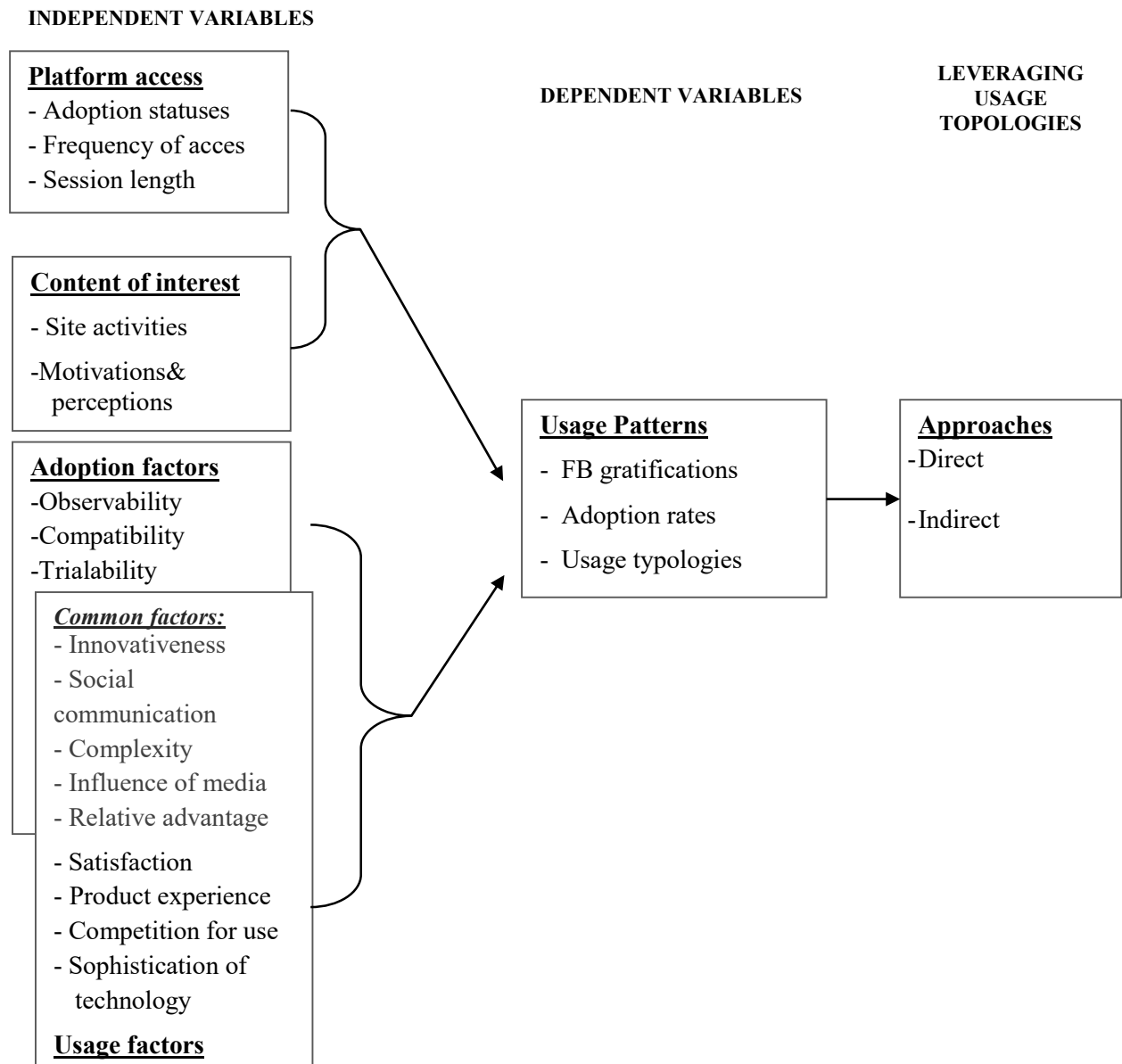


Figure 1: The conceptual framework

As shown in the figure, the independent variables in the study were platform access characteristics, content of interest as well as the theoretical adoption and usage factors. The dependent variable was the usage patterns from which approaches for leveraging the prevailing usage characteristics could be determined. As illustrated, the dependent variable of usage patterns will be influenced by platform access characteristics of access frequencies and length

of sessions. Apart from adoption rates, this helps in establishing the usage topologies. The content of interest that consists of site activities performed by the users as well as the individual motivation factors help in defining the gratifications component of usage patterns. The ranking of gratification topologies is possible through comparing the specific use of the platform by different users. The adoption-diffusion and use-diffusion factors help explain the influencers responsible for categorization of users into the different observed usage topologies.

The leverages of for the social media usage patterns are then possible to derive from the findings emanating from the study. The leading gratification topologies and the theoretical constructs responsible for defining the current usage patterns can be replicated and/ or emulated in striving to predetermine the adoption rates for future technologies as well as in putting in place the factors necessary to attain the desired usage intensities among applications' adopters.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1. Introduction

According to (Kothari, 2004), research methodology ‘is a way to systematically solve the research problem’. This Chapter gives a description of the research design methods and the tools used in carrying out the study. It details the research design, the target and sampled population, research instruments as well as the data collection and analysis tools and techniques employed.

3.2. Research design

Quantitative methods have been used to collect and analyze data needed for the study. Numerical measures were used to quantify the relative intensities of interaction with the social platforms by the users. This helped define the users’ gratification topologies and their respective ranking. The numerical data was also useful in performing various statistical computations needed to defined existing relationships between theoretical innovation diffusion factors and the prevailing patterns of social media use. The data collected was both descriptive and diagnostic in nature. Descriptive approach was used to describe the characteristics of the social media users and their technology accessibility aspects while the diagnostic research was used to determine the frequency of access, the motivations, the perceptions as well as the actual features of interest in social media use. According to (Kothari, 2004) such study types have similar requirements where by the specific objectives of the study are first stated, the target population defined and the research variables operationalized. This was followed and an online questionnaire prepared based on the stated objectives. Invitations for the survey were done through emails and online advertisements. The data obtained was analyzed using SPSS and Microsoft Excel and presented as frequencies, statistical computations and tables. Aggregated records on social media use together with the scores for theoretical factors posited to predict these patterns have been used in giving explanations for the prevailing gratification and usage topologies.

3.3. The target population

The target population for the study comprised the Kenya Internet users. Internet penetration was estimated to be about 63.6% or 29.2 million users countrywide and the local Facebook population to be about 2.05 million by June 2015 (Internet World Stats, 2015). These figures are expected to be constantly increasing and, subsequently, the number of Facebook users is also expected to be higher since most of the access to internet is through mobile phones whose ownership is approaching saturation levels in the country (CA, 2015a, 2015b; CAK, 2014; CCK,

2013). In this study, 29.2 million Internet users has been taken as the target population for the purposes of computing the sample size.

3.4. Sampling procedure and sample size

Random sampling was employed for this study. The use of electronic data collection methods in this study ensured that the respondents were randomly sampled with 62.8% of the respondents being male as compared to 37.2% females. The no. of respondents for the survey was determined using a formula recommended for determining sample sizes both for known and large unknown populations (Krejcie & Morgan, 1970). According to the formula, the sample size, *ss*, can be given by:

$$ss = \frac{X^2NP(1-P)}{d^2(N-1) + X^2P(1-p)}$$

Where

ss = required sample size

X^2 = the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841)

N = the population size

P = the population proportion (assumed to be 0.50 so as to give the maximum sample size)

d = the degree of accuracy expressed as a proportion

Substituting the variables for our population size *P* and $X^2=3.841$, *d* = 0.05 (5%) gives the applicable sample population, *ss* =384 respondents. As tabulated in Appendix III, the sample size produced by this formulae increases only marginally as the target population increases and stagnates at the size of 384 study subjects for very large populations.

3.5. Research instrument

An online questionnaire was used for data collection for this exercise. In structuring the questionnaire, considerations were given to the proposed methods of data analysis so as to better inform the preparation and administration of the instrument (Rugg & Petre, 2007). The questionnaire employed a semi-structured format in order to provide the respondents' views in a way that would produce the relevant data needed to answer the stated research questions. Data was obtained from all internet users approached including those who had adopted and those who had not adopted the Facebook application.

3.6. Instrument validity and reliability

Validity of measurements gauges the closeness of responses to the reality (Rugg & Petre, 2007) while reliability of an instrument is its ability to provide consistent results upon reuse or re-

administration (Kothari, 2004). Face validity of a research instrument enhances people's inclination to volunteer answers (JHA, 2008). The face validity of the online questionnaire was found to be satisfactory during an initial pilot survey. Content validity was ascertained through expert advice from the supervisor and project panelists. All other forms of validity such as criterion/statistical validity and construct validity were equally considered through similar processes where the operationalization of theoretical constructs was found to be appropriate and relevant to the context of this study before the instrument was administered. Reliability of the instrument was additionally enhanced through the initial pilot survey in both electronic and manual environments. The necessary changes and corrections were made before redeploying the instrument. After data collection, a statistical computation was done to give 0.85 Cronbach alpha value for reliability which was satisfactory.

3.7. Data collection and analysis

The questionnaire was administered online whereby participants were invited through emails and online advertisements. The email invitations resulted into the highest proportion of responses at 78.6% out of all responses. Each of these invitations contained the request that the receivers invite as many other contacts as was possible and had a weblink for accessing the online questionnaire. The rest of the responses came from an embedding of the online form on a Facebook page and face book posts with a link for the survey page contributing to 2.3% and 19.1% of all the responses respectively. The research data was then screened and analyzed using MS Excel and SPSS so as to generate summative values and statistics needed to answer the stated research questions. More detailed regression analysis was employed in determining the level of influence of the probed theoretical factors on the prevailing social media usage patterns. Statistical significance values were noted for the level of fitness of all the relationships defined. The results of data analysis and corresponding interpretations are presented in Chapter Four.

3.8. Ethical considerations

So as to demonstrate a sense of legality and genuineness of the exercise to the prospective respondents, administration of the questionnaire was preceded by an introductory informative part. The objective of the study was clearly explained and the respondents invited to provide responses only on a voluntary basis. They were also assured that their personal identities were not to be unveiled or published and that all information collected would be used solely for the purposes of the study.

CHAPTER FOUR

4.0 THE RESEARCH FINDINGS

4.1. Introduction

This chapter covers data presentation, analysis and interpretation of the research study findings. It gives a description of performance of the instrument used and a summary of the respondents' characteristics followed by data analysis and interpretations for each of the initial objectives set. The data is presented in tabular forms and statistics and the corresponding interpretations are also given.

4.2. Instrument return rate and respondents' characteristics

This section provides a summary of the demographic characteristics of the respondents including their gender, age, residence, education and occupation. It starts with a report on the performance of the instrument used in collecting the information.

4.2.1. Instrument return rate

Out of the proposed sample size, the response rate is the actual number of respondents that participated in the survey. An email invitation was sent followed by two reminders which resulted in the highest proportion of survey responses. Other responses were obtained through a Facebook page embedment and a Facebook post for the survey page. In summary, a total of 383 responses were received out of the initial sample size of 384 representing 99.7 % of the sample size.

4.2.2. Respondents' demographic characteristics

This section gives a summary of the respondents' demographics. The survey's respondents included online participants invited through emails, Facebook posts and web links. Eligibility criteria was applied to ensure that only Kenyan nationals participated in the survey. Table 4.1 below gives the respondents' characteristics of age, gender, and education in a matrix form to illustrate how the demographics are inter-related.

Table 4.1: Respondents' demographics

Age category	Gender	Education level						Total %
		Below pry sch.	Pry sch. Level	Sec sch. Level	Dip level	Univ' level	Postgra d level	
Below 13	Male	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.3%
	Female	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13 - 20	Male	0.0%	0.3%	0.3%	0.9%	1.8%	0.0%	3.3%
	Female	0.0%	0.0%	0.9%	0.6%	0.3%	0.0%	1.8%
21 - 30	Male	0.0%	0.0%	4.5%	3.3%	11.5%	2.4%	21.8%
	Female	0.0%	0.0%	3.9%	3.3%	6.9%	1.8%	16.0%
31 - 40	Male	0.0%	0.0%	3.0%	6.3%	7.2%	12.1%	28.7%
	Female	0.0%	0.0%	2.1%	4.5%	5.7%	1.8%	14.2%
41 - 50	Male	0.0%	0.0%	0.6%	0.6%	1.2%	3.3%	5.7%
	Female	0.0%	0.0%	0.3%	0.6%	0.6%	3.3%	4.8%
51 and above	Male	0.0%	0.0%	0.0%	1.2%	0.9%	0.9%	3.0%
	Female	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.3%
Total	Male	0.0%	0.6%	8.4%	12.3%	22.7%	18.8%	62.8%
	Female	0.0%	0.0%	7.3%	9.2%	13.5%	7.2%	37.2%
Grand Total		0.0%	0.6%	15.7%	21.5%	36.2%	26.0%	100.0%

The proportion of males was 62.8%, which was higher than that of females at 37.2 %. The mode age category was 31-40 years with males comprising 28.7% of the total population and females 14.2% adding up to 42.9%. This was followed by 21-30 years category and then 41-50 years category whose male and female populations added up to 37.8% and 10.5% of all respondents respectively. In terms of education, University graduates formed the majority of the respondents (36.2%) followed by post graduates then diploma level and the secondary school level.

4.3. The prevailing structure of Facebook users in the country

The first endeavor in determining the local Facebook usage patterns was to establish the proportion of Internet users, the target population, who had already adopted the Facebook application. Secondly, it was important to know how the adopters' usage patterns were like in terms of application usage rates and the different uses each had for the application. In probing the adoption statuses, we sought to know if one had an active Facebook account. Out of all the survey respondents, 76.1% reported as having an active Facebook account. Only 23.9% of the respondents then were either non-adopters or quitters.

The 76.1% of the respondents found to be using Facebook became the main subject of analysis for the study. In order to determine the stratification of users according to the fourfold usage topologies defined by the Use-Diffusion model explained in Chapter Two, the recorded patterns

for variety and frequency of use were dichotomized into either ‘high’ or ‘low’ values. The four possible usage topologies were then defined by the matrix formed by cross-tabulating these patterns as explained by the theorists of UD model (Shih & Venkatesh, 2004b). The Use-Diffusion topologies matrix is illustrated in Table 4.2.

Table 4.2: The fourfold usage topologies matrix of the UD model

Cross tabulation of the UD variables and the four topologies		Rate of Use	
		Low	High
Variety of Use	Low	Limited Users	Specialized Users
	High	Non-specialized Users	Intense Users

From the survey responses, there was hardly any significant differentiation between the Facebook users’ varieties of usage and frequencies of access after the recorded responses were dichotomized into ‘high’ and ‘low’ categories. 51.3% of the users were categorized as ‘low variety’ users and 48.7% as ‘high variety’ users. 45% of the users were ‘low frequency’ users and 55% ‘high frequency’ users. The cross-tabulation of these two variables however gave a rather different scenario whereby the resultant UD usage topologies had more differentiation amongst them as shown in Table 4.3.

Table 4.3: Classification of FB user into the four UD usage topologies

Usage Topology	Percent	Cumulative Percent
Limited Use	30.5	30.5
Non-specialized Use	16.2	46.8
Specialized Use	20.8	67.5
Intense Use	32.5	100.0
Total	100.0	

As shown in the table, users were more likely to fall in either the ‘limited’ category or the ‘intense’ category which had a combined proportion of 63% of the users while the rest 37% of the users were more or less equally distributed between the ‘non-specialized’ and ‘specialized’ categories. The limited and intense user categories could also be considered as the two extreme usage types with ‘limited usage’ representing lack of any significant use and ‘intense usage’ representing the highest usage for the platform in.

4.4. The factors influencing Facebook adoption trends and usage patterns

One of the objectives of the study was to understand the stratification of local Facebook users using theoretical adoption- and use- diffusion factors. As discussed in Chapter Two, the conjoint approach of the Innovation Diffusion Theory and the Use Diffusion Theory has been employed in this study so as to gauge the extent of the influence of the theoretical constructs for the recorded FB adoption and usage patterns in the country. The two theories have an overlapping set of factors whereby complexity, innovativeness, media influence, social communication, and relative advantage are common to both theories. The factors that set these two apart are compatibility, trialability and observability that are specific to adoption-diffusion whereas competition, product experience and sophistication factors are specific to use-diffusion. The next two subsections provide the findings on the influence of these factors.

4.4.1. Adoption Diffusion Factors versus Facebook uptake patterns

A binary logistic regression was run against the innovation adoption factors stated where the dependent variable was whether the respondent had an active Facebook account or not (or their adoption status). The regression model was used to predict the respondents' odds of having made one or the other decision as can be illustrated by the regression formulae, that is,

$$\ln(ODDS) = \ln\left(\frac{Y}{1-Y}\right) = a + b_1X_1 + \dots + b_kX_k$$

Where,

Y is the predicted probability of one event which is coded with 1 (having an active FB account)

$1-Y$ is the predicted probability of the other decision, coded 0 (no account), and

X_1, \dots, X_k are our 1^{st} to k^{th} predictor/ independent variables.

Table 4.4 shows the influence of each of the predictors on the respondents' Facebook adoption statuses as obtained from the regression test. The predictors had been entered as blocks of constituent factors with the constructs being represented by several attributes.

Table 4.4: Theoretical adoption factors versus Facebook adoption in Kenya

Predictors	B	Df	Sig.	Exp(B)
Compatibility1Friends	1.668	1	.000	5.299
Compatibility2Relate	-.318	1	.538	.727
Compatibility3Cost	-1.451	1	.000	.234
Compatibility4Tech	-.836	1	.098	.433
Compatibility4Device	-.033	1	.952	.967
Complexity	-.511	1	.240	.600
Innovativeness_1	.423	1	.352	1.526
MediaInfluence1Ref	-.584	1	.221	.557
MediaInfluence2Advert	1.367	1	.001	3.923
Observability1Network	.867	1	.052	2.379
Observability2Friends	.282	1	.281	1.326
Observability3Talk	.629	1	.119	1.876
Observability4Publicity	-.457	1	.235	.633
TrialabilityDesign	1.181	1	.032	3.256
SComm1Media	-1.290	1	.002	.275
SComm2Travel	.319	1	.318	1.375
SComm3Discuss	.092	1	.828	1.096
RelativeAdvantage	-.108	1	.735	.898

The table shows the results of the regression test on the adoption factors with the second column representing the coefficients, b_i 's, in the regression equation. Each coefficient b increases the odds by a multiplicative amount $\text{Exp}(B)$. The ratio of the coefficient to its standard error, squared, equals the Wald statistic and if the significance level of the Wald statistic is small (less than 0.05) then the parameter is useful to the model. From the table then, the factors useful in determining the Facebook adoption status of an arbitrary Kenyan internet user from the sample are: compatibility, media influence, observability, trialability and social communication. In interpreting the extent of influence of each factor it should be noted that $\text{Exp}(B)$ represents the ratio-change in the odds of the event of interest for a one-unit change in the predictor. Focusing on the significant factors, 'Compatibility1Friends' has $\text{Exp}(B) = 5.299$ means that a unit increase in the perceived compatibility level of Facebook by an Internet user that is based on close friends opinion increases the odds of adopting the application by a factor of 5.299 times all other factors being constant. This is very strong, indeed the strongest influence. Secondly, unit increase in the perceived compatibility level based on the Internet users perception on its affordability decreases the odds of adopting the application by a factor of 0.234 times all other factors being constant. The negative influence was not expected but the fact that it is only minimal influence could be interpreted to mean that perceived affordability of the application use did not

significantly influence the respondents' adoption statuses. The other significant factor was media influence with a unit increase on the level of exposure to media adverts related to social media increasing the odds of adopting Facebook by a multiplicative factor of 3.923. A unit increase on perceived level of observable possibility to achieve networking among contacts increased the odds of adoption by a multiplicative factor of 2.379. An increase on level of trialability of Facebook increased the odds of adoption by 3.256 times and lastly, an increase in the level of exposure to mass media led to decreased odds of adopting Facebook by a multiplicative factor of 0.275. This could probably be explained by disinterest due to already existing sources offering similar gratifications.

4.4.2. Use Diffusion Factors versus Facebook usage patterns

For Facebook's use-diffusion, a multinomial logit regression test was run to test the significance levels of the UD determinants in influencing the variety and rate of usage of the application by the respondents. This test was appropriate since the dependent variable was a categorical factor with four possible responses. The dependent variable, the user type, was derived from combination of the two Facebook usage patterns of variety and frequency of use as represented earlier in Table 4.2. The UD factors were being tested for their influence in classifying the users along the fourfold usage topologies as shown earlier in table 4.3. From the regression test, the likelihood ratio tests giving information on the extent of influence of UD factors on classification of users revealed that competition resulting from lack of reliable network, Innovativeness, Social communication, Relative advantage and competition resulting from regulatory policies contributed towards classifying users into the four UD categories. The model fitting information from the test also showed that the model was useful in explaining the categorization of the users based on the pseudo- R^2 values that give the overall the appropriateness of the model. Additionally, the classification Table 4.5 for the comparison between recorded and predicted values showed that the regression model outperformed the null – the assumption that the classification is not influenced by the theoretical constructs.

Table 4.5: Classification by model

Observed	Predicted				
	Limited Use	Non-specialized Use	Specialized Use	Intense Use	Total %
Limited Use	63.6%	4.5%	9.1%	22.7%	100.0%
Non-specialized Use	24.0%	32.0%	4.0%	40.0%	100.0%
Specialized Use	35.7%	0.0%	32.1%	32.1%	100.0%
Intense Use	12.5%	12.5%	4.2%	70.8%	100.0%

From the table, the model was 63.6% of the times successful in predicting the ‘limited users’ category and 70.8% of the times successful in predicting the ‘intense users’. This were the categories with most of the users. According to the frequencies in Table 4.5 for the categorization of the users, the null hypothesis for no influence by UD determinants would assume that all users fell in the modal category of ‘intense use’ and would only be 32.5% of the times successful for all cases. The correctness of the regression model is only slightly poorer in identifying the Non-specialized and specialized users. Table 4.6 show how the various theoretical factors influence the probability of an arbitrary application user from the study population being in either of the four usage topologies. Here, only the parameters for ‘intense usage’ have been shown and the complete table is shown in Appendix II. It should be noted that a particular user can fall in only one of the typologies at any given time but can shift from one to another over a certain period of time depending on variability in his usage patterns.

Table 4.6: Extent of influence of UD factors on classification of Intense Users

Usage topology	Factors	B	Sig.	Exp(B)
Intense Use	Competition1Net	-.613	.062	.542
	Complexity	-.110	.715	.896
	Innovativeness	.826	.017	2.285
	Media Influence	.436	.347	1.547
	Social Comm	-.282	.469	.754
	Relative Adv	1.017	.000	2.764
	Product Experience	.000	.972	1.000
	Sophistication	.553	.184	1.738
	Competition2Policy=0	-6.350	.006	.002
	Competition2Policy=1	-5.387	.018	.005

Table 4.6 gives the multinomial logistic regression test coefficients to summarize the effect of each predictor in the model. The ratio of each coefficient (B) to its standard error is the Wald Statistic and the Wald Statistic’s significance level is indicated in the second last column of the table. If the significance level is small (less than 0.05) then the parameter is different from zero, that is, it contributes to the model. In the regression model, positive coefficients increase the likelihood of the given category. The Exp(B) column reports the change in the odds of a usage topology for a one-unit change in the predictor. The reference category for the test was chosen to be ‘Limited Use’ since this, according to the design of the study represented apparent lack of use for the social media platform in question. Therefore, the odds ratios reported in the table have the property that increasing odds ratios correspond to increasing probability of a user falling in one of the other three categories representing increased usage. From the ‘Intense Use’ category

of the table, the four most significant predictors based on the significance values are Competition resulting from availability of network coverage, Innovativeness, Relative advantage and competition resulting from the presence of social media regulatory policies in the users' host environments. These too have varying extent of effect on determining the classification of an arbitrary user. Going by the Exp(B) values, an increase in by one unit in competition on availability of good network signal decreases the odds of an arbitrary user falling in the Intense Use category by 0.542 times or by 54.2%. The odds decrease as the coefficient is negative. Secondly, an increase by one unit in level of Innovativeness increases the odds of one being in the category by a multiplicative factor of 2.285. Additionally, an increase by one unit in components of social media perceived as providing relative advantage increases the odds of one being in the category by a multiplicative factor of 2.764. Lastly, competition brought about by presence of regulatory policies, though significant, has only a small effect on determination of a user's classification in Intense Use category (decreases the odds by 0.5% for presence of such policies and decreases the odds by 0.2% for the absence of such policies). This nominal factor with only a very small effect can be ignored without considerably worsening the model.

4.5. The gratifications sought by local Facebook users

A total of twenty seven possible motivating factors and activities of interest were listed for the users to indicate to what degree they influenced them to visit Facebook and how often a user performed a particular activity once on the site. A five-point Likert scale coded as 1" to "5" representing "Not at all often" to "Extremely often" was used to score the factors. In order to get a uniform rating for all the factors, a weighted average was calculated for each factor with the codes "1 to 5" being the weights in the formulae:

$$\text{Factor rating} = \frac{\sum f_i w_i}{\sum f_i}$$

where f_i = number of respondents choosing one of the weights, $w_i = 1, 2, 3, 4, \text{ or } 5$, representing their frequency of performing an activity or the degree to which they were motivated by a particular factor to use Facebook. Table 4.7 lists these factors/motivations and their corresponding ratings as obtained from the users. From the table, the most motivating single factor for Facebook use emerged as "To read and/ or comment on friends' postings/comments" and the least motivating was "Playing games available on the platform". These two extremes respectively represent what would mostly likely or least likely motivate an average local Facebook user to use the application. Other motivators lie between these extremes in ratings

separated by small differences with ties occurring only twice in ranks 4 and 23 as shown in the ranks column of the table.

Table 4.7: Respondents' ratings on motivations for using Facebook

Reasons/ Motivations for visiting Facebook	Rating	Rank
To read and/ or comment on friends' postings/comments	3.22	1
To engage/interact with like-minded friends and contacts	2.95	2
Reading news posts from popular media houses' and related pages or links	2.94	4
To keeping track and record of important events and occasions involving friends and family {Through updates, comments, photos, etc.}	2.94	4
Posting updates on own timeline/Newsfeed	2.92	5
To post comments, views and updates and share posts from other links	2.91	6
Because I can instantly find some my contacts who are also online for chatting, etc.	2.89	7
Visiting the site with passing time and relaxation as the main reason	2.88	8
Giving views and comments on what is currently happening on political and social scenes	2.84	9
To post views or upload photos on current personal real life activities or events	2.83	10
To search for certain kind of people such as school mates using advanced search	2.81	11
To follow latest news and/or content on music, videos or celebrities	2.79	12
Actively follow on a group's activities making posts and comments	2.76	13
So as to follow on and/or contribute in events where I'm a member, participant or leader	2.75	14
So as to experience the multimedia capability of the platform such as interacting through text+video+photos	2.71	15
To search for products, news and other information	2.69	16
To read and/or share fun sites e.g. sports, jokes, stunts etc.	2.63	17
So as to escape other rather boring activities/routines	2.62	18
Following and liking groups	2.58	19
I am attracted by being able to choose from private messaging or choosing recipients for particular posts	2.54	20
I'm driven to visit the application since it's exciting and boosts ones status and/or social standing as it's trendy, modern and sophisticated	2.45	21
To utilize some third party applications (apps) for more social networking and communication	2.33	23
To "surf" / "browse" profiles of other people - so as to discover more contacts, and even the strangers	2.33	23
To use the Facebook advert feature (paid) and/or creating pages for commercial brands {With aim of making money}	2.12	24
So as to promote brands, goods and services via personal timelines and user groups	2.12	25
Go to apps for shopping, travel, learning activities, and other utilities	2.08	26
Play games available on the platform	1.9	27











As per the Factor Rating formulae given in the earlier in this section, the smallest theoretical rating possible was 1 and the highest 5. The ratings therefore represented an informative aggregated picture of the propensities towards using FB for all users, or, for any arbitrary user.

The users were additionally asked to state other reasons and activities that usually drove them to use the application apart from the pre-listed ones. The additional answers to this question showed that most activities and reasons had already been covered as most of the answers were varying repetitions of the original statements. New motivations however emerged in insignificantly small frequencies such as 'to hone writing skills/ build own brand' and 'tagging'. It was 'safe' to ignore these in the final statistical comparisons as they occurred only once for each and were not varying very much from other activities already in the list.

4.5.1. The ranking of gratifications topologies sought.

As per the analysis design, the recorded motivations and user activities were logically grouped to according to the gratification topologies they represented based on the list of 10 tested topologies given in the literature review Chapter. How the various groupings/ topologies rated against each other was then informed by the average scores of these clusters. Table 4.8 shows the ratings obtained for the ten (10) gratification typologies:

Table 4.8: Gratification topologies of local Facebook users

Gratification topology	Rating	Index
Reinforcing personal values and identity	2.863636364 	0.57
Social connection	2.851731602 	0.57
Information seeking and sharing	2.838961039 	0.57
Life documentation	2.798701299 	0.56
Social surveillance and investigation	2.781385281 	0.56
Process gratifications	2.569264069 	0.51
Diversion and escapism	2.463203463 	0.49
Enjoyment/entertainment	2.439393939 	0.49
Third party extensions and plugins (the apps)	2.391774892 	0.48
Economic factors	2.25487013 	0.45

Each topology could theoretically get a maximum score of 5 and a minimum of 1 based on the possible values for their constituent factors. ‘Reinforcement of personal values and identity’ emerged as the leading motivation for Facebook use in Kenya while ‘economic factors’ came last in the list. The index values shown in the last column of the table were calculated as the ratio of each topology’s rating value to 5 – the highest theoretically possible rating score. As illustrated by the 3-arrow icon set, the first five topologies could be considered as those behind the highest propensities for Facebook use. The next two topologies fall in the middle ground and the last three are the least motivators for Facebook use locally.

4.6. Leveraging social media use within the local context

As mentioned in Chapter two, there are endless possibilities when it comes to identifying ways of leveraging social media usage. Given the foregoing findings on social media usage, various inferences can be made. The identification of ways to leverage the usage characteristics can systematically be deduced from the findings emanating from the first three objectives of the study namely; the prevailing structure of local Facebook users with respect to their application-adoption rates and the application usage patterns; the factors influencing the adoption and usage patterns; and the gratifications sought by the users.

In leveraging propensities for application use as informed by the ranked gratification topologies, developers will have to take note of how to emulate ‘reinforcement of personal values and identity’, for instance, the highest ranking topology. In this study, this topology is sought and obtained through ability to make contact with like-minded people, participate in group events and ability to discover real-time events and people of interest. Similarly, the rest of the topologies comprise of several constituent factors. Designers can leverage on these by identifying factors related to the specific application design contexts.

On the factors influencing the adoption and usage of the Facebook application, the developers, for instance, will have to join hands with marketers and project champions to deal with issues related to how the final technologies are perceived by potential users. In order to increase application adoption rates, the most relevant factors will be compatibility, media influence observability and trialability. Although the developers will easily find opportunities of integrating these in the designs, the project champions will also need to initiate promotional campaigns that could enhance these aspects.

The discussion of leveraging the prevailing social media usage patterns and the factors defining these patterns can take many and varied aspects. Of essence will be ability of a developer to relate how the identified factors could relate to individual specific contexts. The results of data analysis have many implications on understanding the current strata of social media users as well as making recommendations on future research work in the area.

4.7. Challenges/Constraints

The main challenge was incomplete data obtained through the online questionnaires initially. Additional respondents however completed the form eventually giving the numbers needed for the sample size.

CHAPTER FIVE

5.0 DISCUSSIONS

5.1. Introduction

This Chapter presents the summary of the research findings and related discussions. These are based on the original objectives of the study.

5.2. Summary of findings

These are summarized narratives for each of the sets of analyses performed in Chapter Four based on the stated objectives. For each of the research objectives, the findings have been summarized in the next four subsections.

5.2.1. The prevailing structure of local Facebook users

It was found that 76.1% of the local Internet users have adopted the Facebook application. Although there was no much difference on how frequently the adopters accessed the application or in the number of distinct application use instances, the cross-tabulation of these variables produced a UD pattern that showed significant differentiation based on the UD usage topologies. The majority of the users were naturally expected to fall in the two extremes of limited usage or intense usage. The categorization of the users along the fourfold usage topologies defined by the UD model emerged as: Limited Users (30.5%); Non-specialized Users (16.2%); Specialized Users (20.8%); and Intense Users (32.5%).

5.2.2. The influence of AD & UD factors on stratification of local FB users

Two conjoined theoretical approaches were employed in investigating the factors that influenced the adoption and use of the Facebook application. It was further probed how these predicted the users' classification into different usage categories.

Out of the factors tested for Facebook adoption, it was found that compatibility resulting from likings within one's friends network or basically, peer influence, emerged as the greatest predictor. This was expected since social sites are actually meant to provide virtual platforms for connecting with already known or affiliated real offline-life contacts and groups. Observability and perceived trialability of the Facebook application were also part of the factors motivating the adoption of the application by the users. Increase on the users levels of knowledge about the application for its design and capabilities were a plus in determining their interest for adopting. Another factor that increased the odds of adopting for the target population, that is, the internet users in this study, was influence of media through adverts related to (the potentials and benefits

of) social sites. Ironically though to a less significant extent, the respondents that were more exposed to mass media contents had lesser odds of adopting Facebook probably due to the fact that they could be already deriving their desired media gratifications. As discussed in the literature review Chapter, there is an overlap between gratifications gained from both general media and social media channels.

In investigating the UD factors, the variable of interest in the research for the influence of usage patterns was how the target population could be classified into one of the fourfold usage topologies defined by the UD model. For the general model, it was found that competition, innovativeness, social communication, and relative advantage factors were significant classifiers. Classification of arbitrary respondents into either of the four categories was also determined by the theoretical UD factors. Increase in users' innovativeness and social communication factors lead to highest odds of an arbitrary Facebook user falling in the 'Intense Use' topology representing highest varieties and frequencies of application use. Competition resulting from absence of good network signals and the presence of regulatory policies on the other hand decreased the odds of one falling in this topology/ category.

5.2.3. The gratifications sought by different Facebook users in the country

Facebook presents a convergence of web 2.0 digital experiences through which a user is simultaneously able to achieve different gratifications as found out. Using a set of tested U&G topologies, it was possible to determine the factors leading to highest propensities for social media use in the country as well as determining how relatively influential the other factors were to the local users. From the list of 27 factors that constituted the clusters of several unique topologies, a rating was obtained each of the factors as well as for the ten gratification topologies as discussed in Chapter Two on Literature Review. The 'reinforcement of personal values' emerged as the most influential topology. From the factors aggregated for this leading score, this implied that what most of the local Facebook users value most is using the platform to crystalize their own identities such as through selective engagement with like-minded contacts and participating in groups and events related to their offline social lives. The difference in ratings from one topology to the other were however small. This therefore could lead to the conclusions that some of the topologies are closely related.

5.3. Discussion of the results

From the purpose and significance of the study as anticipated during research proposal development period and from the empirical findings emanating from the data analysis, some

emerging interesting facts could be highlighted. The research findings are discussed in the next four subsections.

5.3.1. The prevailing structure of local Facebook users

The cross-tabulation of the dichotomized rate of use and variety of use frequencies gave an insight on the stratification of the Facebook users against the fourfold UD usage topologies. This was helpful in understanding the types of social media users as further research can be carried on how each of the population proportions can be reached through the technologies of the future. As discussed in the succeeding sections, a pre-determination of adoption and usage patterns is possible through ensuring that the determinants of adoption and use diffusion can be pre-controlled within an adopting social system by taking note of the most influencing factors.

5.3.2. Appropriateness of theoretical factors on innovation diffusion trends

Theoretical adoption- and use-diffusion factors were employed in probing what could be attributed to the prevalent rates of adoption as well as the classification of the Facebook users into the fourfold UD usage patterns. From the findings, highest Facebook adoption rates could be explained by peer related interactions. This was expected and underscores the need to understand the real target customers in coming up with any technological innovation or solution. Observability, trialability and media influence could similarly be equated to the need to properly expose technological products to their intended users in a persistent manner. The accessibility of Facebook through more than 2,500 types of mobile phones worldwide (Facebook, 2015) could have been one of the key steps in reaching the hundreds of millions of followers that the application enjoys. Simple design and consistent adverts through various platforms also contributes greatly to the propensities for adoption.

On the patterns of usage going by individual varieties and frequencies of access, both innovativeness and social communication increased the odds of higher intensities. Intense users are therefore generally likely to be more innovative than the rest. In increasing the likability of a technological product by such users, one should be it should be ensured that simplicity does not eliminate sophistication as intense users are bound to be interested in a wide variety of uses for particular technological solution. Communication through the social cycles is also key in arousing interest for reuse and discovering new features.

Generally, the resultant regression models that sought to explain the prevailing social media adoption and use patterns proved to be satisfactory. Thorough appreciation of the theoretical

constructs against the technological usage contexts is therefore vital in giving an informed explanation on the existent or predictive usage patterns.

5.3.3. The gratifications sought by local Facebook users

As per Table 4.8 showing the different ratings for the ten sought gratification topologies in Chapter Four, there are only relatively small differences between the scores ranking the topologies. The continuum defined by the lowest and highest rated topologies however give rise to a logical three-set grouping of the ten topologies into first five highest influencers, two medium influencers and the last three least influencers. Although merging some of the gratifications topologies could seem logical due to their near same scores on the ratings, this might also blur some already available information on the uniqueness of user to user gratifications from media use. Extending the current scope of research for instance, it could be probed what kind of composition users, in terms of their social demographics, contribute in giving the highest score to a particular gratification.

From the study, ‘reinforcement of personal values and identity’ is the highest rated topology while ‘economic factors’ come in last. It could be inferred from the resultant arrangement of gratifications that local social media users are more concerned in harnessing or building own social capital from the platforms than could be said of their interest in deriving other potential benefits such as economic benefits, enjoyment and use of third party applications.

5.3.4. Leveraging social media usage in Kenya for product design

As previously mentioned under the literature review Chapter, approaches for identifying ways of leveraging social media use could be broadly categorized as either direct or indirect. Based on the first two objectives of the research study, the next two sections strive to identify how local product design can be improved or informed by the prevailing patterns of social media use in the country.

5.3.4.1. Considerations based on discovered gratification topologies

The ranking of social media gratification factors showed that reinforcement of personal values was the highest ranking gratification topology for the local users. This implies that discovery of the personal identities or personality traits of one’s target group is key in leveraging this type of motivation of the users. This might be difficult to define given the broad range of personality traits that can be identified for any population. The designers and builders of ICTs solutions should therefore be keen in appropriately identifying the most common and important traits for given target groups.

The general ranking of the ten gratification topologies provides, at a glance, the motivators for social media usage which might guide developers on what specific features and functionalities would most likely appease potential users. Developers can, for instance, ensure that web based applications have enough flexibility to allow for user customization and that interactions with the user also provide for sharing of experiences and diary keeping. This would, to some extent, cater for the first three highest ranking motivators of web service use. The same goes for other gratification topologies ranking high in the list, that is, social connection, information seeking tendency, and life documentation. In practice, the developer will determine the particular mix of gratification topologies that will be relevant to a particular product and which particular aspects could be leveraged on.

5.3.4.2. Considerations based on adoption rates and usage topologies

On the factors used to predict adoption or non-adoption of Facebook, compatibility, media influence, observability and trialability were key in determining adoption statuses among the local internet users. Developers of social sites and general IT solutions should take keen interest on all such factors so as to elicit interest and ensure that the target audience have a favorable evaluation of their products. As discussed in Chapter Four on usage topologies (frequency and variety of use), the classification of users into intense, specialized, non-specialized or limited users will be determined by competition, user innovativeness and relative advantage of the product. Intense usage – which will generally be the wish of many developers – will be achieved where there is less competition for access, users are innovative and perceive the product to be relatively advantageous over its predecessors.

From such considerations, developers will be obliged to evaluate both the design of their products and even the delivery channels so as to ensure that their target clients are not hindered from using the products due to non-leverage of such factors. For instance, offering products accessible through mobile devices that are generally more accessible than other computing devices will reduce competition. Additionally, identifying the characteristics of the most innovative of the potential users will also help in choosing the type of products to deploy in the first phases in case one has such choices to make.

CHAPTER SIX

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1. Conclusions

The study found out that the local social media users are driven by a myriad of gratifications which could represent their varying offline social lives. It can comfortably be concluded that employing the U&G model that isolated channel or content-intrinsic attributes of the innovation and centered on individual motivations for media use helped a lot in making clarifications about the gratifications sought by different users. As a modification of the U&G model, process gratifications were also probed for and found to be of significant influence in the use of Facebook. As compared to other conventional communication channels, Facebook application offers digital convergence capabilities in a single platform. It is imperative that similar technological solutions offer a desirable range of functionalities coupled with high quality standards in terms of performance, reliability and other satisfaction aspects.

The use of theoretical frameworks in explaining and predicting rates of adoption as well as in the stratification of adopters was successful. From the study, it is now possible to make empirical-based decisions on ways and means of influencing the adoption of related innovations as well as encouraging particular use-patterns.

6.2. Recommendations

Several recommendations on the enhancement of the current status of social media diffusion and in the country can be made going by the research findings discussed in the preceding sections. The social media are themselves channels through which the local masses can be reached on various organizational or even national events and courses. The social platforms can as well be replicated in the design of online solutions for learning, health care or other welfare purposes. The following are recommendations emanating from the findings of this study:

- a. In leveraging the influencers of the prevailing social media usage patterns, efforts should be focused in transforming the limited users that form about a third of the population. These, together with 16.2% proportion under the non-specialized category can be transformed into either intense or specialized usage categories where the rates of applications use is high.
- b. ICTs designers and online solutions developers should be keen on studying the social dynamics of the populations and take into consideration the gratification topologies that motivate the usage of technological solutions. The need for the users to crystallize personal

values, connect socially and document their lives seem to be much valued and the designers should find a way to integrate this in their technical designs.

- c. The adoption and usage of technologies can be positively enhanced through appreciating the application of existing theoretical frameworks and constructs against the specific social contexts for which the technological solutions are required. The adoption-diffusion and use-diffusion factors found out to most influence the usage of social media platforms should be taken into consideration in the design and rolling out of future ICTs especially the web-based platforms.

6.3. Suggestions for further study

The study adds to the existing knowledge on social media usage. There are myriad of other scenarios where more research effort will eventually produce a more informative picture in this field.

So as to better understand other social groupings, the study can be replicated for specific groups or institutions so as to bring out the environment-specific dynamics that determine the adoption and usage patterns. This could be schools, professional groupings or unique geo-spatial settings.

Additionally, the research objectives can be enriched to include, for instance, several other gratifications that could be deemed to have emerged after some time. This will help into properly classifying the users and in explaining their motivations.

Lastly, as the most social media users turned out to be intense users at 32.5% of all users, more studies will be helpful in investigating, as time progresses, the relationships that could exist between certain usage topologies and the type of effects that this could have on the users work life, study life and general lifestyles. This will be using in noting any positive as well as negative consequences of social media use that can be leveraged on or, in case of hazardous outcomes, be controlled.

REFERENCES

- Bajic, D., & Lyons, K. (2011). Leveraging Social Media to Gather User Feedback for Software Development. In *Proceedings of the 2Nd International Workshop on Web 2.0 for Software Engineering* (pp. 1–6). New York, NY, USA: ACM.
<http://doi.org/10.1145/1984701.1984702>
- Bryant, B. (2013, July 22). Workers waste an hour a day on Facebook, shopping and browsing holidays, study finds. *Telegraph.co.uk*. Retrieved from
<http://www.telegraph.co.uk/news/uknews/10194322/Workers-waste-an-hour-a-day-on-Facebook-shopping-and-browsing-holidays-study-finds.html>
- CA. (2015a). *Quarterly Sector Statistics Report April-June 2015*. Nairobi: Communications Authority of Kenya. Retrieved from www.ca.go.ke
- CA. (2015b). *Quarterly Sector Statistics Report Oct-Dec 2014* (Statistics). Nairobi: Communications Authority of Kenya. Retrieved from www.ca.go.ke
- CAK. (2014). *Quarterly Sector Statistics Report Jul-Sep 2014* (Statistics). Nairobi: Communications Authority of Kenya. Retrieved from www.ca.go.ke
- CCK. (2013). Sector statistics for Quarter II 2012-2013. Retrieved June 6, 2013, from
http://www.cck.go.ke/resc/downloads/Sector_statistics_for_Quarter_2_-_2012-2013.pdf
- Chung, N., Koo, C., & Park, S.-B. (2012). Why people share information in social network sites? integrating with uses and gratification and social identity theories. In *Proceedings of the 4th Asian conference on Intelligent Information and Database Systems - Volume Part II* (pp. 175–184). Berlin, Heidelberg: Springer-Verlag.
http://doi.org/10.1007/978-3-642-28490-8_19
- Crabtree, A., & Chamberlain, A. (2014). Making It “Pay a Bit Better”: Design Challenges for Micro Rural Enterprise. In *Proceedings of the 17th ACM Conference on Computer Supported Cooperative Work & Social Computing* (pp. 687–696). New York, NY, USA: ACM. <http://doi.org/10.1145/2531602.2531618>
- Cutler, N. E., & Danowski, J. A. (1980). Process Gratification in Aging Cohorts. *Journalism Quarterly*, 57(2), 269–76.
- Donohew, L., Palmgreen, P., & Rayburn II, J. D. (1987). Social and Psychological Origins of Media Use: A Lifestyle Analysis. *Journal of Broadcasting & Electronic Media*, 31(3), 255–278.

- Ebersole, S. (2006). Uses and Gratifications of the Web among Students. *Journal of Computer-Mediated Communication*, 6(1), 0–0. <http://doi.org/10.1111/j.1083-6101.2000.tb00111.x>
- Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The Benefits of Facebook “Friends:” Social Capital and College Students’ Use of Online Social Network Sites. *Journal of Computer-Mediated Communication*, 12(4), 1143–1168. <http://doi.org/10.1111/j.1083-6101.2007.00367.x>
- Facebook. (2015). Welcome to Facebook - Log In, Sign Up or Learn More [SNS]. Retrieved December 18, 2013, from <https://www.facebook.com/>
- Gobry, P.-E. (2011, July 28). CHART OF THE DAY: Facebook Users Barely Ever Use Facebook Apps [Business]. Retrieved September 21, 2013, from <http://www.businessinsider.com/facebook-news-feed-apps-2011-7>
- GSMA. (2013). *Arab States Mobile Observatory 2013*. GSMA. Retrieved from http://www.gsma.com/publicpolicy/wp-content/uploads/2012/03/GSMA_MobileObservatory_ArabStates2013.pdf
- Hou, Y., & Lampe, C. (2015). Social Media Effectiveness for Public Engagement: Example of Small Nonprofits. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems* (pp. 3107–3116). New York, NY, USA: ACM. <http://doi.org/10.1145/2702123.2702557>
- Hsu, C. (Julia). (2007). Staging on the Internet: Research on Online Photo Album Users in Taiwan with the Spectacle/Performance Paradigm (SPP). In *Conference Papers -- International Communication Association* (pp. 1–1). International Communication Association. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=ufh&AN=26950896&site=ehost-live>
- Internet World Stats. (2015, May 16). World Internet Users Statistics Usage and World Population Stats [Statistics]. Retrieved May 16, 2015, from <http://www.internetworldstats.com/stats.htm>
- JHA, N. K. (2008). *Research Methodology*. New Delhi: Abhishek Publications.
- Joinson, A. N. (2008). Looking at, looking up or keeping up with people?: motives and use of facebook. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (pp. 1027–1036). New York, NY, USA: ACM. <http://doi.org/10.1145/1357054.1357213>

- Jussila, J. J., Kärkkäinen, H., & Leino, M. (2011). Benefits of Social Media in Business-to-business Customer Interface in Innovation. In *Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments* (pp. 167–174). New York, NY, USA: ACM. <http://doi.org/10.1145/2181037.2181065>
- Kärkkäinen, H., Jussila, J., & Janhonen, J. (2011). Managing Customer Information and Knowledge with Social Media in Business-to-business Companies. In *Proceedings of the 11th International Conference on Knowledge Management and Knowledge Technologies* (pp. 17:1–17:8). New York, NY, USA: ACM. <http://doi.org/10.1145/2024288.2024309>
- Katz, E., Blumler, J. G., & Gurevitch, M. (1973). Uses and Gratifications Research. *The Public Opinion Quarterly*, 37(4), 509–523. <http://doi.org/10.2307/2747854>
- Katz, E., Haas, H., & Gurevitch, M. (1973). On the use of the mass media for important things. *American Sociological Review*, 164–181.
- Kim, J., & Haridakis, P. M. (2009). The Role of Internet User Characteristics and Motives in Explaining Three Dimensions of Internet Addiction. *Journal of Computer-Mediated Communication*, 14(4), 988–1015. <http://doi.org/10.1111/j.1083-6101.2009.01478.x>
- Kinyanjui, K. (2010, February 11). Facebook now clicks trouble for TV, radio. *Business Daily*. Nairobi. Retrieved from <http://www.businessdailyafrica.com/Corporate-News/-/539550/859636/-/14whj7jz/-/index.html>
- Kirschner, P. A., & Karpinski, A. C. (2010). Facebook® and academic performance. *Computers in Human Behavior*, 26(6), 1237–1245.
- Kothari, C. . (2004). *Research Methodology: Methods and Techniques*. New Age International.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30, 607 – 610.
- Lampe, C., Ellison, N. B., & Steinfield, C. (2008). Changes in use and perception of facebook. In *Proceedings of the 2008 ACM conference on Computer supported cooperative work* (pp. 721–730). New York, NY, USA: ACM. <http://doi.org/10.1145/1460563.1460675>
- Lampe, C., Ellison, N., & Steinfield, C. (2006). A face(book) in the crowd: social Searching vs. social browsing. In *Proceedings of the 2006 20th anniversary conference on Computer supported cooperative work* (pp. 167–170). New York, NY, USA: ACM. <http://doi.org/10.1145/1180875.1180901>
- LaRose, R., & Eastin, M. S. (2004). A Social Cognitive Theory of Internet Uses and Gratifications: Toward a New Model of Media Attendance. *Journal of Broadcasting & Electronic Media*, 48(3), 358–377. http://doi.org/10.1207/s15506878jobem4803_2

- Lee, D., & LaRose, R. (2007). A Socio-Cognitive Model of Video Game Usage. *Journal of Broadcasting & Electronic Media*, 51(4), 632–650.
<http://doi.org/10.1080/08838150701626511>
- Matei, S. A. (2010a). Can media system dependency account for social media? Or should communication infrastructure theory take care of it? [Educational - Expert content]. Retrieved August 26, 2013, from <http://matei.org/ithink/2010/07/27/from-media-dependency-system-to-communication-infrastructure-theory/>
- Matei, S. A. (2010b, July 24). Can social entropy theory explain social media? [Educational - Expert content]. Retrieved August 26, 2013, from <http://matei.org/ithink/2010/07/24/can-social-entropy-theory-explain-social-media/>
- Matei, S. A., Oh, K., & Bruno, R. (2008). Collaboration and Communication in Online Environments: A Social Entropy Approach. Retrieved from <http://matei.org/ithink/wp-content/uploads/2008/12/communicationcollaborationentropyfinal.pdf>
- Motohashi, K., Lee, D.-R., Sawng, Y.-W., & Kim, S.-H. (2012). Innovative converged service and its adoption, use and diffusion: a holistic approach to diffusion of innovations, combining adoption-diffusion and use-diffusion paradigms. *Journal of Business Economics & Management*, 13(2), 308–333.
<http://doi.org/10.3846/16111699.2011.620147>
- Newhagen, J. E., & Rafaeli, S. (1996). Why Communication Researchers Should Study the Internet: A Dialogue. *Journal of Computer-Mediated Communication*, 1(4), 0–0.
<http://doi.org/10.1111/j.1083-6101.1996.tb00172.x>
- Oloniteru, O. J., & Ojo, A. (2013). On Ekiti's Smart Governance for Development Approach: A Reflexive Account. In *Proceedings of the 7th International Conference on Theory and Practice of Electronic Governance* (pp. 190–193). New York, NY, USA: ACM.
<http://doi.org/10.1145/2591888.2591920>
- Reuter, C., Ludwig, T., Kaufhold, M.-A., & Pipek, V. (2015). XHELP: Design of a Cross-Platform Social-Media Application to Support Volunteer Moderators in Disasters. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems* (pp. 4093–4102). New York, NY, USA: ACM.
<http://doi.org/10.1145/2702123.2702171>
- Rogers, E. M. (2003). *Diffusion of Innovations* (Fifth Edition). New York, NY, USA: Free Press.
- Rugg, G., & Petre, M. (2007). *A Gentle Guide to Research Methods*. England: Open University Press Mc Graw Hill.

- Ruggiero, T. E. (2000). Uses and gratifications theory in the 21st century. *Mass Communication & Society*, 3(1), 3–37.
- Sahin, I. (2006). Detailed review of Rogers' diffusion of innovations theory and educational technology-related studies based on Rogers' theory. *The Turkish Online Journal of Educational Technology*, 5(2), 14–23.
- Sambasivan, N., & Smyth, T. (2010). The Human Infrastructure of ICTD. In *Proceedings of the 4th ACM/IEEE International Conference on Information and Communication Technologies and Development* (pp. 40:1–40:9). New York, NY, USA: ACM. <http://doi.org/10.1145/2369220.2369258>
- Shih, C.-F., & Venkatesh, A. (2004a). Beyond Adoption: Development and Application of a Use-Diffusion Model. *Journal of Marketing*, 68(1), 59–72.
- Shih, C.-F., & Venkatesh, A. (2004b). Beyond Adoption: Development and Application of a Use-Diffusion Model. *Journal of Marketing*, 68(1), 59–72.
- Social cognitive theory, social learning, self-efficacy and social media. (n.d.). Retrieved August 26, 2013, from <http://matei.org/ithink/2010/07/22/bandura-last-hurrah-an-integrated-social-psychological-theory-of-mass-communication-with-a-cognitive-twist/>
- Stafford, T. F., Stafford, M. R., & Schkade, L. L. (2004). Determining Uses and Gratifications for the Internet. *Decision Sciences*, 35(2), 259–288. <http://doi.org/10.1111/j.00117315.2004.02524.x>
- Steinfeld, C., Ellison, N. B., & Lampe, C. (2008). Social capital, self-esteem, and use of online social network sites: A longitudinal analysis. *Journal of Applied Developmental Psychology*, 29(6), 434–445.
- Storey, M.-A., Treude, C., van Deursen, A., & Cheng, L.-T. (2010). The Impact of Social Media on Software Engineering Practices and Tools. In *Proceedings of the FSE/SDP Workshop on Future of Software Engineering Research* (pp. 359–364). New York, NY, USA: ACM. <http://doi.org/10.1145/1882362.1882435>
- Turban, E., Bolloju, N., & Liang, T.-P. (2010). Social Commerce: An e-Commerce Perspective. In *Proceedings of the 12th International Conference on Electronic Commerce: Roadmap for the Future of Electronic Business* (pp. 33–42). New York, NY, USA: ACM. <http://doi.org/10.1145/2389376.2389382>
- Valenzuela, S., Park, N., & Kee, K. F. (2009). Is There Social Capital in a Social Network Site?: Facebook Use and College Students' Life Satisfaction, Trust, and Participation. *Journal of Computer-Mediated Communication*, 14(4), 875–901. <http://doi.org/10.1111/j.1083-6101.2009.01474.x>

- Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: four longitudinal field studies. *Management Science*, *46*(2), 186–204.
- Zhao, X. W., Guo, Y., He, Y., Jiang, H., Wu, Y., & Li, X. (2014). We Know What You Want to Buy: A Demographic-based System for Product Recommendation on Microblogs. In *Proceedings of the 20th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining* (pp. 1935–1944). New York, NY, USA: ACM.
<http://doi.org/10.1145/2623330.2623351>

Appendix I: The Questionnaire

INTRODUCTION::

This academic research survey is aimed at determining the types of uses and the users of social media in Kenya. Kindly participate by giving appropriate answers for the questions posed. For more information and clarifications about this survey, please click on the weblink or communicate via email or phone as follows:

[Link to the survey's home webpage with additional information](#)

E mail: karumaj@students.uonbi.ac.ke

Tel: 0724099465

PLEDGE/ ASSURANCE ON PRIVACY:

We want to assure you that we will adhere to professional research ethics and particularly strictly observe the privacy of the participants' data. All collected information will be used solely for the intended academic research purposes.

Part I: Introductory Information:

Kindly give the requested background information

1. Which category below, includes your age in years?

<input type="checkbox"/>	Below 13	<input type="checkbox"/>	18 – 20	<input type="checkbox"/>	26 – 30	<input type="checkbox"/>	36 – 40	<input type="checkbox"/>	46 – 50	<input type="checkbox"/>	56 - 60
<input type="checkbox"/>	13 – 17	<input type="checkbox"/>	21 – 25	<input type="checkbox"/>	31 - 35	<input type="checkbox"/>	41 – 45	<input type="checkbox"/>	51 – 55	<input type="checkbox"/>	Above 60

2. What is your gender?

<input type="checkbox"/>	Male	<input type="checkbox"/>	Female
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3. Which is your home Constituency? (*select*)

4. What is your highest level of education?

<input type="checkbox"/>	Below primary school	<input type="checkbox"/>	Secondary school level	<input type="checkbox"/>	University level
<input type="checkbox"/>	Primary school level	<input type="checkbox"/>	Diploma level	<input type="checkbox"/>	Postgraduate level

5. Have you ever attended a computer or IT related course lasting one week or longer?

<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
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6. Have you worked for any period of time during the last 6 months?

<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
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If yes, what has been your type(s) of work for the last 6 months? (*Tick main occupation*)

<input type="checkbox"/>	I have been employed - At an executive/managerial position	<input type="checkbox"/>	I have worked as a casual - In tasks involving mostly manual labour
<input type="checkbox"/>	I have been employed - At an officer/consultant/technician position	<input type="checkbox"/>	I have been running own business
<input type="checkbox"/>	I have been employed - At a support staff (subordinate) position	<input type="checkbox"/>	I have been working at my farm
<input type="checkbox"/>	I have worked as casual -In tasks based on an office environment	<input type="checkbox"/>	Other kind of work (please specify)

7. Have you been to school or attended any formal learning course during the last 6 months?

<input type="checkbox"/>	Yes, on a full-time basis	<input type="checkbox"/>	No. None attended
<input type="checkbox"/>	Yes, on a part-time basis	<input type="checkbox"/>	

8. Kindly describe the quality/strength of the signals from the network you use for internet at the different places you have been in the last 6 months. *{Could be mobile operator, LAN, Wifi, etc}*

	Not at all strong / absent	Slightly strong	Moderately strong	Very strong	Extremely strong	Not been here.
At home						
At the work place						
At school						
When traveling						
At other places I've been						

9. Kindly describe the reliability of power connection /electricity at the different places that you have been in the last 6 months.

	Not reliable at all / absent	Slightly reliable	Moderately reliable	Very reliable	Extremely reliable	Not been here.
At home						
At the work place						
At school						
When traveling						
At other places I've been						

10. On average, how much money do you make and/or receive per month from ALL sources? *{In KSh.}*

<input type="checkbox"/>	0 – 3,000	<input type="checkbox"/>	20,001 – 25,000	<input type="checkbox"/>	45,001 – 50,000
<input type="checkbox"/>	3,001 – 6,000	<input type="checkbox"/>	25,001 - 30,000	<input type="checkbox"/>	50,001 – 55,000
<input type="checkbox"/>	6,001 – 10,000	<input type="checkbox"/>	30,001 – 35,000	<input type="checkbox"/>	55,001 – 60,000
<input type="checkbox"/>	10,001 – 15,000	<input type="checkbox"/>	35,001 – 40,000	<input type="checkbox"/>	Above 60,000
<input type="checkbox"/>	15,001 – 20,000	<input type="checkbox"/>	40,001 – 45,000	<input type="checkbox"/>	

11. How have you been accessing the internet within the last 6 months? *{Tick all that apply}*

<input type="checkbox"/>	Using my own computer	<input type="checkbox"/>	Using computer at the school
<input type="checkbox"/>	Using a family/home computer	<input type="checkbox"/>	I have accessed the Internet from a cyber café
<input type="checkbox"/>	Using a computer at place of work	<input type="checkbox"/>	Using a mobile phone
<input type="checkbox"/>	Other means (please specify)	<input type="checkbox"/>	

12. Do you have an active Facebook account / page?

<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
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IF NO, SKIP TO PART IV

Part II. Facebook Usage Pattern (for FB Users/adopters)

In this section, kindly give the information sought on your characteristic usage of the Facebook application

1. When did you create or open your VERY FIRST Facebook account/page? *{Month and year}*

Month	Year

2. What is your most common means of accessing the Facebook platform?

	From own phone		From home computer		Computer at place of work
	From own computer		From a cyber café		Computer at school
	Other (specify)				

3. Has your employer, organization or institution integrated social media links (*e.g FB, Twitter, G+, LinkedIn, etc.*) to their website?

	Yes		No		N/A
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4. Approximately how much does it cost you to use Facebook **per week**? *{Average amount in KSh.}*

It's free		<i>Where only non-chargeable means are used e.g sch., library etc</i>
Is costs KSh.		<i>Average amnt consumed on FB alone through phones or modems</i>

5. How often do you usually access the Facebook platform?

	I am always connected!		At least once in a week
	Several sessions in daily-4 sessions or more		At least once or a few times in a month
	Few sessions in a day (up to 3 sessions)		Very rarely - 1 month can pass without access
	Once in a day		Any additional info'?

6. In a typical day, about how much time do you spend on Facebook and how much time on ALL social platforms subscribed to? (*in minutes*)

Total time spent on Facebook alone	Total time spent on ALL Social Media (FB + Others)

7. When did you last manage your Facebook privacy settings?

	In the last few days		Between 2 and 6 months ago
	In the last few weeks		More than 6 months ago
	Between 1 & 2 months ago		Never changed the settings. Defaults remain

8. Do you consider your Facebook usage as being more confidential or more public?

	More confidential/personal		More public/ open
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Part III: Your Usual Facebook Activities - The actual application use instances

For this third section, kindly rate your frequency of performing the stated activities on Facebook or how much you are influenced by the stated reasons for your visits as appropriate by choosing the frequency or description that best correspond to your usage of the application

Score	1	2	3	4	5
Value	Not at all often	Slightly often	Moderately often	Very often	Extremely often

1. In a typical day, how often do you perform the stated activities on Facebook or visit the site because of the stated reasons?

<i>Activity / reason for visiting</i>	<i>Score</i>				
	1	2	3	4	5
Reading news posts from popular media houses' and related pages or links					
So as to experience the multimedia capability of the platform such as interacting through text+video+photos					
So as to promote brands, goods and services via personal timelines and user groups					
Giving views and comments on what is currently happening on political and social scenes					
Posting updates on own timeline/Newsfeed					
So as to escape other rather boring activities/routines					
Visiting the site with passing time and relaxation as the main reason					
To read and/ or comment on friends' postings/comments					
Because I can instantly find some my contacts who are also online for chatting, etc.					
Go to apps for shopping, travel, learning activities, and other utilities					
Play games available on the platform					
Actively follow on a group's activities making posts and comments					
To post comments, views and updates and share posts from other links					
To search for certain kind of people such as school mates using advanced search					
Following and liking groups					
To follow latest news and/or content on music, videos or celebrities					
To post views or upload photos on current personal real life activities or events					
To read and/or share fun sites e.g. sports, jokes, stunts etc.					
So as to follow on and/or contribute in events where I'm a member, participant or leader					
I'm driven to visit the application since it's exciting and boosts ones status and/or social standing as it's trendy, modern and sophisticated					
I am attracted by being able to choose from private messaging or choosing recipients for particular posts					
To utilize some third party applications (apps) for more social networking and communication					
To "surf" / "browse" profiles of other people - so as to discover more contacts, and even the strangers					
To engage/interact with like-minded friends and contacts					
To search for products, news and other information					
To keeping track and record of important events and occasions involving friends and family {Through updates, comments, photos, etc.}					
To use the Facebook advert feature (paid) and/or creating pages for commercial brands {With aim of making money}					

2. Kindly give any extra information on your FB use that has not been covered in the above question:

“I will be influenced by the following reasons /activities to visit the Facebook application...

Other reasons and motivations for FB use:	Frequency of activities/ Level of influence
	Extremely often
	Very often
	Moderately often
	Slightly often
	Not at all often

3. Please give up to three (3) other social media and platforms that you currently use most?
(Choose up to three from the listed or enter others in space provided)

Twitter	Yahoo IM/ Groups	Snapchat
Myspace	Windows Live/ IM/	2 go
Google + / Hangouts	WhatsApp	None, just FB
Other platform (s) (specify):		

4. Kindly indicate your satisfaction with the Facebook application by giving your perceived satisfaction levels with the application based on the following attributes inquired on and the *Scoring Key* below for the score

Scoring Key

Score	1	2	3	4	5	6	7
Value	Much less satisfying	Varying satisfaction levels from 1. 'Much less' to 7. 'Much more'					Much more satisfying

<i>Satisfaction attribute</i>	<i>Score</i>						
	1	2	3	4	5	6	7
How do you like the general look of FB (Themes, backgrounds, icons, buttons, etc.) as compared to other similar platforms?							
How satisfying is FB speed and performance in opening pages, creating pages and retrieving messages as compared to other similar platforms?							
How likely will you ascertain that messages you send have been delivered and that you have received messages sent to you via FB as compared to other similar platforms?							
How satisfying is the quality of help or assistance available for the Facebook platform? {Either from the developer, third parties or user forums} as compared to other similar platforms?							
How is your general experience in using all the services offered by FB {Starting service, navigating, connecting with contacts, creating and retrieving content, etc.} as compared to other similar platforms?							

[SKIP TO PART V](#)

Part IV: Perceptions on the Facebook Platform (for non-adopters)

In this second and last section, please indicate your views and perceptions on the Facebook application by giving appropriate answers to questions posed.

1. Have you ever operated/managed a Facebook account before?

	Yes		No
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2. Are you currently using any of the following social platform? *{Tick all that apply}*

	Twitter		Yahoo IM/ Groups		Snapchat
	Myspace		Windows Live/ IM/ Groups		2 go
	Google + / Hangouts		WhatsApp		None, just FB
	Other platform (s) (specify):				

3. Is the cost of using FB relatively cheap or expensive as compared to other available communication channels such as sms and voice calls for you?

	Much less expensive	Moderately less expensive	Slightly less expensive	About the same cost	Slightly more expensive	Moderately more expensive	Much more expensive
Cost?							

4. How do you agree (or disagree) with the following statements? (base your score on the *Scoring Key* given)
Scoring key:

Score	1	2	3	4	5
Value	Strongly disagree	Somewhat disagree	Neither disagrees nor agrees	Somewhat agree	Strongly agree

<i>Question</i>	<i>Score</i>				
	1	2	3	4	5
Do you think that currently there are many media references to Facebook in various forms?					
Do you consider yourself technology savvy or skilled in using various web technologies?					
Do you think Facebook functions/ uses are related to other common communication platforms such as sms and chatting?					
Do you think there is significant publicity on Facebook from the Facebook team and other partners such as local mobile operators?					
Do you consider yourself to be readily open to new ideas especially matters technology?					
Do you think that the Facebook application is easy to use for anybody interested even the first timers?					
What of the visual appeal? Is the Facebook application design appealing and attractive?					
Do think that Facebook users could be exposing themselves to cyber-crime or other internet dangers?					
Do you think it is possible to achieve all or much of any networking needs among your friends or group members using Facebook?					
Do you think Facebook is accessible through multiple devices such as different phone models and computers available to you					

5. What is the proportion of your friends that are currently using Facebook or any similar social platform?

	Very few		More than half of them
	Less than half of them		Almost all of them
	About half of them		

6. How many of your close friends generally agree to the use of social media platforms such as Facebook, Twitter or others?

	Very few		More than half of them
	Less than half of them		Almost all of them
	About half of them		

7. Please indicate how often you encounter the stated occurrences or perform the actions stated here using the scoring key given:

Scoring key:

Score	1	2	3	4	5
	Not at all often	Slightly often	Moderately often	Very often	Extremely often

<i>Occurrences and undertakings</i>	<i>Score</i>				
	1	2	3	4	5
How often do you encounter advertisements on/or related to Facebook usage frequently?					
How often have you heard of promotions and incentives of using Facebook such as free access and usage discounts?					
How frequently do you access the available mass media such as radio, TV and newspapers?					
How often do you hear or get a glance of people around either talking about or using Facebook?					
How frequently do you travel outside your usual work station or home area for any reasons?					
How frequently do you discuss general technological developments with your friends or colleagues?					
Do you get to hear or experience any forms of discouragement from using the Facebook application as a social networking platform from your friends or family?					

8. Have you ever been concerned that the privacy of your data on Facebook could be compromised if you used the application?

	Not at all of a concern	Slightly of a concern	Of moderate concern	Very much of a concern	Of extreme concern
Privacy?					

9. Do you consider Facebook usage as being expensive or cheap in terms of airtime or data charges?

	As being expensive		As being cheap
	Cost is just about right		I don't know

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Part V: Your Perceptions on the Facebook Platform (FB Users)

In this fourth and last section, please indicate your perceptions about the Facebook application for each of the stated questions according to the choices given.

1. How do you agree (or disagree) with the following statements? *(Use the scoring key given)*

Score	1	2	3	4	5				
Value	Strongly disagree	Somewhat disagree	Neither disagrees nor agrees	Somewhat agree	Strongly agree				
<i>Question</i>					<i>Score</i>				
					1	2	3	4	5
Do your close friends generally agree to (or are in favor of) the use of social media platforms such as Facebook, Twitter or others?									
Is the functionality of your phone or computer greatly enhanced as a communication tool by the Facebook application?									
Do you think there is enough publicity on Facebook from the Facebook team and other partners such as local mobile operators?									
Is the cost of using FB relatively cheap as compared to other available communication platforms such as sms, voice, whatsapp, etc.?									
Can the use of Facebook be credited with boosting one's social status?									
Is the discovery of online friends and real-time chatting a great feature for Facebook which make it stand from other communication channels?									
Do you consider yourself readily open to new ideas especially on matters technology?									
Is the integration of Facebook messaging with normal mobile sms a great functionality of the Facebook application?									
Does the Facebook application greatly increase the rate of access, discovery and passing of information via the devices being used?									
Is the Facebook application's design appealing and attractive (=the visual appeal)?									
Do you consider it quite easy to use all the features of the Facebook application?									
Do you think that the Facebook application is easy to use for anybody interested even for the first timers?									
Do you think that the friend-finding and friends-suggestion features greatly enhance the Facebook experience?									
Do you think that the application provide for extra entertainment potential to be achieved from phones and computers?									
Do you consider Facebook use to be related to use of other common communication platforms such as sms and chatting?									
According to you, do science and Information Technology provide increasingly more convenient and modern means of executing basic routines?									
Do you consider your experience with the general functionality of the application to be good enough such as in inputting text, uploading and navigating?									
According to you, are the currently circulating media reviews and references to the Facebook application in various forms significantly many?									
According to your experiences, can Facebook be accessed from multiple devices such as different makes and models of phones and computers?									
Do you consider yourself technology savvy?									

Do you usually achieve or do you think is it possible to achieve all or much of your needed networking among friends or group members using Facebook?					
---	--	--	--	--	--

2. Please indicate how often you encounter the following scenarios or perform the stated actions:
(Use the scoring key given)

Scoring key:

Score	1	2	3	4	5
	Not at all often	Slightly often	Moderately often	Very often	Extremely often

Occurrence / Activity performed	Score				
	1	2	3	4	5
How often do you encounter advertisements on or related to Facebook usage?					
Do you experience periods of poor network signals which affects your application usage?					
How often do you readily get help on using the Facebook application whenever you need help?					
Have you sometimes enjoyed promotions and incentives of using Facebook such as free access and discounts?					
How frequently do you discuss general technological developments with your friends or colleagues?					
How frequently do you use or access other available mass media such as radio, TV and newspapers?					
Do you get to hear or experience any forms of discouragement from using the Facebook application as a social networking platform from your friends or family?					
Do you usually access Facebook from several different devices, that is, different computers and/or phones?					
Are you ever worried of the thought of being a victim of cyber-crime or other internet dangers and receiving unwanted messages/content in Facebook?					
Are your networking and communication needs and expectations always met via FB use?					
How often do you hear or get a glance of people around you either talking about or using Facebook?					
Do you usually access Facebook from different social settings such as workplace/school/home/traveling?					
How often do you get difficulties using FB when installing /uninstalling, navigation and sign up processes?					
How frequently do you travel outside your usual work station or home area for any reasons?					

3. How fast is Facebook in performance as compared to other related platforms available to you?

	Much less fast	Moderately less fast	Slightly less fast	About the same speed	Slightly more fast	Moderately more fast	Much more fast
Speed?							

4. Are there any policies or regulations at your place of work, school, etc. that bar you from using Facebook when you could find time for the same?

	Yes		N/A
	No		

5. Is using Facebook expensive or affordable in terms of airtime or data charges?

Not at all affordable	Slightly affordable	Moderately affordable	Very affordable	Extremely affordable	I don't know

6. What proportion of your close friends is currently using Facebook?

	Extremely small		More than half of them
	Less than half of them		Almost all of them
	About half of them		

7. How do you rank your skillfulness in using the Facebook application?

Not at all skilled	Slightly skilled	Moderately skilled	Very skilled	Extremely skilled

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Appendix II: Parameter estimates for the extent of influence of UD determinants

Usage topology	Factors	B	Sig.	Exp(B)
Non-specialized Use	Competition.Poornet	-1.119	.007	.327
	Complexity.noteasy	-.503	.195	.604
	Innovativeness	-.177	.673	.838
	MediaInfluence	.322	.585	1.379
	SocialComm	.879	.097	2.408
	RelativeAdv.promo	1.287	.000	3.624
	ProductExperience.	.009	.457	1.009
	Sophistication	-.060	.905	.942
	Competition.Antifbpolicy=0	-3.405	.213	.033
	Competition.Antifbpolicy=1	-3.067	.266	.047
Specialized Use	Competition.Poornet	.175	.588	1.191
	Complexity.noteasy	-.665	.049	.514
	Innovativeness	.722	.036	2.058
	MediaInfluence	-.168	.688	.845
	SocialComm	-.412	.258	.662
	RelativeAdv.promo	.170	.527	1.186
	ProductExperience	.006	.557	1.006
	Sophistication	-.224	.568	.800
	Competition.Antifbpolicy=0	.288	.907	1.334
	Competition.Antifbpolicy=1	.048	.984	1.049
Intense Use	Competition.Poornet	-.613	.062	.542
	Complexity.noteasy	-.110	.715	.896
	Innovativeness	.826	.017	2.285
	MediaInfluence	.436	.347	1.547
	SocialComm	-.282	.469	.754
	RelativeAdv.promo	1.017	.000	2.764
	ProductExperience	.000	.972	1.000
	Sophistication	.553	.184	1.738
	Competition.Antifbpolicy=0	-6.350	.006	.002
	Competition.Antifbpolicy=1	-5.387	.018	.005

Appendix III: Sample sizes based on formulae recommended by Krejcie and Morgan

N	ss	N	ss	N	ss
10	10	230	144	1,400	302
15	14	240	148	1,500	306
20	19	250	152	1,600	310
25	24	260	155	1,700	313
30	28	270	159	1,800	317
35	32	280	162	1,900	320
40	36	290	165	2,000	322
45	40	300	169	2,200	327
50	44	320	175	2,400	331
55	48	340	181	2,600	335
60	52	360	186	2,800	338
65	56	380	191	3,000	341
70	59	400	196	3,500	346
75	63	420	201	4,000	351
80	66	440	205	4,500	354
85	70	460	210	5,000	357
90	73	480	214	6,000	361
95	76	500	217	7,000	364
100	80	550	226	8,000	367
110	86	600	234	9,000	368
120	92	650	242	10,000	370
130	97	700	248	15,000	375
140	103	750	254	20,000	377
150	108	800	260	30,000	379
160	113	850	265	40,000	380
170	118	900	269	50,000	381
180	123	950	274	75,000	382
190	127	1,000	278	1,000,000	384
200	132	1,100	285	20,000,000	384
210	136	1,200	291	40,000,000	384
220	140	1,300	297	50,000,000	384

N is population size
SS is corresponding sample size