



**INFLUENCE OF SOCIAL MEDIA ON KNOWLEDGE SHARING PRACTICES IN KENYAN UNIVERSITIES: A CASE OF STRATHMORE UNIVERSITY**

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**ABSTRACT**

*The main objective of the research was to reveal the influence of social media tools on the sharing of knowledge in Kenyan universities. The research population was arrived at and evaluated using purposive sampling, while data was gathered using questionnaires. The study further adopted descriptive research design with a statistical sample of 233 students from the Faculty of Information Technology at Strathmore University. Statistical Package for the Social Sciences (SPSS) version 21 was the software used to analyse the gathered data. Descriptive statistics (percentage and frequency) were used to present as well as deduce the major findings for the research. Inferential statistics comprising correlation, multiple linear regression models and ANOVA analysis were used to find out the connection between the dependent and independent variables. Results of the study revealed that the four constructs namely social media determinants, user perceptions, social media tools and social media barriers have a significant influence on knowledge sharing in Kenyan universities. The findings further depicted that the studied social media tools (Facebook, WhatsApp, Twitter, and blogs) resulted in better communication, collaboration, interaction and knowledge sharing amongst the students in Kenyan universities, and hence generally improved knowledge sharing. The ANOVA results revealed that social media had a significant influence on knowledge sharing. The study concluded that social media contributed immensely to knowledge sharing in one way or another amongst university students in Kenya. The study therefore recommended that Kenyan universities enhanced social media use for knowledge sharing through adopting social media as substitute to official communication, drafting comprehensive social media policies which include sections on knowledge sharing, ensuring security and controls over information shared via social media, facilitating students to have portable gadgets such as smartphone, laptops among others, and finally introducing units on social media in their curriculum.*

**Key Words:** social media tools, social media determinants, user perception, impression, social media impact

## INTRODUCTION

One of the internet based technologies that has tremendously transformed the world is social media. Many contemporary literatures have given social media a series of definitions: as a computer and internet-mediated technology that allows individuals and organisations to view, create and share information, ideas, career interests, and other forms of expression via virtual communities and networks (Schivinski & Dabrowski, 2016); as collaborative online applications which enable and encourage participation, conversation, openness, creation and socialisation amongst a community of users (Chugh, 2017; Ngai *et al.*, 2015); as web-enabled tools and practices that enable participation and collaboration based on individuals' activities (Storey *et al.*, 2010, Virgilio, 2017); and as technologies that allow individuals to participate with information and with other individuals interactively, and to build networks based on mutual personal or professional interest (O'Reilly & Lancendorfer, 2014; Fuchs, 2017).

Goel, Rana and Rastogi (2010) defined knowledge management (KM) as a systematic and integrative process of coordinating organisation wide activities such as acquiring, creating, storing, sharing, diffusing, developing, and deploying knowledge by individuals and groups in pursuit of primary organisational goals. Cummings and Dennis (2016) identified knowledge sharing as the process in which knowledge is gained and transferred when two or more members co-learn or discover something together. Knowledge sharing moreover involves the transfer of knowledge between individuals, groups or organizations using variety of means or communication channels (Abubakar *et al.*, 2017).

Several studies have been conducted globally, regionally and in Kenya on the influence of social media on knowledge sharing in the universities and other sectors:

Globally, Kim *et al.* (2015) reviewed the factors affecting information sharing in social networking sites amongst university students, where they endeavoured to identify personal and environmental antecedents to information sharing on social networking sites (SNSs) and examined the interaction effects between these two factors. The study identified that the more users perceive their spectators to be a collection of weak links, the more likely they are to share knowledge on SNSs independent of the size of their networks (Kim *et al.*, 2015). The study further indicated that sharing of information using social media was significantly impacted by personal related factors such as information self-efficacy, positive social outcome expectations, and sharing the enjoyment.

Regionally, Fasae and Adegbilero-Iwari (2015) reviewed the use of social media for academic practices by science students of public universities in Southwest Nigeria. The Study identified that Facebook, Google-Plus, and Twitter were the most famous and recognised social media tools used by the students, and that majority of the students used social media to remain updated with trending events and when free and bored. The study further identified that although most of the students understood and adopted social media tools, they did not use it for knowledge sharing. Notably, this poses a barrier to social media and knowledge sharing integration. Moshia *et al.* (2015) studied the adoption and utilisation of social media tools to enhance knowledge sharing in higher learning institutions. The study examined the magnitude to which social media tools are utilised to enhance knowledge sharing among knowledge workers in the Nelson Mandela African Institution of Science and Technology (NM-AIST), United Republic of Tanzania. The study revealed that the use of social media tools for knowledge sharing in institutions of higher learning was still at the infant stage.

Locally, several studies have been conducted on the impact of social media on knowledge sharing. Nguyo *et al.* (2015) discussed the role of information communication technology (ICT) in knowledge sharing in state corporations in Kenya. The study analysed the impact of specific ICT parameters for example ICT tools, ICT infrastructure, ICT skills and ICT structure in knowledge sharing. The outcome of the study indicated that all the parameters have a significantly positive influence on knowledge sharing. Social media being a product of ICT inherits the same influence on knowledge sharing.

A University is defined as an educational institution designed for instruction and examination of students in many branches of advanced learning, conferring degrees in various faculties, and often embodying colleges and similar institutions (Stevenson, 2016). Universities are vital actors in the development process of any Country. The unique role of universities according to Brennan (2018) encompass to provide education at university standard, provide facilities for and encourage study and research, encourage the advancement and development of knowledge, disseminate knowledge, and promote scholarship.

Kenyan universities play a distinct role in promoting teaching, learning, consultancy, research and innovation in Kenya. The Commission for University Education classifies Kenyan universities into Public Chartered Universities, Private Chartered universities, Public University Constituent Colleges, Private University Constituent Colleges, and Institutions with Letter of Interim Authority totalling to seventy-one (71) universities operating in Kenya (Commission for University Education, 2017).

### **Statement of the Problem**

The perceived role of social media is often misunderstood, despite its massive adoption by institutions of higher learning in Kenya. The escalating of this new technology has had a massive impact on

areas that don't have a direct relation with the core businesses of universities which include study, research, innovation, and dissemination of knowledge (Amukune, 2013).

Despite tremendous usage of social media in Kenyan universities, there is low adoption and utilisation to enhance knowledge sharing. This is due to inaccurate perception that social media is not for official business activities such as sharing knowledge; but rather for social activities such as staying in-touch, staying up to date, entertainment, communication, content sharing, and to meet new people among others (Koross & Kosgei, 2016). This misunderstood perception may be as a result of lack or weak social media determinants, user perception or apathy towards social media, the social media tools not being appropriate for knowledge sharing, and existence of barriers which hinder usage of social media for knowledge sharing.

A study by Mosha *et al.* (2015) revealed that social media tools usage for knowledge sharing in Tanzanian universities was still at the infant stage, although there was keen interest from the University community to utilise social media tools for knowledge sharing. According to Pookulangara and Koesler (2011), the global impact of social media manifests in specific fields such as economics, marketing, social, and educational fields. Jane *et al.* (2014) and Abdul *et al.* (2013) further acknowledged that more university students in Asia are actively exploring and accepting the use of social media technologies (SMT) as tools for engaging with their universities and peers; as well as for teaching and learning purposes.

Regardless of the enormous use of social media, and its influence on the way people interact and share information, its impact on sharing tacit, explicit and embedded knowledge is not well defined. The study, therefore, sought to determine the influence of social media tools on knowledge sharing in Kenyan universities. The study ascertained the existence of

social media determinants, user perception, social media tools, barriers that inhibit appropriate usage of social media for knowledge sharing and the determining factors moderating the impact of social media on knowledge sharing. The suggestions derived from this study would enable university management, staff members and students to understand and appreciate how social media can impact both personal and corporate knowledge sharing objectives.

### **Research Objectives**

The overall objective of the study was to determine the influence of social media on knowledge sharing in Kenyan Universities. The specific objectives were:-

- To establish the social media determinants that influence knowledge sharing in Kenyan universities
- To ascertain the influence of user perception of social media on knowledge sharing in Kenyan universities
- To find out the impression of social media tools on knowledge sharing in Kenyan universities
- To assess the impact of social media barriers on knowledge sharing in Kenya universities
- To define the moderating effect of determining factors on the impact of social media on knowledge sharing in Kenyan universities

## **LITERATURE REVIEW**

### **Theoretical Framework**

#### **Technology Acceptance Model (TAM)**

TAM is an information systems theory that focuses on how users gradually accept and use technology (Davis, 1989). The model suggests that when users are presented with new technology, the perceived usefulness and perceived ease of use of the technology possibly influenced their decision on whether or not to use the technology, and how to use it. User acceptance describes the degree to which a person believes that using a particular system would

enhance his or her job performance. Perceived Ease-of-Use (POU) determines the degree to which a person believes that using a particular technology would be free from effort (Marangunić & Granić, 2015).

#### **Lazy User Model (LUM)**

This theory describes how an individual selected a solution from a set of possible solution alternatives to fulfil their needs (Tetard & Collan, 2013). In arriving at the solution, the user considered the amount of effort the solution demanded from him/her. The user is supposed to select the solution that carries the least effort.

The theory relates to three variables, social media determinants, social media tools and social media barriers. In making an informed choice of the technology to be adopted for knowledge sharing, users consider the elements, content, characteristics, categories, and benefits of social media tools. The technological and other barriers further negatively impact on knowledge sharing via social media.

#### **Diffusion of Innovations Theory**

Diffusion of innovation is a process by which an innovation is communicated over time amongst participants in a social system (Rogers, 2010). This theory proposed that four main elements influence the spread of a new idea; the innovation itself, communication channels, time, and a social system (Ma *et al*, 2014). This process relies heavily on human capital and the innovation must be widely adopted to self-sustain. Within the rate of adoption, there is a point at which an innovation reaches critical mass. The theory categorises innovation adopter based on their characteristics into, innovators, early adopters, early majority, late majority, and laggards.

#### **Social Media and Knowledge Sharing Determining Factors Theory**

#### **Information Foraging Theory**

The Information Foraging theory fronted by Pirolli and Card (2007) was derived from optimal foraging theory that helped biologists understand the factors determining an animal's food preference and feeding strategies. This theory describes knowledge seeking behaviour in the context of predator (knowledge) and preys (knowledge seekers). The predator (knowledge seeker) evaluates their options when deciding which knowledge to seek based on a cost-benefit analysis (Cleveland & Ellis, 2014; Paik & Pirolli, 2015).

### Diffusion of Innovations Theory

Diffusion of innovation theory (Rogers, 2010) discusses the spreading of innovation based on several factors for instance characteristics of the innovation itself, adopter's characteristics, communication channel and time. The theory validates the concepts of social media impact on knowledge sharing. Knowledge sharing via social media is dependent on some technological factors, such as functionality, usability, structure or platform, ease of use, interface design and user needs, among other traits (Wahlroos, 2010; Ling *et al.*, 2011). Adopter's characteristics such as perceived benefits and costs, trust issues, skills, IT literacy and individual responsibility, influence a user's rate of adopting social media for knowledge sharing (Ling *et al.*, 2011).

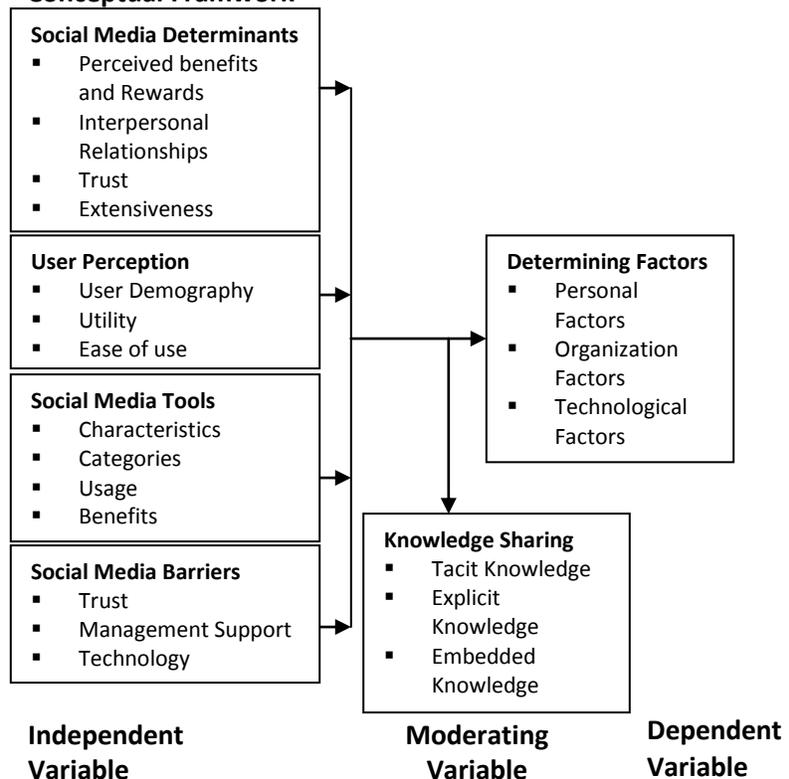
### Knowledge Management (KM) Matrix Theory

Developed by Gamble and Blackwell (2001), the KM Matrix model splits the KM process into four stages namely locating the sources of knowledge, organising the knowledge, socialisation (share, disseminate, simulate knowledge), and knowledge internalisation through use (Hislop & Helms, 2018). Critics have stated that the model limits KM role to knowledge sharing, omitting the other processes for instance knowledge acquisition/ creation and divestment (Keren & George, 2015; Hislop & Helms, 2018). The model though is relevant to this study since its focus is on the sharing and retrieval of knowledge.

### SECI Model

Nonaka (2008) introduced the SECI, an innovation model which relates to the concepts of creation, sharing and transfer of tacit and explicit knowledge. They proposed four ways that knowledge types can be combined and converted, showing how knowledge is shared and created in the organisation. The four ways include socialisation (tacit to tacit), externalisation (tacit to explicit), combination (explicit to explicit) and internalisation (explicit to tacit).

### Conceptual Framework



**Figure 1: Conceptual Framework**

**Source: Author (2018)**

### Empirical Review

#### Social Media

This study reviewed several pieces of literature about the impact social media has to organisations. As a tool for information and communication network, social media influences on coordination, cooperation, communication and connections within organisations'

population, hence improving the overall performance of groups when faced with tasks (Anari et al., 2013). The reviewed studies generally considered social media based on four constructs as discussed by various researchers. These constructs include social media determinants, user perception, social media tools and social media barriers (Leonardi *et al.*, 2013; Junga *et al.*, 2015; Mayfield, 2015; Sarmiento, 2013; Holste & Fields, 2010; Cleveland & Ellis 2014; Yeo and Marquardt; 2013). The current study examined the impact of social media on knowledge sharing using the above-named constructs, that is, social media determinants, user perception, social media tools and social media barriers.

### **Social Media Determinants**

Paroutis and Al Saleh (2013) referred to social media determinants as the aspects or traits that expedite the usage of social media as a driver for knowledge sharing. He identified the potential determinants of social media knowledge sharing integration based on the technology acceptance model and the lazy user theory as perceived benefits and rewards, interpersonal relationship, trust and extensiveness.

### **User Perception**

Sarmiento (2013) defined user Perception as personal experiences and responses that result from the use or anticipated use of a product, system or service. Han *et al.* (2007) further expound User perception as a person's perception of system aspects for instance utility, ease of use and efficiency. Based on Technology Acceptance Model (TAM), the perception of users on the role of social media in knowledge sharing was discussed based on three constructs, that is, user demographics, ease of use and the level of trust on the social media tool.

Fasae and Adegbilero-Iwari (2015) conferred that user demographics determined the type of social media, the purpose of using social media, and how often students used social media in Public universities in Nigeria. In the survey, the study identified the most

popular social media included Facebook, Twitter, Google Plus and WhatsApp in that order (Fasae & Adegbilero-Iwari, 2015). The study further observed that students in these universities used social media for various reasons. The reasons included: sharing academic events with peers, submitting assignments, to remain updated about trending news and events, connecting with new friends, maintain existing friendships and family relationships, staying in touch with friends or family, finding employment, to occupy free time when bored, and to interact and exchange idea with their lecturers.

### **Social Media Tools**

Walker (2016) defined social media tools as the tools that allow people to communicate and interact with one another using computers, smartphones, and the Internet. Kaplan and Haenlein (2012) additionally described social media as a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user-generated content. A subset of these tools includes wikis, weblogs, social networking sites, and file-sharing sites among others. Social media tools and knowledge sharing platforms are intertwined since they provide access to the services within societies and organisations such as universities.

### **Social Media Barriers**

In this study, four social media barriers were discussed that directly impact on sharing knowledge using social media, which include; the trust people had on the social media tools, communication skills, support accorded by management and technological barriers. The barriers included; lack of trust, poor communication skills, management support and technological barriers.

### **Determining Factors**

Based on three models; technology acceptance model (Kock, 2017), the lazy user theory (Tetard & Collan,

2013) and the diffusion of innovation theory (Rogers, 2010); determining factors act as the moderating variable that could strengthen the relationship between social media and knowledge sharing. Lin (2007) categorised these factors into three proportions; personal, organisational and technological.

### Knowledge Sharing

Fullwood *et al.* (2013) defined knowledge sharing as the willingness of individuals in an organisation to share with others the knowledge they have acquired or created. The reviewed literature borrows from Knowledge Management Matrix Theory (Gamble & Blackwell, 2001), SECI Model (Nonaka, 2008), and Information Foraging Theory (Pirolli & Card, 2007). Based on these theories, the study identified three elements of knowledge sharing such as tacit knowledge sharing, explicit knowledge sharing, and embedded knowledge sharing.

### METHODOLOGY

A research design is a conceptual structure in which research is conducted (Kothari, 2014). This study adopted a descriptive research design. A descriptive research design is one in which information is collected without changing the environment, meaning nothing is manipulated (Cooper & Schindler, 2011). The study was also both qualitative and quantitative. Due to the limited geographical scope of

**Table 1: Social Media Tools Awareness and Usage**

Social media tool	Mean	Standard Deviation
Facebook	3.9	0.176
Twitter	3.32	0.853
YouTube	3.53	0.566
Blogs	3.29	0.374
WhatsApp	3.56	0.154
Others	2.29	0.173

From the findings, most of the respondents agreed with the statement that they were aware and used various social media tools. The mean score of 3.9, indicated those who were aware and used Facebook,

this study, descriptive design was ideal as it was logistically easier and simpler to conduct. The study's target population was drawn from Strathmore University and focused on the students from the Faculty of Information Technology, which comprises of 1684 students (Strathmore University, 2017). The study was based on primary data. The primary data was collected through the administration of questionnaires to the respondents. The questionnaires were closed-ended and based on the Likert scale. Data from the questionnaires was coded using with the help of IBM Statistical Package for Social Sciences (SPSS) package version twenty-one. SPSS offers extensive data handling capabilities and numerous statistical analysis routines that can analyse small to very large data statistics (Barry & Babinec, 2017). The data was further analysed using descriptive and inferential analysis including correlation and linear regression.

### RESULTS

#### Social Media Determinants that Influence Knowledge Sharing

The study probed the respondents to indicate which social media tools they were aware of and whether they used the same. The component was measured by way of the respondents' level of awareness and usage of the various social media tools in their academic setting. Table 1 indicated the above further.

Twitter had a mean score of 3.32. Those who were aware and used YouTube comprised a mean score of 3.53, awareness and usage of WhatsApp stood at a mean score of 3.56, blogs at 3.29, while awareness

and usage of other social media tools had a mean score of 2.29. From the findings, it was worth noting that there was an overall appreciation and adoption of social media in Kenyan Universities. This concurred with the global statistics according to Liu *et al.* (2017) that put global usage of social media by year 2017 at 100 million. On social media determinants / factors awareness levels, the respondents were questioned to indicate the level of awareness with the above social media determining factors. Results indicated that 40% of the respondents were conversant with perceived benefits and rewards as a social media factor, which was higher than interpersonal relationship at only 20%. Trust as a social media factor was at 20%, same to extensiveness at 20%. The

findings interestingly indicated that respondents had low cognisance of three social media determinants under test (interpersonal relationship, trust levels and extensiveness).

The findings further supported the opinion by Virgilio (2017) that various factors such as perceived benefits and rewards, Interpersonal relationship, trust, and extensiveness influence users' preference and choice of a social media tools for knowledge sharing. On factors that Influenced the Choice of Social Media Tool for Knowledge Sharing, respondents were requested to rate how the social media factors mentioned above influenced their choice of social media tool/s. The findings were as indicated below.

**Table 2: Factors that Influenced the Choice of Social Media Tool for Knowledge Sharing**

Factors	Mean	Standard deviation
Perceived benefits and rewards	3.427692	1.439816
Interpersonal relationship	3.325642	1.711432
Trust	3.437671	1.392241
Extensiveness/ portability	3.528629	1.217739

From the descriptive statistics presented in the above table, perceived benefits variable was agreed to a great extent as a social media determining factor that influenced knowledge sharing with a mean of 3.427692. Interpersonal relationships variable was agreed to a very great extent with a mean of 3.325642. Trust variable was agreed to a very great extent with a mean of 3.437671. Portability was agreed to a very great extent with a mean of 3.528629. Hence, it was crucial to note that knowledge sharing was to a very great extent

influenced by the above social media determinants at close range. The results showed that the discussed factors perceived benefits and rewards, Interpersonal relationship, trust, and extensiveness as discussed by Virgilio (2017) influence on the influence of social media tool on knowledge sharing.

### **The Influence of User Perception of Social Media on Knowledge Sharing**

Respondents were asked to state the role of social media in the university. Below were their responses.

**Table 3: The Role of Social Media**

Role	Mean	Standard deviation
To share academic data, for example, events, assignments	4.3700	2.62145
For leisure	4.4300	2.53448
To be updated about trending news and events	4.1200	2.83242
To connect/keep in touch with friends	4.2200	2.78343
To interact and exchange knowledge and ideas with peers and lecturers	4.5300	2.23442
To seek for employment and business opportunities	4.6200	2.12524
To share tacit and explicit knowledge	4.5400	2.30741

The component was measured by determining seven items which were rated on the Likert scale. The respondents were unanimous in stating that social media plays a great role in their academic and social life. Results indicated that majority of the respondents used social media to seek for employment and business opportunities (mean score of 4.6200). This implied that SM was an essential for collaboration and sharing of business as well as employment knowledge. Other responses include; for leisure (mean score of 4.4300), to be updated about trending news and events (mean score of 4.1200), to connect/keep in touch with friends (mean score of 4.2200), to interact and exchange knowledge and ideas with peers and lecturers (mean score of 4.5300), to share academic data, for example, events, assignments, (mean score of 4.3700) and to share tacit and explicit knowledge (mean score of 4.5400). These findings support Onuoha and Saheed (2011) view that user perception has an influence on how university students adopt and use social media for knowledge sharing. A perception would result in an increased adoption of social media tools hence better usage for knowledge sharing.

On motivation for the Choice of Social Media Tool for Knowledge Sharing, the component was measured through determining whether respondents agreed with the stated statement or not. From the results, it was interesting to note that other specified motivational factors influenced the respondents' choice of social media tools, other than the ones tabulated. 80% of the respondents indicated that

their choice of social media tools was influenced by their ease of use. 65% of the respondents indicated that their choice of social media tool was influenced by the availability of support, while 60% of the respondents indicated that their choice was based on feedback capability, knowledge use and reuse as well as knowledge capture.

These findings that students adopt and use social media tools for a variety of needs and reasons, and their perceived value depends on their utility, ease of use, efficiency, related advantage and the ability to fulfill user needs they wanted to be fulfilled. The findings agreed with Fasaie and Adegbilero-Iwari (2015) who implied that social media tools had been adopted by university students for diverse reasons. Mwangi and Wagoki (2016) further agreed that success or failure in adopting social media tools is attributed to the perception users have on the ability or inability of the social media tools to meet their needs.

### The Impact of Social Media Tools on Knowledge Sharing

The study further sought to find out which of the social media tools was more preferred in the university. The responses were presented in table 4 below:

**Table 4: Preferred Social Media Tools for Knowledge Sharing**

Variables	Frequency	Percent
Blogs	18	12.9
Twitter	28	19.4
YouTube	24	16.5
Facebook	37	25.7
WhatsApp	36	25.5
<b>Total</b>	<b>143</b>	<b>100.0</b>

The results indicated that Facebook was the most commonly used social media tool (25.7%), reason being users found Facebook platform ease to understand and use. Furthermore, most Kenyan universities had a large following on their Facebook pages, therefore they preferred communicating with their stakeholders (students, staff, alumni, and researchers) via this platform. YouTube and blogs were the least preferred social media tools for knowledge sharing at 16.5 and 12 percent. This was attributed to most university students are not being familiar with how to use the tools as official communication channels, but rather as unofficial communication channels.

On activities Students Engage the Social Media Tools, the component was measured by determining whether they agreed with the stated adoption statement or not. Respondents were asked to indicate the activities they engaged in when using social media. From the findings, most of the respondents cited knowledge sharing, research and innovation, teaching and learning, university publicity, communication tool, and social connectivity as the proven activities students engage social media in universities. The findings also indicated that there were proven benefits of using social media such as collaborative learning, assisting each other when needed, exchanging resources and documents, classifying complex knowledge, sharing existing knowledge with others as well as giving and receiving reflections and feedback from others. This study concurs with Irwin *et al.* (2012) who identified that universities use social media tools for social connectivity, as study aids, for teaching and learning, to promote research and innovation and alumni engagement among other student centered activities.

#### **Impact of Social Media Tools on Knowledge Sharing Activities**

The component was measured by querying the respondents to select any one or all of the indicated extent of the impact of social media tools on

knowledge sharing activities. Respondents were to indicate the extent of social media tools impact on knowledge sharing activities. Results indicated that coaching and training, sharing embedded knowledge and tacit knowledge sharing scored highly in-relation to activities that social media tool have impacted most. All respondents had similar trends and perceptions regarding the impact of social media tools on knowledge sharing activities. The results agreed with Aghaee (2010) and Joosten (2012) who enumerated the benefits of social media tools on knowledge sharing to include: facilitates open communication, enables students to discuss and share ideas, provides networking opportunities, acts as an effective recruitment tool, improves university reputation and client base, among other benefits.

#### **Impact of Social Media Barriers on Knowledge Sharing**

The component was measured by determining five items which rated as either, strongly agree, agree, neutral, disagree or strongly disagree on the Likert scale. The respondents were asked to respond to provided statements regarding the barriers involved in adopting social media tools in knowledge sharing. All respondents strongly agreed with the notion that once social media messages are posted, they have no control over what happens to them. This implies that social media tools used in knowledge sharing have revolutionised the way students share knowledge which in return had a bearing on knowledge sharing activities. From the results, 85% of the respondents the organisational culture as another barrier to adoption of social media for knowledge sharing. This was attributed to organisational culture biases towards social media, possibly due to the lack of policy guidelines from the management on the use of such tools and also the related security implications, especially to the IT team. A greater percentage of respondents (90%) indicated that technological barriers variable contributed to the pace of adopting social media for knowledge sharing. This was

accredited to biases, resistances to change or difficulty in understanding the technology. This finding supports Kock (2017) and Tetard & Collan (2007), who explored how technology influences a user's decision to adopt the technology, and how a user selects a technological solution based on the effort required by the solution.

Only 20% of the respondents felt it was not necessary to have perceived costs versus benefits in adopting social media tools in knowledge sharing. This is an interesting perception given the autonomy with which these tools are available for use.

### Effect of Determining Factors on the Impact of Social Media On Knowledge Sharing

The final objective of the study was to determine the moderating effect of determining factors on the impact of social media on knowledge sharing in Kenyan universities. The results on showed that majority of respondents agreed with that social media determining factors to a great extent impact on knowledge sharing.

**Table 5: Social media impact determining factors**

Social media adoption determining factors	Very little extent (%)	Little extent (%)	Some extent (%)	Great extent (%)	Very great extent (%)	Total (%)
Personal Factors such as <b>perceived costs and benefits, trust issues and literacy IT levels</b> have impacted on my choice of social media tool I use for knowledge sharing?	1	10	23	42	24	100
Organizational factors such as <b>organisational culture</b> influenced my choice of social media tool for knowledge sharing in Kenyan universities?	3	7	24	46	20	100
Technological Factors such as <b>functionality, usability, structure or platform, ease of use, and interface design and user needs</b> , impact on the adoption of social media for knowledge sharing.	1	3	11	45	40	100
<b>Average %</b>	<b>2</b>	<b>7</b>	<b>19</b>	<b>44</b>	<b>28</b>	<b>100</b>

Respondents agreed with the statement that to little or some extent; individual or personal factors influence knowledge sharing (34%); organizational factors determine adoption of social media for knowledge sharing (34%); technology related traits such as functionality, usability, structure or platform, ease of use, and interface design and user needs

influence extent of adoption of social media for knowledge sharing (15%). The findings concur with (Kock, 2017; Wahlroos, 2010; Tetard & Collan, 2013) who in their evaluation of the technology acceptance model and the lazy user theory, agreed that the three components can be used to measure the influence of social media on knowledge sharing.

**Table 6: Bivariate Pearson Correlation Coefficient**

		SMD	UP	SMT	SMB	KS
<b>SMD</b>	Pearson Correlation	-.331**	.044	.410**	.382**	.391**
	Sig. (2-tailed)	.007	.728	.001	.002	.001
	N	143	143	143	143	143
<b>UP</b>	Pearson	.218	1	.313*	.301*	.321*

	Correlation					
	Sig. (2-tailed)	.081		.011	.015	.019
	N	143	143	143	143	143
<b>SMT</b>	Pearson	.259*	.313*	1	.354**	.366**
	Correlation					
	Sig. (2-tailed)	.037	.011		.004	.002
	N	143	143	143	143	143
<b>SMB</b>	Pearson	.429**	.301*	.354**	1	0.852**
	Correlation					**
	Sig. (2-tailed)	.000	.015	.004		.000
	N	143	143	143	143	143
<b>KS</b>	Pearson	.432**	.321*	.366**	0.852**	1
	Correlation					
	Sig. (2-tailed)	.000	.019	.002	.000	
	N	143	143	143	143	143

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

The results, display the correlation between social media variable and knowledge sharing in Kenyan Universities. Social media determinants were positively and significantly correlated with knowledge sharing at ( $r = .391^{**}$ ,  $p = .001$ ,  $\alpha = 0.05$ ), while user perception was positively and significantly correlated with the knowledge sharing at ( $r = .321^*$ ,  $p = .019$ ,  $\alpha = .05$ ). Social media tools were positively and significantly correlated with knowledge sharing at ( $r =$

$.366^{**}$ ,  $p = .002$ ,  $\alpha = .05$ ). The correlation between social media barriers and knowledge sharing was positively and significant correlated at ( $r = 0.852^{**}$ ,  $p = .000$ ,  $\alpha = .05$ ).

#### Multiple Regression Analysis

The study used simple OLS Regression analysis to understand the causal effect relationship between the variables.

**Table 7: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.929 <sup>a</sup>	.863	.849	.14656

a. Predictors: (Constant), social media determinants, user perception, social media tools, social media barriers.

The overall correlation coefficient (R) between the independent variable social media use in Kenyan Universities and the dependent variable knowledge sharing was found to be .929. This meant that there was a strong positive relationship between social media use in Kenyan Universities and knowledge

sharing. Furthermore, it indicates that the model explains only 86.3 % of the variations in knowledge sharing in Kenyan Universities as shown by coefficient of determination ( $R^2$ ) of 0.863 with the remaining 13.7% of the variation in knowledge sharing being explained by other factors

**Table 8: Analysis of Variances**

Model		Sum of Squares	Df	Mean Square	f	Sig.
1	Regression	7.847	6	1.308	60.887	.000 <sup>b</sup>
	Residual	1.246	58	.021		
	Total	9.093	64			

**Dependent Variable:** knowledge sharing, **b. Predictors:** (Constant), social media determinants, user perception, social media tools, social media barriers

According to table 8 the F value of 60.887 with an overall significance of model 1 was .000. The level of significance was lower than 0.05 and this means that

social media use shows statistically significant influence on knowledge sharing in Kenyan Universities.

**Table 9: Coefficients of Independent Variable**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	Constant	4.258	.807		5.277	.000		
	SMD	.464	.054	.514	8.566	.000	.657	1.521
	UP	1.089	.084	.064	12.96	.000	.653	1.532
	SMT	1.096	.177	.437	6.199	.000	.474	2.109
	SMB	1.132	.126	.709	9.014	.000	.381	2.622

**a. Dependent Variable: Knowledge Sharing (KS)**

Table 9 further, showed the coefficients of independent variables (social media determinants, user perception, social media tools, and social media barriers), the values of **p** and values of **t**. The model was thus estimated as shown in equation (2).

$$KS = 4.258 + .464 SMD + 1.089 UP + 1.096 SMT + 1.132 SMB.$$

The estimated model equation simplifies the causal effect relationship between social media use and knowledge sharing in Kenyan Universities. The value 4.258 was the intercept term of the model showing the level of knowledge sharing when the independent variables in the model are held constant at zero. Social media determinants had a statistically significant influence on knowledge sharing ( $\beta_1 = .464$ ,  $t = 8.566$ ,  $p = .000$  and  $\alpha = 0.05$ ); User perception had statistically significant influence on knowledge sharing ( $\beta_4 = 1.089$ ,  $t = 12.964$ ,  $p = .000$  and  $\alpha = 0.05$ ); Social media tools had a statistically significant influence on knowledge sharing ( $\beta_3 = 1.096$ ,  $t = 6.199$ ,  $p = .000$  and  $\alpha = 0.05$ ); and Social media barriers had a statistically significant influence on knowledge sharing ( $\beta_6 = 1.132$ ,  $t = 9.014$ ,  $p = .000$  and  $\alpha = 0.05$ ). The results therefore indicated the four independent

variables (social media determinants, user perception, social media tools and social media barriers) have a significant influence on knowledge sharing at Strathmore University.

**CONCLUSION**

The nature of communication and knowledge sharing has undergone a substantial change in the past twenty years, and the change is not over. The ability to communicate and share knowledge efficiently enormously impacts on an organisation's success. Knowledge sharing affects teamwork and collaboration among the members of an organisation. Effective knowledge sharing further enables positive interaction between two or more individuals working together to solve problems and creates innovative products and master required skills. Social media has emerged as a powerful tool in facilitating effective knowledge sharing. Apparently, it is evident that most students in universities are experimenting with some form of social media and therefore social media is here for the long run. Learning institutions in Kenya, universities included are crucial not only at impacting knowledge but also in meeting communication needs of its stakeholders.

The overall objective of the study was to establish the impact of social media on knowledge sharing in Kenyan universities. As per the findings of this study, social media have helped much in the learning of the students in the institutions and hence needs to get incorporated into the institution running. The study explored social media constructs specifically social media factors, user perception social media tools and social media barriers and how they practically impact on knowledge sharing in Kenya universities.

The study revealed that there was a significant impact of social media tools on knowledge sharing in these institutions, though the pace of incorporating these tools to the core of the universities business have not been perfectly achieved due to some circumstances such as lack of control and regulatory measures on social media. The study further pointed that most of these universities still officially rely on traditional channels of communication such as face to face communication, noticeboards and websites to communicate critical knowledge to their students. Social media tools themselves come with known barriers such as their vulnerability to abuse and lack of control, with the study identified as part of reasons for their low pace of incorporation as knowledge sharing platforms in these institutions. Students also perceived the most popular social media tools (Facebook, WhatsApp and YouTube) as recreational platforms rather than official knowledge sharing platforms.

On the positive side, social media as knowledge sharing platform comes with plenty of benefits such as reducing geographical barrier, easy accessibility, portability and compatibility with most gadgets, making them good knowledge sharing platforms. Since the study findings revealed that there was a significant impact of social media tools on knowledge sharing, there is a need for Kenyan universities to take a critical look at social media as knowledge sharing platforms. Some of these approaches include: drafting social media policies which include sections on knowledge sharing; implementing social media

tools as alternatives to traditional modes of teaching; investing in internet and other technologies that support social media; instil a culture among students in which social media is viewed as an official rather than an unofficial communication channel.

## **RECOMMENDATIONS**

Kenyan universities need to take advantage of the many benefits that accrue from social media to benefit their students especially on major academic related activities such as teaching, research and imparting knowledge to them. Based on the study findings the following recommendations are suggested to enable universities extensively utilise social media for knowledge sharing: To gain value from social media, Universities ought to perceive and encourage students to use social media for official communication such as studying, research, sharing information and knowledge sharing. Students should further be encouraged to enlist on professional social media sites such as LinkedIn to help them develop networks and relationships, other professionals.

Secondly, universities should draft comprehensive social media policies which include sections on knowledge sharing. These policies would extensively guide students on what ought to be shared on the social networks and educate them on the need to secure their privacy. Students revealed that they perceive social media to be vulnerable hence fear about their privacy and that of their posted information. Proper manning of the social media tools through well laid down policies can facilitate the use of social media for knowledge sharing. These controls would also regulate the cases of abuse and infringement from arising and hence effective knowledge sharing.

Thirdly, the emergence of smartphones in Kenya and the compatible nature of social media tools across most platforms have facilitated the massive use of social media tools. However, there are those who do not have these gadgets or are limited by lack of electricity and internet connectivity. The study

recommends that for purposes of enhancing knowledge sharing via social media, students be facilitated by both the universities and Government, especially those with financial constraints.

Finally, social media education should be taught in learning institutions. This education will help students understand social media tools hold and their capabilities. Students should be taught how to use social media effectively in an official way, while the unskilled should get trained on how to become literate on the usage of the social media to increase knowledge sharing among people.

### Areas for Further Research

The study findings indicate that the four constructs of social media (social media determinants, social media

tools, user perception and social media barriers) have an impact on knowledge sharing. Since the results of the study indicated that only 86.3% of social media factors that influence knowledge sharing were discussed, further research therefore remains necessary to cover the remaining 13.7%. In particular, future research on influence of social media on other institutions such as government ministries and county governments will be eminent. Specific strategies to reverse the perception that social media is used for social issues only rather than official communication will add value to the universe of knowledge.

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