PROPOSED MODEL FOR THE INTEGRATION OF SOCIAL MEDIA IN TEACHER EDUCATION INSTITUTIONS IN UGANDA
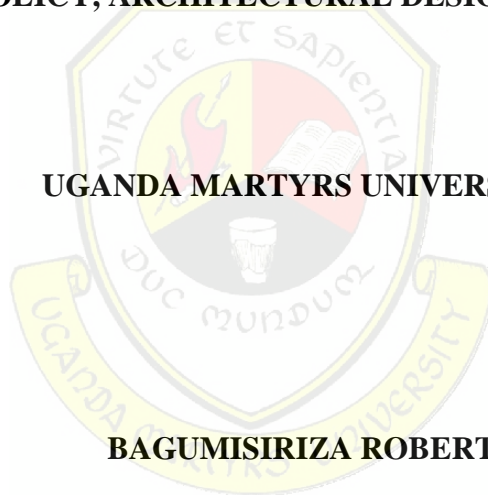
ACASE OF NATIONAL INSTRUCTORS COLLEGE ABILONINO

A DISSERTATION SUBMITTED TO THE FACULTY OF SCIENCE IN THE PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF THE MASTER OF SCIENCE ICT POLICY, ARCHITECTURAL DESIGN AND MANAGEMENT

UGANDA MARTYRS UNIVERSITY

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DEDICATION

This work is dedicated to my employees, sponsors, family members, parents, relatives, lecturers and colleagues who greatly supported me to come up with this dissertation.

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First and above all, I thank the Almighty God for providing me with resources and life to carry out this study successfully

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LIST OF ABBREVIATIONS

ICT   Information Communication and Technology

UNESCO   United Nations Educational, Scientific and Cultural Organization

SPSS   Statistical Package for the Social Science

TAM   Technology Acceptance Model

UTAUT   Unified Theory of Acceptance and Use of technology

UMU   Uganda Martyrs University

IT   Information Technology

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ABSTRACT

The rapid development of information and communication technologies has sparked the creative incorporation of social media into current pedagogical technologies and processes. Teacher training institutions in Uganda are still facing challenges of social media integration in teaching and learning. Teachers have failed to use social media devices in teaching and learning. This was attributed to fears that the use of social media platforms in teaching and learning would have negative influence on students' academic performance since they spend most of the time chatting and making friends. The main objective of the study was to propose a model for social media integration in learning within teacher education institutions in Uganda. The study employed mixed methods approach combining both qualitative and quantitative methods to collect data. Data were analyzed using SPSS and excel statistical packages. The study identified social media infrastructure, technical support, training of users, culture, infrastructure plan, awareness, gender, age and policies as requirements for the proposed model. This model would provide an opportunity for students and teachers to create learning resources, share learning resources, modify learning resources and collaborate with each other in teaching and learning process to enhance students' performance class activities and examinations.

CHAPTER ONE

1.1 Background of the study

The Internet has changed the way we communicate, perform research, and streamlined the access people have to teaching and learning practices. Using technology is no longer an option; today's learners must leverage their access and become proficient with the latest tools.

The growth in importance of social media platforms has had a dramatic impact globally on how people communicate (Thomas and Thomas, 2012). Commonly used social media platforms such as Facebook, Twitter, and LinkedIn, Google plus, WhatsApp and many others have the potential to transform teaching and learning practices in teacher training institutions in Uganda. Social media platforms can facilitate knowledge sharing, interaction, collaboration and communication. These platforms provide for a way for collaboration and engagement of learners and educators in a common space around shared interests (Mazman and Usluel, 2009). They provide rich learning support in line with social theories of learning (Vygotsky, 1978) which emphasize personalization, collaboration, information sharing, common interests, active participation, and group work support (Mazman and Usluel, 2009). The collaborative Web therefore supports social media learning in which learners use personal tools for self-directed and problem-based learning. The collaborative web is supported by tools known as social software tools. Social software tools which support social learning include, among others: wikis, Weblogs, social bookmarking, social media platforms (Facebook, Twitter, LinkedIn, google plus and WhatsApp), video repositories, online office and tagging (Awodele, 2009). The use of these tools can enable higher education institutions to achieve social aspects of learning in line with social constructivist learning theory (Vygotsky,1978).Social media platforms facilitate learning in various ways. For example, by using wikis, learners are able to participate actively by contributing to a topic of interest and collaborating in groups to share available resources (Ryan,

2011). Blogs can provide a two-way communication tool for learners and educators to participate in online forums and chatting. Social media platforms can be used students and teachers to share learning resources (Alexander, 2008). Other social media platforms tools in education support audio sharing (Skype) and multimedia sharing (YouTube). Facebook, Twitter and other social media platforms have potential to support social media learning through community networking services such as wall posting, chatting, content sharing and tagging (Alexander, 2008). Popular learning management systems such as Moodle now include these types of social media platforms like blogs, online discussion forums, multimedia sharing, chatting, online community and wikis (Awodele 2009). Social media platforms can be used to facilitate social media learning can be classified as new learning media (Kroop, 2010), most of which are available for free, or at low cost. Despite the enormous potential and apparent cost effectiveness of new learning media for facilitating social media learning, however, its application by institutions of higher learning in developing countries of Africa is low (Ndume , 2008). As such, the use of social media platforms in countries like Uganda, is still at its infancy. However, with the unreliable power supply, poor internet connectivity, poor social media infrastructure and many others, it difficult to know whether institutions have integrated social media platforms in teaching and learning in teacher training institutions in Uganda.

1.2 Statement of the problem

Teacher training institutions in Uganda have been equipped with ICT infrastructure such as internet, desktop computers, Laptop computers and mobile technologies to support use of web 2.0 tools in teaching and learning practices. Staff have acquired various trainings in the use of social media platforms in teaching learning practices within in Uganda and abroad through Teacher Training Education project (TTE). This project has funded academic staff to attend electronic learning conferences in Uganda, Ethiopia and Egypt. In addition, benchmarking activities were organized for academic staff and top managers to visit higher institutions of

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learning in Kenya to learn best practices about social media use as a teaching tool. Some teachers were provided with mobile ICT devices such as laptop computers, tablets and smartphones to support use of social media platforms in teaching and learning practices. With the availability of all the above services, one would expect academic staff to accept use of social media platforms in teaching and learning given that the current generation of students are ICT natives. Despite these initiatives, Teacher training institutions are still facing challenges of social media integration in teaching and learning. Teachers have failed to use social media devices in teaching and learning. This was attributed to fears that the integration of social media platforms in teaching and learning would have negative influence on students' academic performance since they spend most of the time chatting and making friends. This therefore prompted this study to propose a model to provide a roadmap for social media integration in teaching and learning in teacher training institutions in Uganda.

1.3 Objectives of the study

1.3.1 Major objective

The major objective of this study was to propose a model to integrate social media platforms in teaching and learning practices in teacher education institutions in Uganda.

1.3.2 Specific objectives

The specific objectives of the study were to:

1. Review models that integrates social media in teaching and learning and then determine the requirements for the proposed model.
2. Propose a model that would guide teacher education institutions to integrate social media in teaching and learning
3. Validate the model

1.4 Research questions

1. What are the requirements for an appropriate social media integration model for teacher education institutions?

2. What model would integrate social media in teaching and learning?

3. How can this model be validated?

1.5 The scope of the study

This study focused on the integration of social media in teaching and learning practices in teacher education institutions in Uganda. The study also focused on social media integration theories, social media existing models in Uganda and other countries. The study was conducted at National Instructors College Abilonino. This was due to limited time and finances to conduct the study in all teacher training institutions in Uganda.

Specifically, the study will propose the model that would guide teacher training institutions to integrate social media platforms in teaching and learning.

1.6 Significance of the study

Social media platforms such Blogs, Goggle plus, Wikis, Facebook, Twitter, LinkedIn, YouTube and among others, have been sufficiently explored by students in their private time (Jackson, 2012). Most of the students in teacher training institutions are social media natives. This means that they have adequate capacity to effectively use social media platforms in teaching and learning practices. Teachers in higher education have received various training in the use of web 2.0 technologies including social media platforms but the integration rate was slow. Therefore, in order to successfully integrate social media in teacher education institutions, there was need to propose a model to achieve this. The model would provide road map for both students and

teachers to properly integrate social media platforms into teaching and learning practices. This would provide an opportunity for students to expand their learning environment since only a portion of learning occurs within the confines of a classroom (Uganda, 2007). Furthermore, social media platforms would provide students with the opportunity to effectively present their ideas, lead online discussions, and collaborate.

2.0 CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter presents the theoretical Models, review of existing Models and related literature on ICT integration in teaching learning processes in educational institutions.

2.2 Social media

Social media is changing the way people interact, present ideas and information, and judge the quality of content and contributions globally (Africa, 2014). More than 1.2 billion people use Facebook regularly. Students and teachers use social media applications to create content, upload photographs, audio and videos to the cloud. Social networking sites such Facebook, twitter, YouTube and WhatsApp make it easy to share, find news updates, and chart with peers. Social media technologies also enable two way dialogues between s, teachers and the institutions.

2.3 Forms of social media platforms

Facebook

Facebook is the commonly used form of social media platform in Uganda and in the world. The majority of the users of Facebook platform were students and the youth from tertiary institutions. Facebook has over 1.28 billion users in United States who were mainly college students and young professionals (Ajemera ,2014). Students and teachers can create content, share it and modify it during teaching and learning. Furthermore, teachers can use Facebook to interact with students on key classroom ideas, while emphasizing more difficult concepts by providing additional examples.

Pinterest

Pinterest is one of top social media platforms used in developing countries (Wasserman, 2014). However, it is not commonly used in Uganda. Teachers can use Pinterest to perform research in

teacher training institutions for classroom or online applications. Teachers and students can share ideas with other and can further develop a network. Teachers in developed countries use pinterestplatform to inspire students, increase student participation, and help students tell stories. (Kompleks Creative, 2014).

Twitter

Twitter platform used in teaching and learning helps to engage students and teachers in the learning process. This platform can be used to share resources, promote brainstorming, extend class discussion, and to promote student sense of community.

Instagram

Instagram is a social media platform based around sharing pictures and fifteen-second videos which can be posted to other social media platforms. One example, a teacher could have a student review a book and create an Instagram video to share two key points they learned (Ferlazzo, 2014). Also students can create photo essays based on concepts from the curriculum, using 'photo prompts' to engage students in writing responses based upon the photos, or for taking pictures of a step by step process (Laponsie,2013).

Blogs

Blogs are a platforms that support teachers and students to engage in teaching and learning processes. Blogs helps learners to share reference materials, tutorials, videos, and information. Blogs can illustrate up-to-date information for educators to share with classes by providing one blog for each course taught. The content of the blog would be controlled by the teacher. Additionally, blogs can be used for commentary, news and announcements, supporting research projects, learning journals, learning communities, and collaborative authoring (Lingard, 2014).

LinkedIn

Used primarily for professional networking and users usually to affiliate with others in their work maintaining a list of contacts for people they know and trust. The trust factor is an

important concept as connecting with others requires either a pre-existing relationship or some mutual contact (Papacharissi, 2009).

2.4 Social media learning

Social media learning refers to learning using new learning media commonly referred to as social software tools (Kruger, 2010). Social software tools which support Social media learning include Wikis, Weblogs, Social bookmarking, social media platforms (Facebook, Twitter, MySpace), YouTube, LinkedIn, Google plus etc). Social software tools connect learners in the virtual space enabling them to interact and collaborate as they execute learning activities. By participating in Social media learning, learners are actively engaged in the learning process and experience flexible environments for communication, global information sharing, personalized learning and independent learning with respect to place and time (Kruger, 2010; Mazman and Usluel, 2009). Social media learning enables borderless learning, and its focus is toward learner-centred and process driven learning environments as opposed to content-driven learning (Nichols and

Anderson, 2005). Walsh (2010) indicates that in Social media learning, there is increased social motivation for students to read and contribute through online discussions.

Learners with similar interests are now able to connect themselves globally in social and learning communities (Cain, 2008). Social software tools have the potential to support social and personalized learning (Awodele et al., 2009); however, because of the rich functionality provided by these tools, higher education institutions need to ensure that how to use these tools effectively is clear to both learners and educators (Kroop ,2010).

Social software tools are used in education in two ways - as separate tools like Wikis and Blogs or as integral parts in latest versions of learning management systems (Kruger, 2010).

Furthermore, reveals that the potentials of blogs, wikis and discussion boards can be embedded in their online learning management systems.

2.5 Social media learning success factors

Social media learning is a form of information and communication technology(ICT) supported learning which uses social media platforms such as Twitter, Facebook, YouTube, Google plus and many others(Kruger,2010). The success of social media learning depends on institutional policies, involvement of stakeholders, reliable infrastructure and adequate funding from government and development partners (Nicholas & Anderson, 2005). The other requirements for social media success in teaching and learning were identified as administrative support, learning methodology, infrastructure availability, awareness, change management, and intellectual investment Ndume (2008). Furthermore, the success of social media learning depends on eight dimensions such as institutional support, pedagogical support, interface design considerations, proper evaluation, management support, resource support, ethical considerations and technological support (Khan, 2001).

2.6 Social media learning in Africa

Developing countries of Africa including Uganda are characterized by limited access to social media learning facilities, limited bandwidth, high social media illiteracy levels, high poverty levels, lack of or intermittent power supply and lack of appropriate social media-supported learning policies and sustainability plans. Most of the literature on social networked learning is from developed countries whose technological, economic, social, political and cultural setup are quite different from those in developing countries like Uganda (Lubega, 2011).

2.7 Social media in Uganda

Uganda has one of the youngest populations in the world with more than half the population below the age of 20 years. The use of social media platforms in daily activities is on the rise in higher institutions of learning in Uganda by students and teachers. The majority of users are students and they use Facebook, Twitter, LinkedIn and WhatsApp. Furthermore, MTN and Orange telecom companies offer free access, news, sports and much more to their customers. Despite the free availability of these platforms, students and teachers use them for personal activities that include getting news updates, chatting with friends and research that does not contribute towards the quality of teaching and learning activities. This impinges negatively to learners' performance in classrooms and outside.

2.8 Forms of social media

Facebook

Africa (2014) report indicated that Facebook was a dominant social networking site globally. Students in higher education had Facebook accounts and spent on average 10 to 30 minutes on the site charting with friends. Facebook offers various opportunities to students in higher education institutions to share ideas discuss and collaborate with peers. In addition Facebook was a powerful tool that supported teachers and students to connect with colleagues, share educational content and strengthen communication among teachers, students and parents.

LinkedIn

Thomas observed that LinkedIn was used primarily for professional networking and maintaining lists of contacts of people they know and trust. The trust factor was an important concept as connecting with others required either a pre-existing relationship or some mutual contact (Cochrane & Thomas, 2012).

Blog

A weblog or blog is essentially an online journal where a number of contributors participate by dialoging about a particular topic or focus. Like other social media, blogs allow users to post personal content, to comment on and connect to other media sites, and to make observations about other users' posts (Du & Wagner, 2006). Blogs today are most often provided by hosting services such as Blogger, ModBlog, and Xanga. Sophisticated and larger users may need to host their own blogs (Du & Wagner, 2006).

Twitter

Twitter is a social networking site that is often termed a micro blogging service. In contrast to Facebook, Twitter limits posts or updates to 160 characters. Twitter makes for a faster mode of communication because of the relatively short post lengths (Tseng, 2007). The average blogger may update every few days whereas the average micro blogger will update several times a day (Java, 2007).

2.9 Benefits of social media in teacher education institutions

Social media technologies provide opportunities for individual expression as well as interactions with other users (Arnold & Paulus, 2010). The use of social media in education has encouraged students to develop connections with peers, establish a virtual community of students and ultimately increase their overall learning (Fewkes& McCabe, 2012).

The flexibility of social media tools enable teachers and students to obtain high quality materials, update lecture note at any given time, facilitates self-learning, support group work, and support laboratory learning tools such as virtual labs etc. The use of social media tools to conduct lesson provide various opportunities such as Independent learning, group learning, collaboratively working on assignment, downloading lesson content, interacting with teacher,

tracking learning, scheduling lesson activities and developing instructional materials(Tafawa,2012).

Social media integration in teaching and learning has strengthened the learning environment and culture, fuelled by growth in the internet, with decreasing costs, increasing band width, and a growing band content. Social media shifts teaching from teacher centered to learner centered and enhance the quality of teaching and learning.

Students receive learning materials through the internet at anytime, anyplace and customize the content to suit their needs (Jeong, 2012). Institutions of higher learning including teacher education institutions gain various benefits such as content standardization, personalized institutions, accountability on demand availability, reduced cycle time, increased convenience of students and reduced costs.

Laird and Kuh (2005), shows that students who use social media for academics have a higher possibility of contributing and participating in active, academic collaboration with others. This collaboration promotes a deeper connection between the students, educators, and course content (Mehdinezhad, 2011). Students are empowered to collaboratively work on the same task through social media technologies in classrooms and outside classrooms. This stimulates the students to think critically and individual development (Kuh& McCormick, 2011).

Social media technologies support active teaching learning to strengthen creative learning process (Shoshani& Braun, 2007). They further indicate that it provides an opportunity for students to expand their learning environment since only a portion of learning occurs within the confines of a classroom (Schwämmlein, &Moskaliuk, 2012). The teacher and students use social media tools such Google drive to work on the content collaboratively in classroom and outside classroom environments (Trathen, &Koppenhaver, 2010). It builds a system of

relationships between peers, provides instant pathways for disseminating and enhancing course-related knowledge outside the confines of the traditional classroom (Fewkes& McCabe, 2012).

The ability to communicate with each other in one location allows s to build on conversations, whether related to course content or not. This increases the likelihood of having greater learning because students are adding to the dialogue beyond that of the prescribed topic, including discussions that were originally posted by a moderator or professor (Hurt, 2012). Furthermore, sharing and creating information through social media merely requires   understanding its appropriateness for a given topic (Wang, & Chang, 2013). By providing students with a common experience within a virtual community, they are able to dig deeper for content and make connections across multiple sources (Frye, 2010). This ability produces a network of opportunities to increase learning beyond the traditional classroom setting. He further argues that Social media technologies offer potential learning opportunities to larger numbers of students across a wide geographical space at a minimal cost.

2.10 Theoretical approaches to social media integration in teaching and learning

Social learning and development theories states that individual social behavior and socialization are fostered by social interaction, consciousness and social cognition (Vygotsky, 1978). Connections between people and the socio-cultural context in which they act and interact with others frequently provides the basis for personal learning and social development and group collaboration plays a very fundamental role in building cognition (Vygotsky, 1978).

Vygotsky's social development theory states that every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first, between people and then inside the child .This applies equally to voluntary attention, to logical memory, and to the formation of concepts. All the higher functions originate as actual

relationships between individuals (Vygotsky, 1978). This theory further postulates that learning occurs when learners are fully engaged in social interaction. The concept is referred to as ''Zone of Proximal Development'' which asserts that skills obtained collaboratively exceeds skills obtained individually.

Vygotsky's theory forms the basis for the social constructivist theories of learning which claim that learning is an active and constructive process (Vygotsky, 1978). The social constructivist approach is based on tenets that learning is self-governed, problem-based and collaborative. According to Alexander (2008), social software tools can support a social constructivist approach to networked learning by providing learners with personal tools that can engage them in social networking, and that support group interaction and collaboration. Learning is a social process which demands interaction and collaboration (Panday, 2009). The core activities in the learning process include, but are not limited to: problem solving by students and collaboration and students self-management. Unlike classroom and traditional learning management-based learning, the emphasis of social networked learning is to transform traditional learning beyond educator-centred learning to achieve learner-centred, problem-based and collaborative learning environments (Alexander, 2008). As such, this form of learning focuses on understanding learners' views and feelings and on creating conducive environments towards problem solving other than just imparting knowledge to them (Nichols and Anderson, 2005).

2.11 Theoretical model

To understand why people accept or reject new social media platforms has been one of the most challenging issues in the study of new technologies .Among the various efforts to understand the process of user acceptance of information systems, the Technology Acceptance Model (TAM) introduced by Davis (1986) is one of the most cited theoretical model. This model explain key factors of user acceptance of information systems including social media and also predict the relative importance of the factors in the integration of technological systems (Davis, Bagozzi, &

Warshaw, 1989). The model is an attempt to derive "the determinants of computer acceptance that is general, capable of explaining user behaviour across a broad range of end-user computing technologies and user populations, while at the same time trying to be parsimonious and theoretically justified.

The current study acknowledges the above theories and goes further to focus on social media integration in teaching and learning.

From the literature reviewed above it is evident that most of the research was done in developed countries. Similarly, there is limited research done on social media integration in teaching and learning processes. This therefore, gives me the motivation to research on the requirements for proposing a model to integrate social media platforms in the teaching and practices in teacher training institutions in Uganda.

2.12 Existing models on social media platforms

2.12.1 Model for evaluating Social Media learning impact on educational achievement

Leach (2013) indicates that the quality of learning depends on the usability of the device, social technology, and interaction to allow students to absorb information. Also claims that the availability of robust technology support the integration of social media platforms in teaching and learning practices. Furthermore, level of social media use depends on the availability and access to internet services in teacher training institutions. This implies that students and teachers will be able to interact with each during teaching and learning practices.
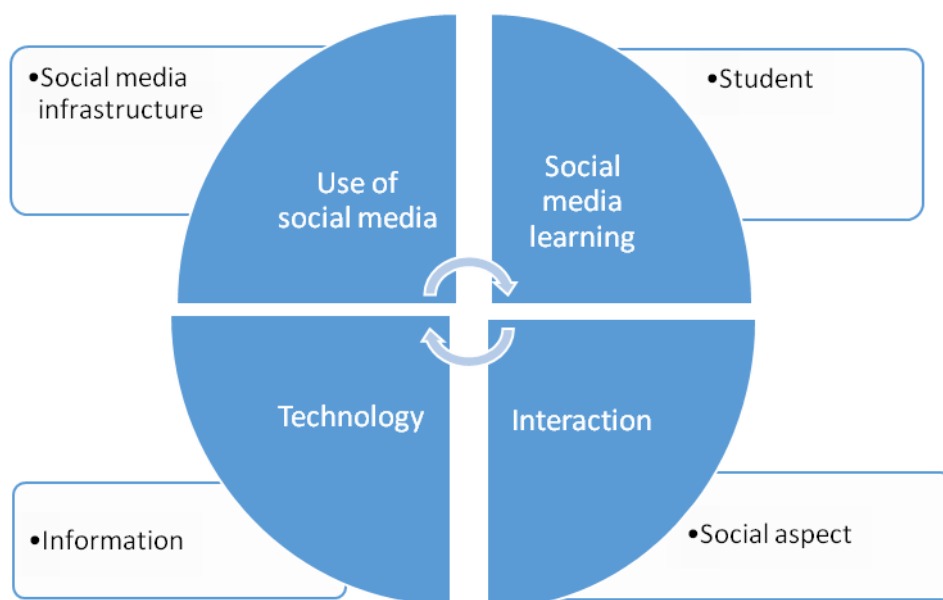
Figure 2.1 Leach model (2013)

Social media learning requires use of mobile devices such as smart phones, tablets or computers to interact or collaborate with each other during teaching and learning practices through social media technology. Students in teacher training institutions are highlymotivated to interact socially with their peers. Furthermore, the new generation overlooks printed learning resources such as textbooks, journals, newspaper and instead seeks for electronic resources. This model further indicates that Facebook, twitter and Google + were the most commonly used platforms in teaching and learning practices. Incorporating social media platforms in teaching learning practices makes lesson presentation innovative and supports students to carry out personal research on academic issues any time.

Position on the model

The model for evaluating social media learning impact on educational achievement presents key requirements that are very crucial for the integration process of social media platforms in teacher training institutions in Uganda. However, this model may not be applicable for the Ugandan

context because it assumes that institutions in Uganda already know the benefits of social media integration in teaching and learning practices. Furthermore, it does not consider issues of top management support and policies to regulate the integration process. The observed institution's strategic plan indicates that these elements were not considered yet they are important in integration process of social media platforms. Therefore, this model was not adopted for this study.

2.12.2 The D & M model

The success and quality of social media platform may be measured in the same manner like the success and quality of an information systems. This has been used in over 300 scientific papers for measuring the success of social media platforms. The dimensions of this model are quality of information, the use of social media platforms, user satisfaction, individual impact and institutional impact.
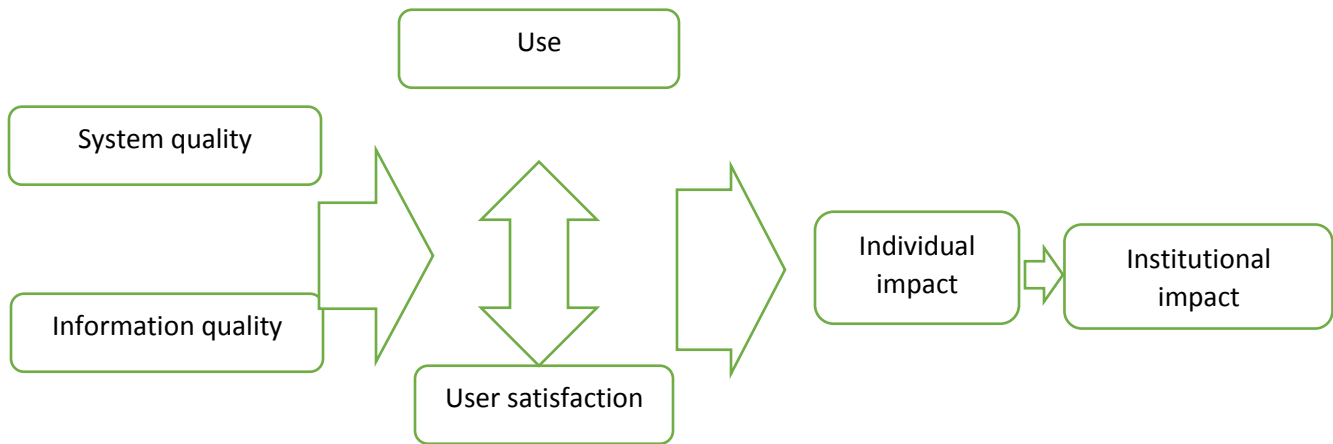
Figure 2 .2 De-Lone and McLean model (2003)

Description of each components

Component	Description
The system quality	The system performance
The information quality	The quality of the system output
The services quality	The efficiency of the support services provided for the system users
The intent to use	The perceived behaviour of system use
The use of the system	The actual behaviour of system use
The user satisfaction	The general perspective of users on the system
Benefits	The advantages of using an information system

The use of D & M model to measure the success of the social media platforms does not consider issues related to culture, infrastructure, skills and knowledge of users, Policies and key stakeholders.

System quality

Social media integration in teaching learning practices requires to understand the system quality of these platforms before and during integration process. This indicates that teachers, students and other stakeholders have to be involved in the determining the requirements for the system that meets their training needs. In my view, system quality is a key requirement in social media integration process. It determines the rate at which electronic resources can be accessed and used by both teachers and students. This indicates that the proposed model should consider this requirement in the design and development. However, some of the social media devices in teacher training institutions do not support the use of new technologies.

Information quality

Teachers and administrators were worried about the quality of electronic resources. This implies that teachers and administration have provide proper guidelines on what kind of information to be accessed and references. In my view, this requirement is missing in teacher training institutions and it has created opportunity for students to spend most of their time online accessing non-academic resources (MOESTS, 2013).

Support services

The integration process of social media platforms requires the institutions to consider aspects of user support in case problems. Otherwise, teachers and students needs to immediate support to avoid delays that may frustrate them during learning practices. This implies that if not attended to, teachers are likely to opt to use lecture and talk methods.

Perceptions of users

In my view, perceptions of teachers and students are key requirements in the integration of social media platforms in teaching and learning practices. However this model does not issues of performance expectancy, attitude, facilitating conditions and effort expectancy of teachers and learners. Also these requirements should be considered in the design and development of the proposed model if found applicable.

Position on the model

This model has requirements that are very important in the integration process of social media platforms in teaching and learning practices. This model suits well in institutions that are already familiar with social media platforms. It is silent about users' skills and knowledge, expected benefits, top management support, policies, and key stakeholders. Therefore this model may not be adopted for this study.

2.12.3 The model for predicting and enhancing higher education teachers' participation in social media learning
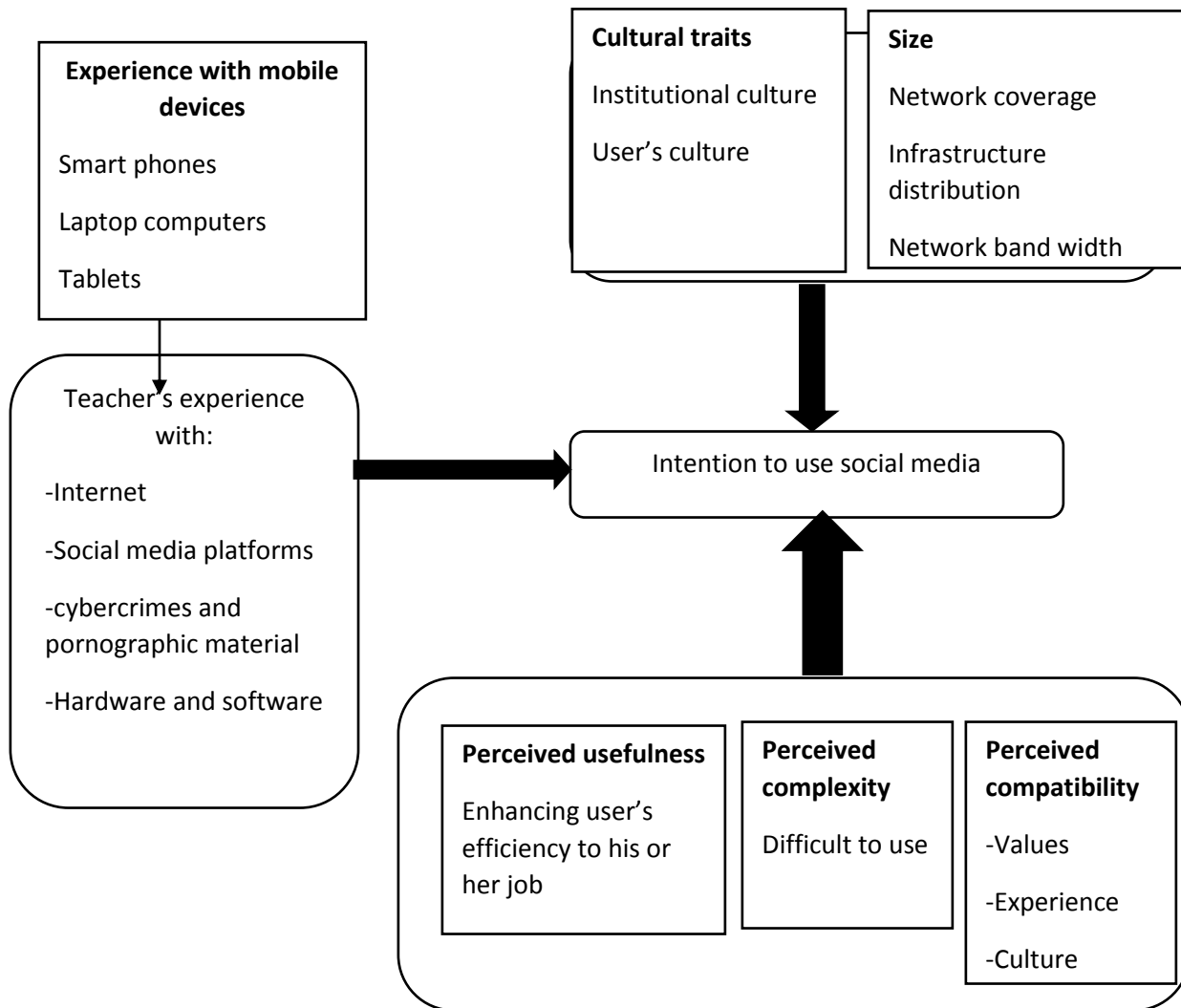
Figure 2.3: Tareka (2013)

This model indicates that teachers experience with the internet, teachers experience with mobile social media devices, perceived usefulness (the extent to which teacher believes that using social media platforms would enhance his or her efficiency), and perceived complexity (the extent to which teacher finds that social media is difficult to use).

Perceived compatibility (the extent to which instructor believes that social media is compatible with existing values and experience),

Perceived trial-ability (the extent to which instructor believes that there are chances for e-learning to be tested before applying it)

Perceived visibility (the level of which the results of social media learning are visible). In this respect, they concluded that these variables have a significant positive influence on user intention to use social media platforms.

Position

The requirements of this model are essential in the integration of social media in teaching and learning but it doesn't talk about infrastructure, institutional preparedness and Social media policy strategy issues. Therefore, perceived ease of use, experience and culture requirements will be adopted for the proposed model.

2.12.4 A model for social media learning adoption (developing countries)

Administrative support

User education

Provision of training and workshops to users

Technical support:

Maintenance and troubleshooting

Infrastructure

Hardware and software

Electricity

Social media devices

Internet access

System interactivity

Connectivity and accessibility

Perceived usefulness

Job improvement

Users' attitude

Easy to learn

Experience of users

Gender

Age

User intentions

Social media use

User-friendliness

Budgeting and accountability

Figure 2.4: Maleko & Lubega (2011)

The dimensions of this model are perceived System usefulness, perceived ease of use and user intensions. Perceived usefulness is dependent on Self Efficacy towards new learning media, ones experience in the use of web and internet, availability of reliable technical support in case of difficulties, perceived mental belief that the system can be learnt in short period of time and with less effort and infrastructure in terms of electricity, computers and internet access.

Other dimensions were user friendliness of the new learning media, the culture of the institutions in terms of ethics for accessing online resources, budget planning and allocation to ICT projects and accountability of those leading higher learning communities.

Position on the model

This model has key requirements that may suit the situations of teacher training institutions in Uganda. This model presents elements that were missing and hindering ICT including social media platforms integration in teacher training institutions in Uganda MOESTS (2013). In my view, all the requirements are essential in the integration of social media platforms in teaching and learning practices and should be considered for the proposed model. Therefore, this model was adopted to evaluate other models to determine requirements for the proposed model.

2.12.5 Willingness to adopt social media platforms model
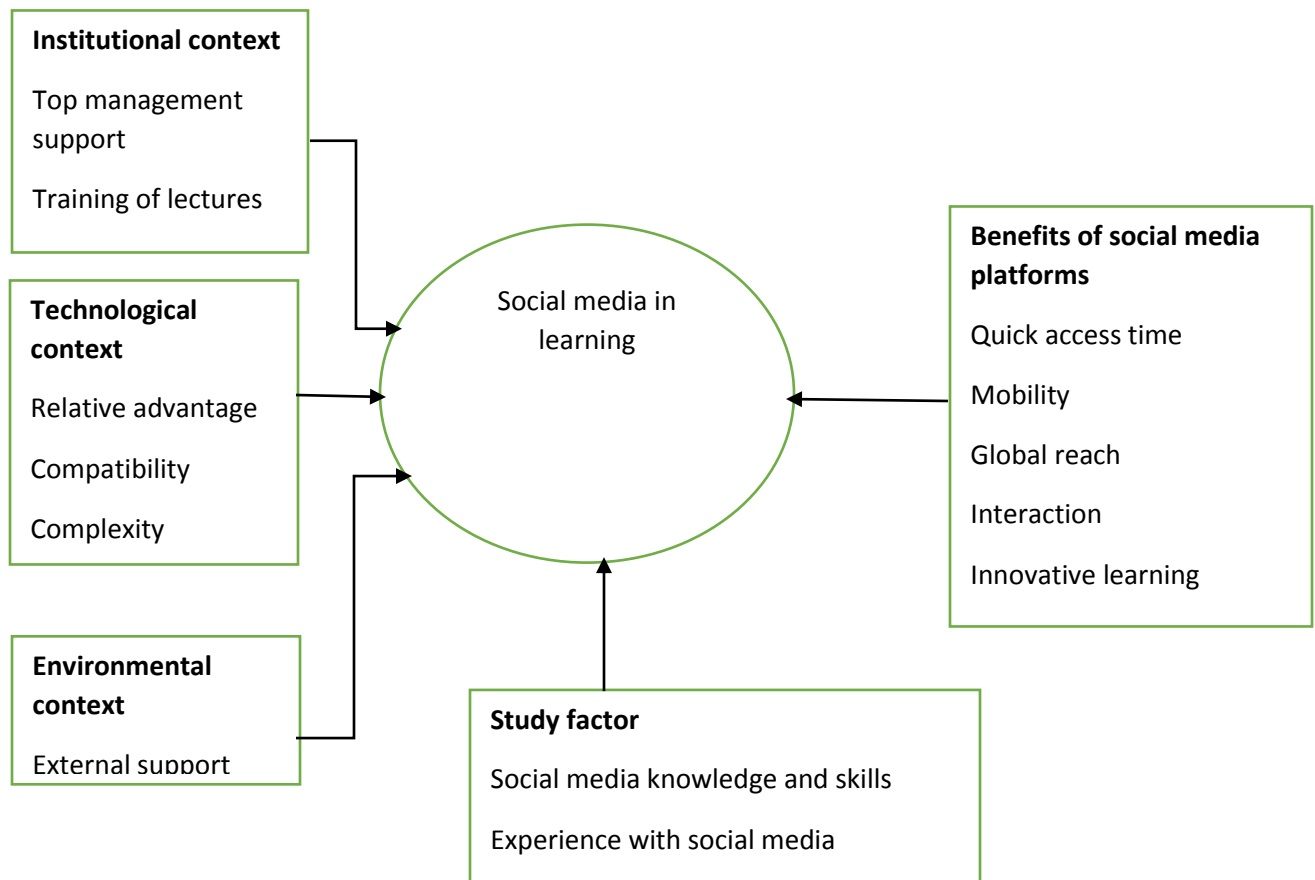
Figure 2.5: Ooko& Odour (2013)

Relative Advantage is defined as the degree to which an innovation is perceived as being better than the idea it succeeds (Rogers, 2003). Lee (2004) adds that when an innovation is perceived to offer relative advantage over the institution's current practice, it is more likely to be adopted. Top management support, training of staff and institutional readiness are considered to be requirements that influence institutions willingness to adopt of new technologies including social media. Top management can stimulate change by communicating and reinforcing values through an articulated vision for the institution (Thong, 1999). This means that top management support is critical in creating a supportive climate for the integration of new technologies.

Position on the model

This model suits well Universities and other tertiary institutions that have adequate infrastructure, well trained staff, strategies and clear policies. It assumes that reliable infrastructure, skilled staff, clear strategies and policies were already in place. Reports and observations indicate that these requirements were missing in teacher training institutions.

2.13: Existing models' requirements

Model	Requirements	Common requirements
Social media learning impact	-Infrastructure -Information -Technology -Social aspect -Student	i) Social media infrastructure ii) Information quality iii)Technology iv) Top management support v) Experience
D & M model(Success and quality of social media platforms)	-system quality -information quality -satisfaction -impact	
Model for predicting teachers' participation in electronic learning(Social media)	-Perceived ease of use -Perceived complexity -Perceived compatibility -Teachers' experience with internet -Teachers' experience mobile devices	

	- Institutional cultural traits and its size	
Social media learning acceptance	-Technical support -Experience -Infrastructure -User-friendliness - Budget -Culture -Perceived usefulness -Easy to learn -User intention	
Willingness to adopt social media platforms	-Top management support -Training of staff -Readiness -Relative advantage -Compatibility -Complexity -External support -Skills and knowledge -Experience	

12.4: Summary of model requirements from other models

Infrastructure	Experience of staff	Technologies	Top management support
-Electricity	-Skills and knowledge	-Web based	-Technical support
-Computers	-Information quality	- Mobile	-Training of staff
-Smart phones			- Policies
-Tablets			-Budget
-Internet access			

Benefits of social media platforms in teaching and learning practices

Sharing information

Collaboration

Discussion

Modifying user-generated content

12.5: Conceptual model

Social media infrastructure

- Hydro and thermal sources of power supply
- LAN and WiFi internet connectivity
- Laptop computers
- Desktop computers
- Smart phones
- Tablets

Experience of teachers

- Knowledge and skills
- Information quality
- Gender
- Age

Top management support

- Technical support to users
- Technical manuals for guiding users
- Developing and approving policies
- Budgeting for social media platforms
- Hiring and recruiting technical staff

Technology acceptance model

Perceived usefulness

Perceived ease of use

Attitude toward using social media

Infrastructure conditions

- Hardware and software for social media devices
- Internet connectivity
- Sustainability plan
- Social media devices

Human resource

- Basic skills
- Intermediate skills
- Advanced skills

The conceptual model indicate that perceived ease of use, perceived usefulness and attitude of

users were the major determinants of social media integration teaching and learning. Attitude of

a user towards using social media platforms is a major determinant of whether the user will

actually use or reject social media platforms. The attitude of the user can be influenced perceived

usefulness and perceived ease of use. These beliefs can be directly influenced by experience of users, top management support, infrastructure, training of users, gender, age and readiness of the institution to integrate social media platforms in teaching and learning. The readiness of the institution and teachers to integrate social media platforms in teaching and learning were directly influenced by the status of available infrastructure, skills and knowledge.

3.0 CHAPTER THREE: METHODOLOGY

3.1 Introduction

This chapter presents a description of the study design, the area of the study, information source, description of the population and sampling techniques, procedure for data collection, data collection instruments, pretesting data collection instruments and ethical considerations.

3.2 Study design

The study employed both qualitative and quantitative methods to collect data. Quantitative method involved collecting and converting data into numerical form so that statistical calculations can be made and conclusions drawn. To get an in-depth and understanding of the integration status of social media in teaching and learning, qualitative tools were also be used.

3.3 Area of study

The study was conducted in Kole district at National Instructors College Abilonino. The study involved students, teachers and administrators of the college. This institution is charged with training of teachers for technical and Vocational institutions in Uganda.

3.4 Study population

A population is the collective or totality of the subjects having some characteristics in common that the research study wants to address and where the interventions are to be made (Amin, 2005). The administrators, heads of departments, teachers and support staff were involved in this study.

3.4.1 Sample size and selection technique

The study employed Krejcie& Morgan table (1970) to determine the sample size of the study.

Table 1: Number of participants

Category	Population	Sample size	Sampling technique
Administrators	4	4	Purposive sampling
Heads of departments	9	9	Purposive sampling
Teachers	26	26	Purposive sampling
Support staff	28	28	Simple sampling
Total	**67**	**67**	

3.4.2 Sampling technique

The study used simple random sampling method to select students to be involved in the study. The study also employed purposive sampling method to select administrators and teachers since they hold specific positions in the College.

3.4.3 Data collection methods

The study used both quantitative and qualitative methods to collect data from primary and secondary data sources in the college.

3.5 Data collection instruments

The study employed questionnaires to obtain data from primary sources and a checklist to verify data from secondary sources in the college.

3.5.1 Questionnaire

A questionnaire is a data collection tool which has instructions on paper to guide and explain to the participants, and recording of responses. It is a tool suitable for collection of data that is buried deep within the minds or attitudes, feelings or reactions of people. A questionnaire can be mailed to people thousands of miles away, whom the researcher may never see. This too is suitable because of its ability to reach many participants in short time. The researcher used the questionnaire because it could be used to collect data from a large sample while observing confidentiality and it saves time. The questionnaires were both structured and unstructured questions arranged in sections according to order of the research questions.

3.5.2   Checklist

The study employed a checklist tool to assess existing requirements for social media integration in teaching and learning in the college. A checklist contained items 1-11 and two different columns of available and not available which the researcher completed by ticking as applicable against each item.

3.7 Data quality

Data collection tools were pretested on 10 respondents to ensure that the questions were accurate, clear and in line with objectives of the study. This was done to ensure the validity and reliability of the designed tools.

3.8 Data collection procedure

After the approval of the proposal, tools were improved with support of the allocated supervisor so that they are well structured to collect the intended data from respondents. These tools were

pretested to ensure validity and reliability. After improving on the questionnaire and a checklist, a letter of introduction was obtained from School of Postgraduate Studies Faculty of Science Uganda Martyrs University. The researcher pre-visited the institution under the study to make appointments for data collection from respondents. The data were collected with the assistance of three research assistants, who were trained by the researcher on how to manage tools.

3.9 Ethical considerations

The researcher requested for approval from administration of National Instructors College to conduct the study in the institution and also asked for respondents' approval before involving them in the study. The researcher briefed the respondents about the research objectives, importance of the study, roles of the respondents, and how they would benefit from the study findings. In addition, the researcher assured the respondents about the confidentiality of their data during and after the study.

3.10 Data analysis

The study employed Computer packages for social scientists (SPSS) to analyze the collected data. Data were entered, sorted and cleaned to remove redundant data. Both quantitative and qualitative responses were computed to give means and frequencies and percentages

CHAPTER FOUR: DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.0 Introduction

This chapter presents findings from the study which were obtained by use of a questionnaire with structured questions and a checklist that was used to assess existing social media requirements available in the college. This section also presents the demographic characteristics of respondents, response rate, proposed requirements and confirmed requirements for social media integration in teaching and learning.

4.1 Response proportion of respondents

In the study, 60 questionnaires were distributed to respondents but 44 were returned valid which constitutes 73%.

4.2 Demographic characteristics of the respondents

The demographic characteristics of respondents were gender, age range, education level, period worked in the institution, knowledge of social media and ownership of mobile social media devices.
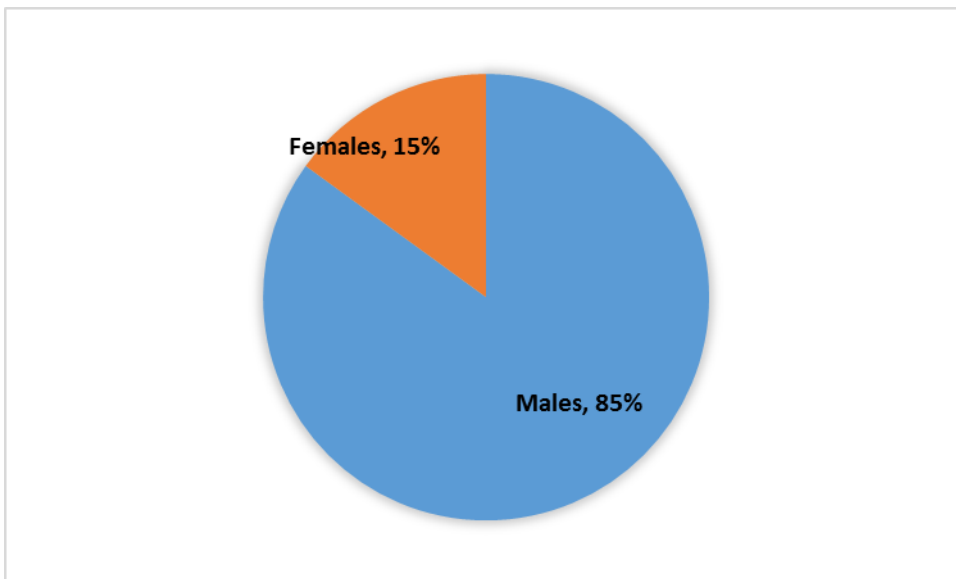
Figure 1: Gender respondents

The results of the findings indicate that most of respondents were males(85%) compared to females(15%). The majority of the respondents who participated in the study were males. This implied that teacher training institutions were dominated by male staff.
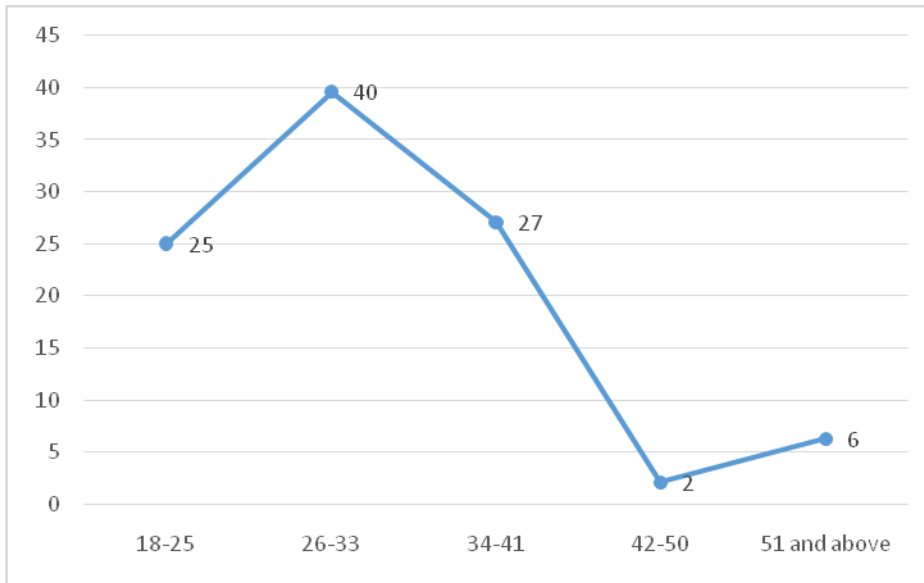
Figure 2: Age range of respondents

Resuts in figue 2 shows that the respondents were in the age range of 18-25,26-33,34-41,42-50 and above. This implies that respondents who participated in the study were mature enough to make concrete decisions about social media integration in teaching and learning in teacher training institutions.
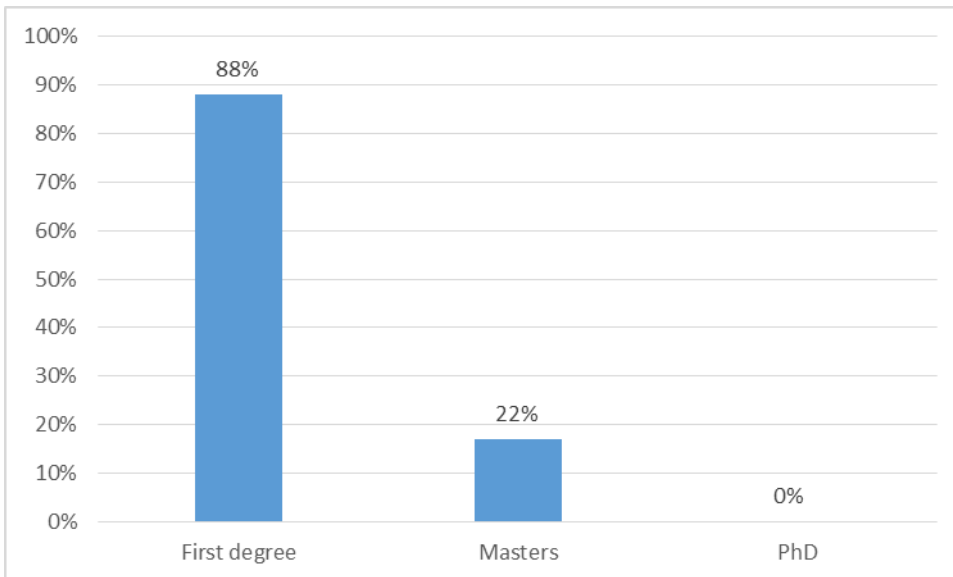
Figure 3: Education level of respondents

The results in figure 3 indicate that respondents who participated in the study had first degrees (88%) and master's degree (22%).This shows that respondents were informed and their views about the requirements for social media integration in teaching and learning were reliable. Furthermore, most of the respondents were the youth (88%) who are digital natives and this makes the results of this study more reliable.
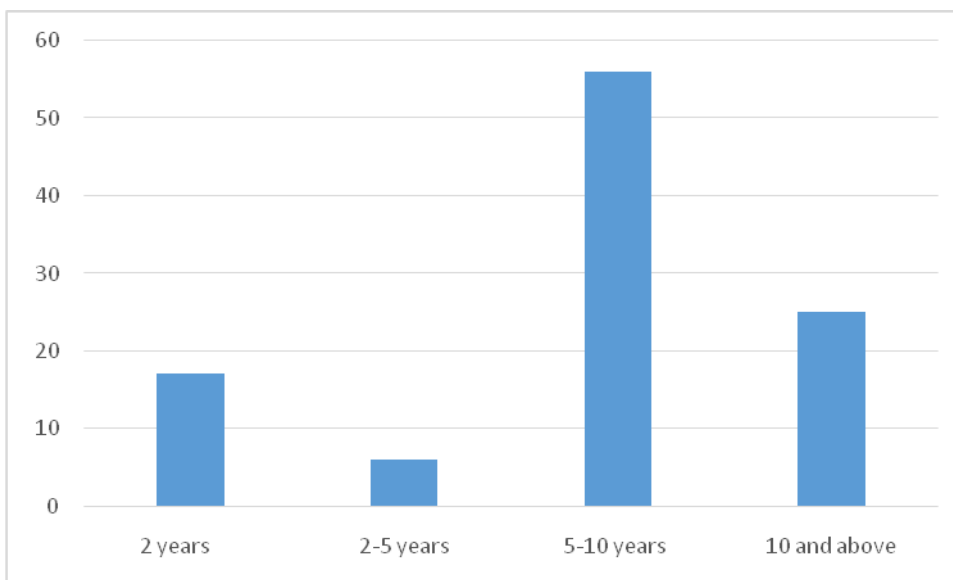
Figure 4: Period worked at the college

The results in the above figure indicates that most of the respondents had worked in the college for more than five years (56%). This implies that their views about existing models were reliable and applicable to the prevailing environments in teacher training institutions.
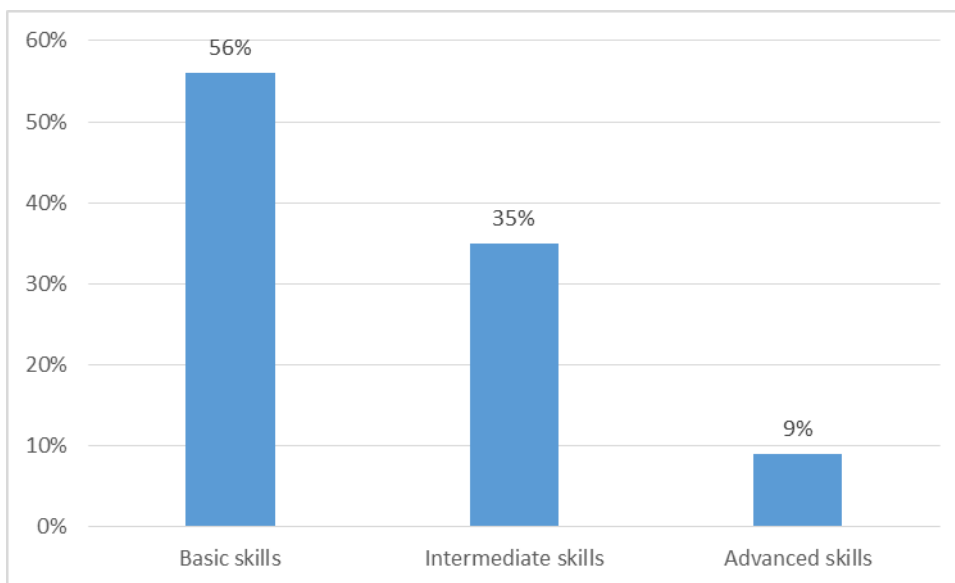
Figure 5: Knowledge and skills of respondents

The results in the above figure indicates   that repondents were skilled and knowlegable about

the use of social media platforms in teaching and learning. The study identified skills and knowledge of respodents as basic(56%),intermediate (35%) and Advanced(9%). This implies that all the respondents were able integrate and use social media platforms in teaching and learning sucessfully.
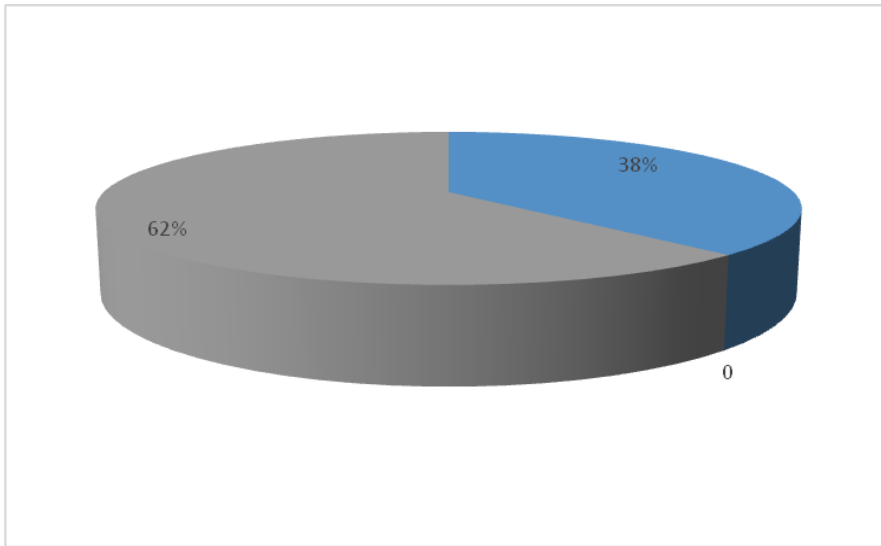
Figure 6: Ownership of mobile devices in the College

The results in the above figure indicates that most of respondents do not own social media mobile devices (62%) compared to 38% of the respondents who owns social media devices such as smart phones and laptop computers. However, this implies that institutions should be equipped with adequate infrastructure to enable all respondents to access social media platforms when required.

4.3 Respondents' opinions on the requirements for social media integration in teaching and learning practices
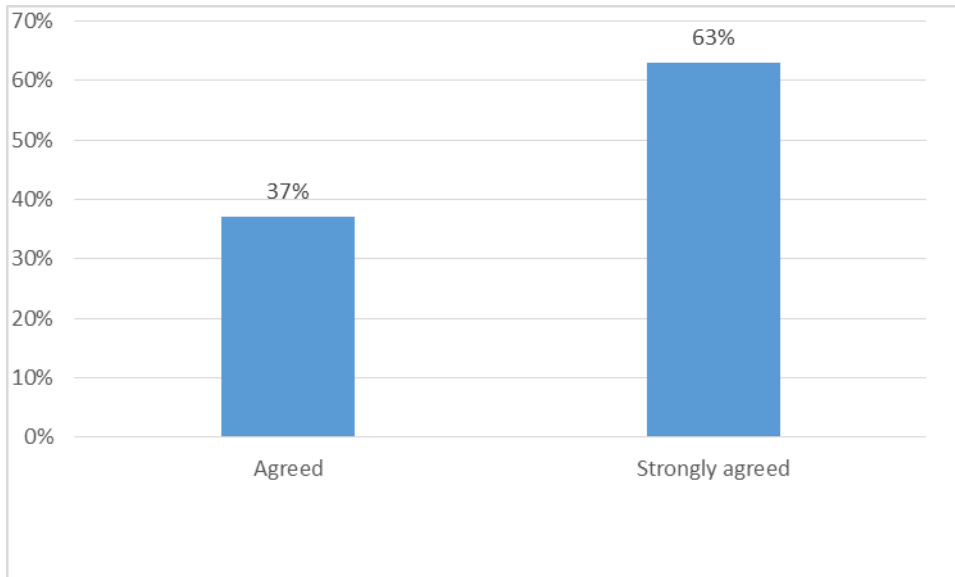
Figure 7: Social media infrastructure

The results in the above chart shows that all respondents (100%) agreed that social media integration in teaching and learning requires adequate infrastructure with high speed internet connection. This agrees with MOES (2013) report that emphasized to strengthen ICT infrastructure in teacher training institutions in Uganda. Therefore, data from literature and primary data agree that infrastructure should be strengthened in teacher training institutions to support the integration process of social media platforms. Therefore, all respondents (100%) were in agreement with the proposed requirements for the model.
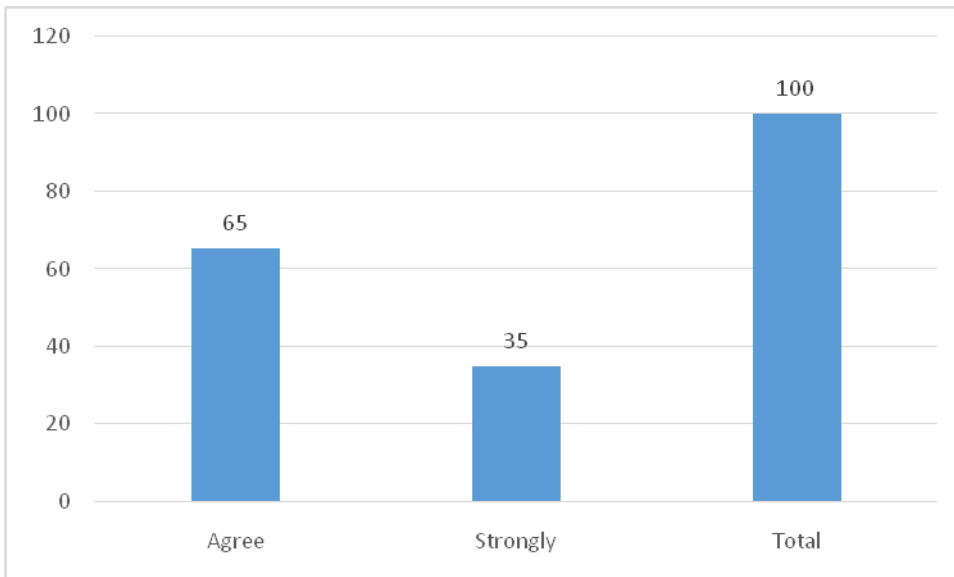
Figure 8: Government and institution policies

The results of the study in the chart above indicate that all respondents were in agreement with the requirement of policies in the proposed model. This implied that social media policies were very important to successfully integrate social media platforms in teaching and learning. However, the results of the checked requirements in the college revealed that they were no policies made by government and the institution to permit, limit or ban the use of social media platforms.
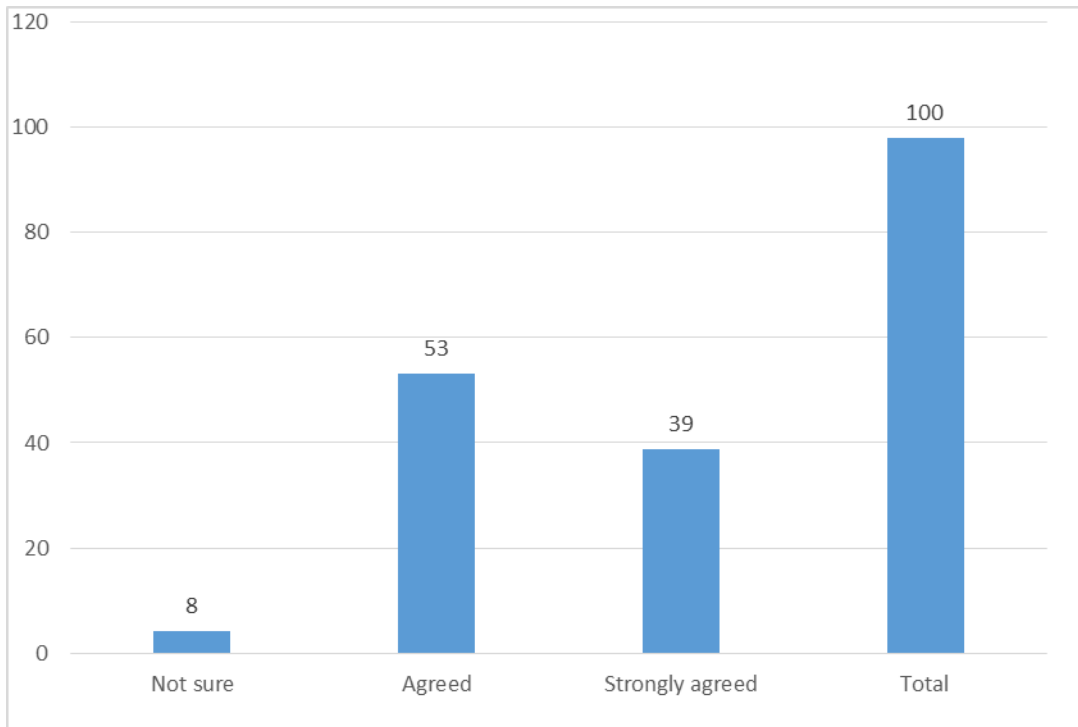
Figure 9: Teachers' competences

Results in the above chart indicate that social media integration depends on teachers' competences on the quality of ICT skills received by teachers during pre-service and in-service studies. Generally, 92% of the respondents agreed that teachers' competences should be considered as a key factor in the integration of social media platforms in teaching and learning. Therefore, the adopted requirements from the model of Oudur and other scholars agrees with the respondents views on teachers' competences. However, 4% of the respondents were not sure whether teachers' competence could affect social media integration in teaching and learning. The study attributed this to lack of interest or awareness about social media use in teaching and learning.
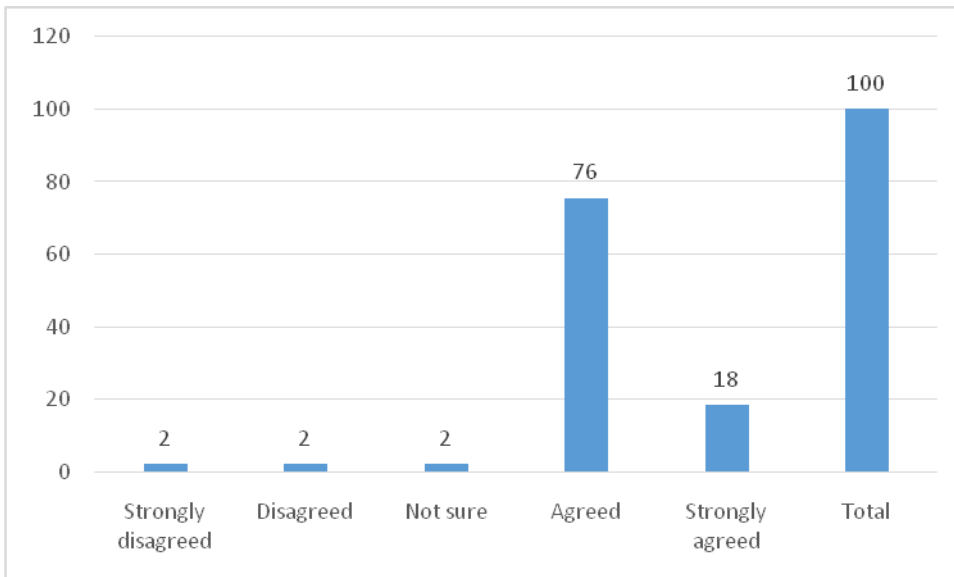
Figure 10: Perceived usefulness

The results indicate that majority of the respondents constituting 94% agreed that using social media platforms would enhance efficiency in teaching and learning. This supports the requirement of perceived usefulness that was adopted from Lubega(2011) and Tareka(2013). However, 4% of the respondents disagreed compared to 2% of the respondents who were not sure.
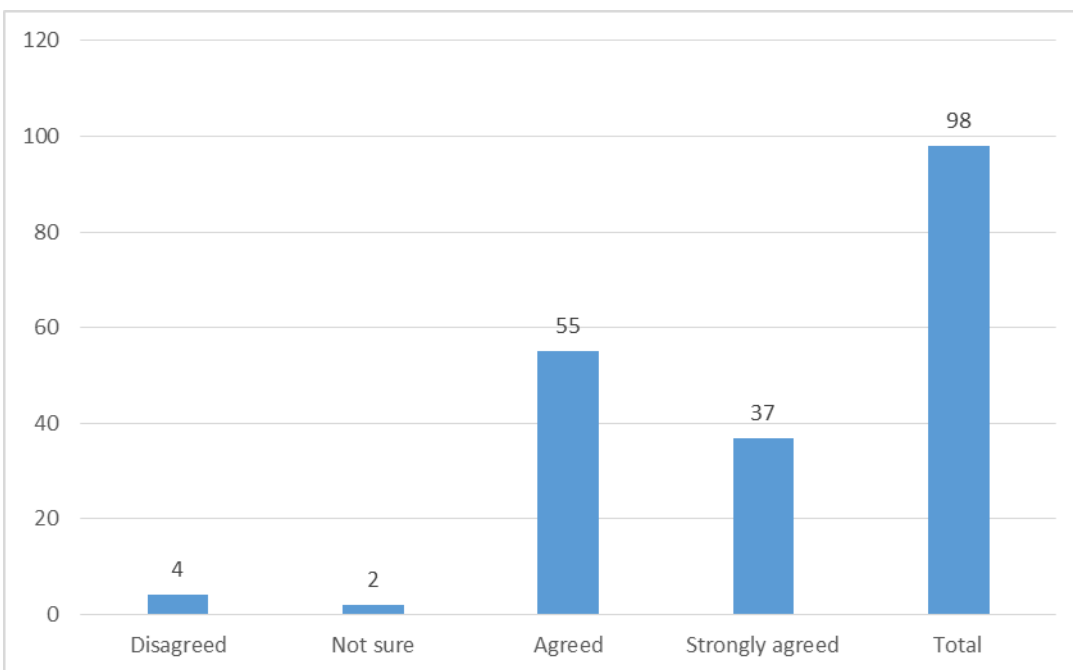
Figure 11: Perceived ease of use of social media platforms

The results of the study show that majority of the respondents constituting 92% indicated that perceived ease of use influences social media integration and use in teaching and learning. However, 4 % of the respondents disagreed while 2% of the respondents were not sure. The requirement that was adopted from Maleko(2011) agrees with the respondents' views on perceived ease of use of social media in teaching and learning.
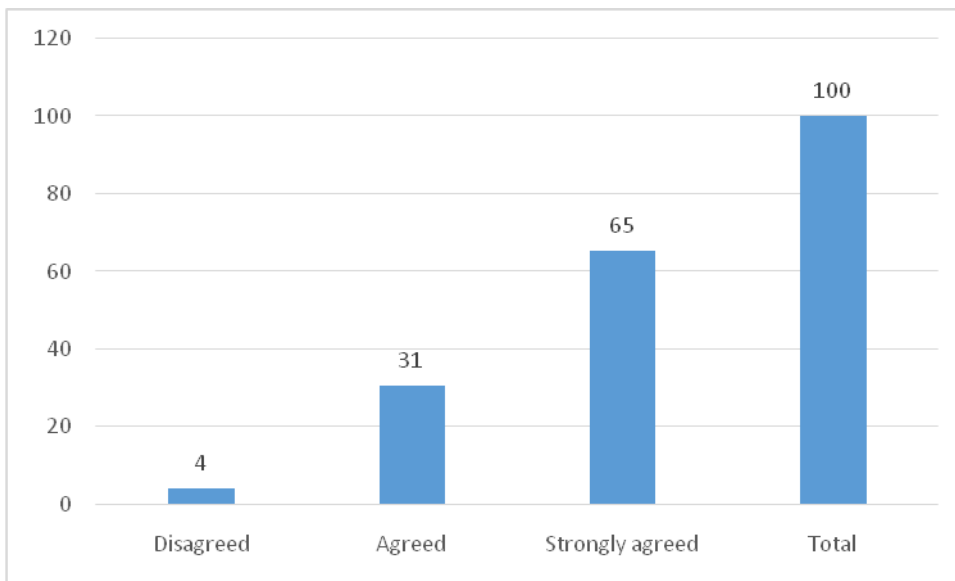
Figure 12: Teachers experience with social media platforms

Results in the above figure indicate that majority of the respondents strongly agreed that teachers' experience with social media platforms is a key requirement in the integration process compared 31% of the respondents who agreed. This implied that 96% of the respondents confirms with the requirement adopted from other models. However, 4% of the respondents were not sure.
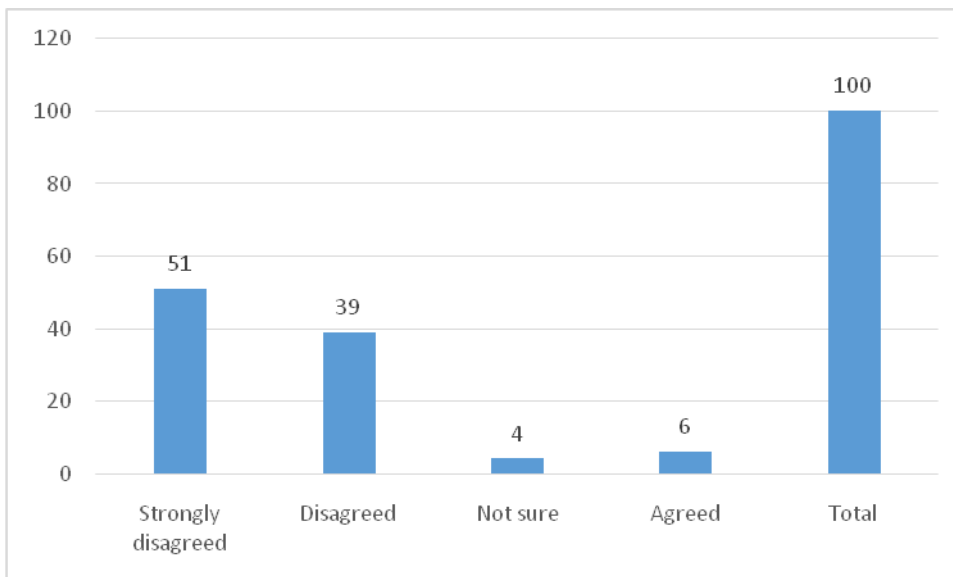
Figure 13: Top management support

The results indicate that 90 % of the respondents were not provided with technical support in case of challenges with social media use by the institution. This implies that the present models available in the college does not cater for the issue of technical support. This differs with the requirements adopted from the reviewed models.However,6% of the respondents agreed that technical support was provided by the college in case of problems with the use of social media.

Generally, this indicated that the level of technical support provided was low. Yet it is a major requirement for social media platforms to be effectively integrated in teaching and learning in teacher education institutions.
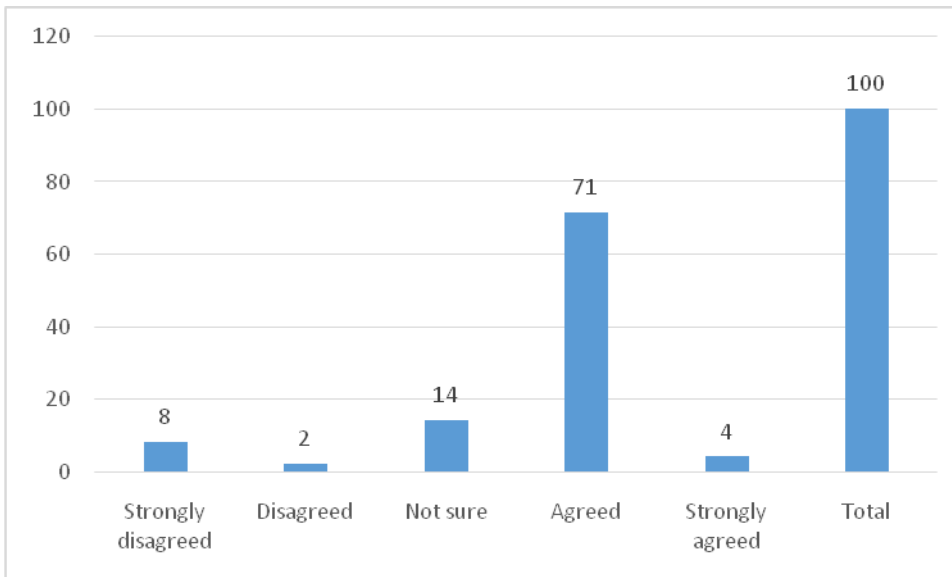
Figure 14: Institution's cultural traits

The majority of the respondents constituting 75% generally agreed that institutional cultural traits were hindering social media integration in teaching and learning in the college. However, 10% of the respondents indicated that cultural traits does not affect social media integration in teaching and learning. This implies that the respondents' views were in agreement with the requirements adopted from Lubega (2011) on cultural traits.
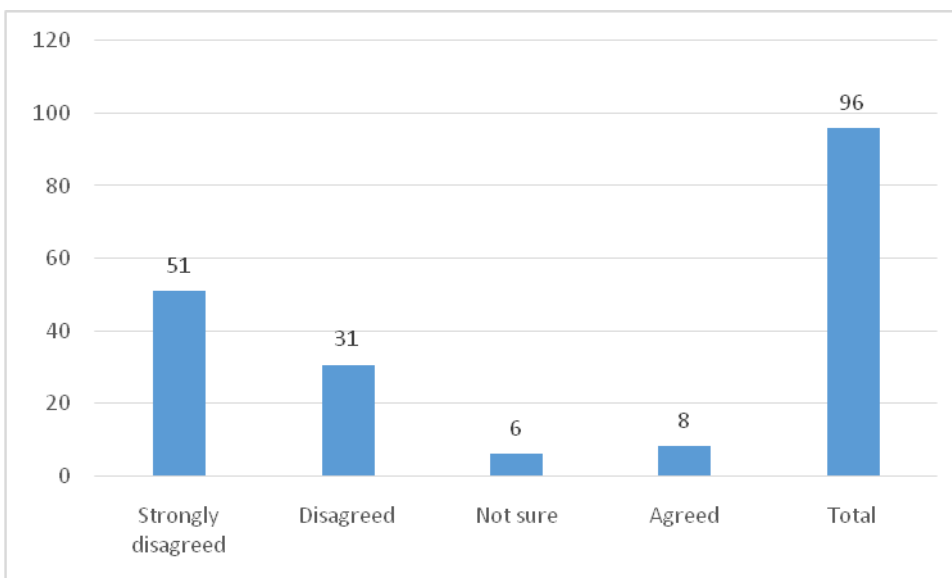
Figure 15: High speed internet connection

Results indicate that teacher training institutions were characterized with low speed internet connectivity (82%). This implied that the use of social media platforms in teaching and learning was inadequate.
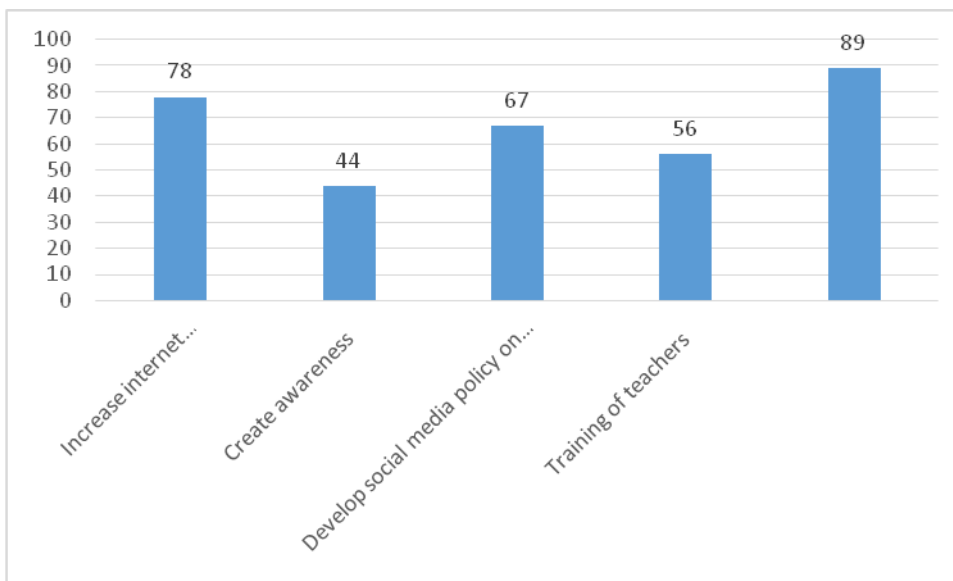
Figure 16: Suggested requirements for social media integration in teaching and learning

The results demonstrate and show that upgrading social media infrastructure (89%), increasing internet speed (79%), training of teachers (56%), creating awareness (44%), setting up electronic learning platforms (11%) and developing policies on social media platforms use and cybercrimes (67%) are key requirements for successful integration of social media platforms in teaching and learning. The suggested requirements agrees with the requirements adopted from the reviewed models.
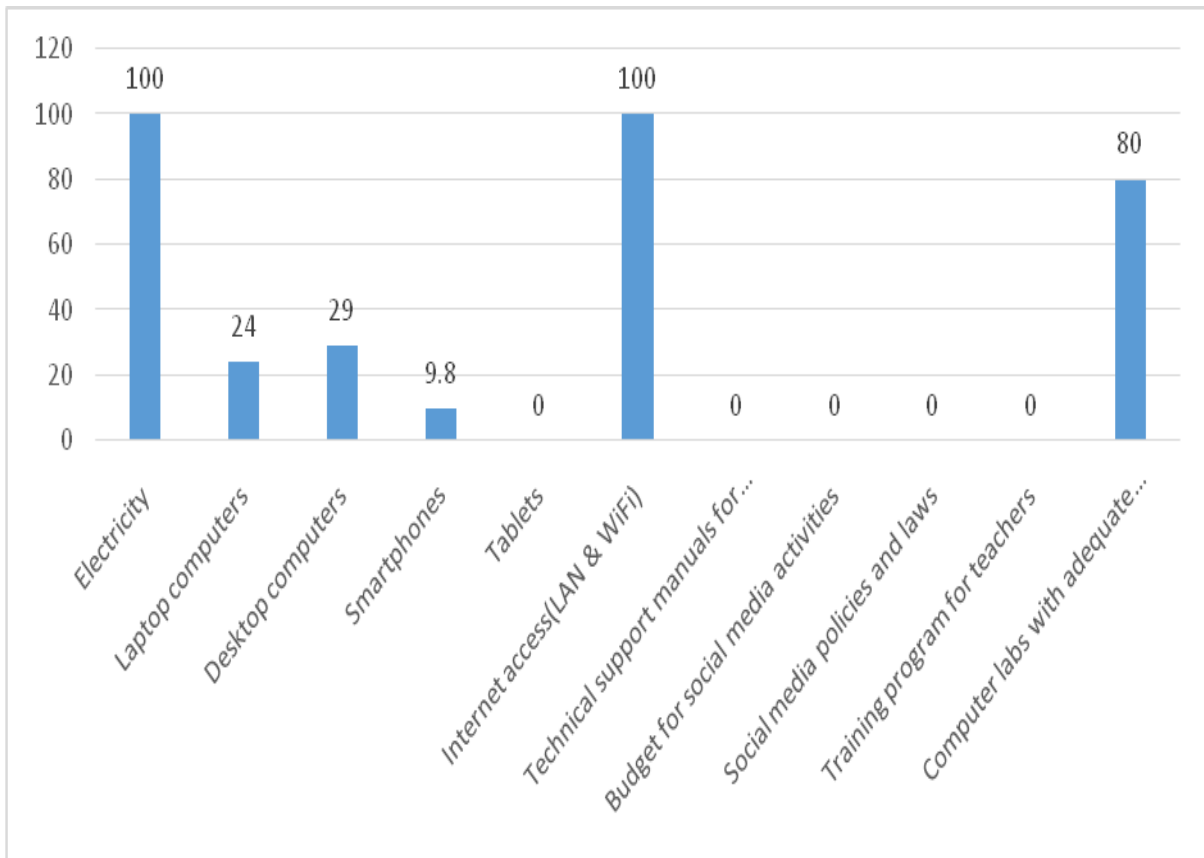
Figure 17: Checked requirements for social media integration

The results show that the existing requirements in the college were electricity (100%), laptop computers (24%), desktop computers (29%), smartphones (9.8%), WiFi and LAN internet connectivity (100%, computer labs (80%) and social media infrastructure plan (100%). However, items such as tablets, policies, budgets and training program for teachers were not available in the college. This implies that some of the requirements available in the college were same as the requirements adopted from the reviewed models.

4.4 Model requirements from field studies

i. Adequate infrastructure to support use of social media platforms

ii. Policies made by government and the institution to limit or ban the use of social media platforms

iii. Teachers' competences

iv. Perceived usefulness and ease of use

v. Teachers' experience with social media platforms

vi. Technical support

vii. Cultural traits

viii. Awareness

4.5 Summary of requirements for the model

Requirements from literature(those on conceptual model	Requirements from field study
▪ Experience ▪ Top management support ▪ Infrastructure ▪ Training of teachers ▪ Gender ▪ Age ▪ Infrastructure status ▪ Human resource ▪ Skills and knowledge ▪ Institution readiness ▪ Individual readiness	▪ Policies made by government and the institution • Teachers' competences • Technical support • Creating awareness • Cultural traits • Infrastructure plan

4.6 Proposed model for social media integration in teaching and learning practices

Social media policy

- Pornographic content

- Cybercrimes:

  i. Blackmailing

  ii. Threats

  iii. Harassment

  iv. Sharing confidential information

Infrastructure plan
- Infrastructure distribution
- Network topology
- Use of hardware and software
- Technical support
- Procurement
- Disposal mechanisms

Awareness
- Social media platforms
- Use in teaching and learning
- Benefits and disadvantages

Key stakeholders and their roles

- Teachers

- Students

- Parents/Guardians

- Examining body

- Governing council

- Development partners

Extension of the model

Social media infrastructure

- Hydro and thermal sources of power supply

- LAN and WiFi internet connectivity

- Laptop computers

- Desktop computers

- Smart phones

- Tablets

Experience of teachers

- Knowledge and skills

- Information quality

- Gender

- Age

Top management support

- Technical support to users

- Technical manuals for guiding users

- Developing and approving policies

- Budgeting for social media platforms

- Hiring and recruiting technical staff

Perceived usefulness

Perceived ease of use

Attitude toward using social media

Infrastructure conditions

- hardware and software for social media devices

- internet connectivity

- Sustainability plan

- Social media devices

Human resource

- Basic skills

- Intermediate skills

- Advanced skills

The study combined requirements from existing models and field study to propose the model for social media integration in teaching and learning in teacher training institutions in Uganda. The model was extended by adding policies to limit or ban cybercrimes and pornographic content, creating awareness about social media platforms, cultural traits and the infrastructural plan. The institution must plan for the infrastructure by developing and managing the process. The college strategic aims and requirement that is set by the stakeholders should be used to guide the social media infrastructure planning. Several considerations should be made when planning for infrastructure in the institution. These include availability, accessibility, the internet facilities and their support services

The proposed model has detailed requirements that will pave way for institutions to adapt social media platforms in teaching and learning in teacher institutions. This model highlights on the requirements that must be in place in institutions and the expected outcomes. This model puts more emphasis on equipping institutions with reliable social media infrastructure such electricity, internet connectivity, smart phones and tablets among others. This will facilitate students and staff to fully use social media platforms. Furthermore, this model considers top management support as the key requirement that must be strengthened by all institutions intending to integrate social media platforms in teaching and learning practices. This model focuses on issues that include technical support, users' skills and knowledge, policies, cultural traits, age, gender and perceived ease of use. This model further emphasizes readiness of the institution and individuals. The requirements of the model are described in details below;

Social media infrastructure

The success of social media platforms depends on the availability of infrastructure and their access. MOESTS (2013) report indicate that the integration of ICT including social media was hindered by lack of infrastructure. Well-equipped institutions with social media infrastructure

will support students and staff to use these platforms. The basic infrastructure requirement highlighted by the proposed model include electricity, computers, internet connectivity and mobile devices such as laptop computers, smart phones and many others.

Mobile technologies

Technology allows access to web sites anytime, anywhere through mobile communication devices. Flexibility of access provided by new technologies has a significant influence on the frequency of accessing social media platforms. Social media depend on mobile and web-based technologies to create highly interactive platforms through which students and teachers share, co-create, discuss, and modify user-generated content.

Top management support

Top management can encourage change by communicating and reinforcing values through an articulated vision for the institution (Thong, 1999). This means that top management support is critical in creating a supportive climate for the integration of new technologies. For instance students and teachers requires immediate solutions in case of technical problems to avoid interruptions in teaching and learning practices. Resources for social media integration should be considered in the institution's budget. Top management should also consider issues of training teachers to address issues of skills gaps and to match with modern technologies. In addition, top management plays a big role in policy and decision making at institutional that are very crucial in the integration process.

Government policies

Social media integration can teacher training institutions in Uganda can be affected by policies made and approved by the government on restrictions on social media use. Government may view social media platforms as a threat to political stability and decide to restrict to Facebook, Twitter, YouTube, Google plus and many others. For example, the Government of Uganda

suspended use of social media platforms during presidential elections. Therefore, such restrictions if not considered can affect the normal teaching and learning process.

Institutional policies

Policies made and approved by governing councils can permit or restrict on the use of social media platforms in teaching and learning. Teachers and top management fears that it promotes immoral behaviors amongst students. Also teachers don't trust information posted on social media platforms due to lack of standards on the quality.

Culture

Institutions normally face the obstacle of users' culture in adopting new technologies including social media in teaching and learning. Some users including teachers and top managers of teacher training institutions at times say that "we have never done it that way'. Social media cannot be regulated and it is against our cultural rules. In most institutions when a new technology is implemented and encounters the institutional culture, the culture will push back and almost win. This attitude indicates fear of new technology and this can be as the result of gender and age.

Infrastructure Plan

The institution must plan for the social media infrastructure by developing and managing the process. The institution strategic aims and requirement that is set by the stakeholders should be used to guide the social media infrastructure planning. Several considerations should be made when planning for infrastructure in the institution. These include availability, accessibility, the internet facilities and their support services. It is also recommended to document the plan after it has been made. The documentation should include; diagram for the distribution of the available social media facilities to instructional rooms within the institution, a detailed development of the institution's network infrastructure, the use of new application software packages, the ICT technical support, making procedurals change that involve security related issues, the purchase

of planned goods and services, environmental friendly disposal mechanisms, expenditure, including estimates for present and following year.

Cybercrimes

Cyber bullying is a common online criminal activity. It's important for students and teachers to learn about cyber bullying and its prevention, as well as how to react if they feel they're the victims of it. Forms of cyber bulling include threats, harassment, and sharing confidential information. Cyber bullying and blackmailing are common crimes online, and many individuals, particularly students, are becoming victims of cyber blackmailing. Cyber blackmailers can easily destroy a person's life.

4.7 Model validation

This section presents the findings from the validation exercise.

The respondents who validated the proposed model were heads of departments (64%), administrators and IT manager (7%). The people who validated the model possessed a reasonable level of education, work experience and were mature.

Components of the proposed model

The majority of the respondents indicated that the model componet requirements were suitable and applicable for social media integration(86%) while only 14% of the respondents indicated that the component requirements were not relevant and applicalbe for social media integration in teaching and learning in teacher training institutions in Uganda.

The languge of the proposed model

The majority of the respondents agreed that the model uses a simple language (53%) while 40% of the respondents also strongly agreed that the model uses a simple language. However, 7% of

the respondents did not agree that the model uses simple language. Overall, the majority of the respondents (93%) indicated that the model language was clear and simple for users.

Interdependent of model components

The majority of the respondents reavealed that component requirements of the model were dependant on each other(100%). This implies that the model component requirements were applicable.

Ease and use of the model

64% of the respondents agreed that the requirements of the proposed model were clear and easy to use to integrate social media platforms while 30% of the respondents strongly agreed. However, 6% of the respondents were not sure whether the requirements of the model were easy for the implementers.

Generally, the majority (94%) of the respondents indicated that the requirements of the model were clear and easy for social integration in teaching and learning.

Infrastructure requirements of the model

The majority of the respondents indicated that hardware and software, high speed internet and secured network infrastructure in teacher training were key requirements in the integration of social media platforms in teaching and learning (100%).

Technical support requirement

The majority of the respondents indicate that the availability of reliable technical support in case of difficulties was a key requirement in the integration of social media platforms in teaching and learning (100%). Generally this shows that the model was applicable for social media integration in teaching and learning.

Policy requirement of the proposed model

73% of the respondents indicate that the model caters for government and institutional policies that regulate the use of social media platforms in teaching and learning. Despite, 27 % did not agree that policies were not desirable in the integration of social media platforms. This implies that the model was applicable for social media integration.

Skills and knowledge requirement

100 % of the respondents indicated that teachers' competences were crucial in the integration of social media platforms in teachinng and learning. Therefore the proposed model was applicable.

Availabilty of social media resources

93% of the respondents agreed that resource allocation for social media integration was a major requirement for social media integration in teaching and learning while 7% disagreed.

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CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter reflects upon the entire study by summarizing it and explaining the contribution of this study. This chapter also discusses the research recommendations and suggests avenues for future work.

5.1: Summary of findings

The purpose of the study was to propose a model that would guide teachers to integrate social media platforms in teaching and learning in teacher training institutions in Uganda. The study reviewed existing models to determine the requirements for the model. The identified requirements were experience of users, top management support, training of users, gender, age, perceived usefulness, perceived ease of use, infrastructure conditions, human resource, skills and knowledge, and readiness of institutions to integrate social media platforms in teaching and learning. However, the reviewed models did not talk about requirements like social media policy strategy issues, key stakeholders, awareness, cultural traits, sustainability and infrastructure plan. This was in line with Lubega (2011). Furthermore, the study identified requirements from field studies that included infrastructure, social media policy strategy on use and cybercrimes, teachers' competences, perceived usefulness, perceived ease of use, teachers' experience with social media platforms, top management support, cultural traits and awareness. Most of these requirements were in agreement with the requirements picked from the model of Maleko and Lubega (2011). Like OoKo and Odour (2016) model, field studies indicated that there was no social media policy strategy on use and cybercrimes, no technical support provided to users in case of challenges, no awareness created to users and cultural traits were hindering social media activities in teacher training institutions. The requirements from both the literature and field study that were in agreement were adopted as key requirement for the proposed model. The requirements that were missing in the reviewed models

but unconcealed by the field studies were also considered to extend the model. These requirements were social media policy strategy on use and cybercrimes, cultural traits, and infrastructure plan. The proposed model was validated and confirmed by educated, experienced and mature persons. The validation results indicated that the proposed model requirements were applicable for social media integration in teaching and learning in teacher training institutions.

Therefore, the objectives of the study were achieved since the study proposed a model that would guide teachers to integrate social media platforms in teaching and learning in teacher training institutions in Uganda.

5.2 Conclusion

The purpose of this study was to propose a model that would guide teachers in teacher training institutions to integrate social media platforms in teaching and learning. The study reviewed existing models to determine requirements for the proposed model. The study extended the existing models by adding social media policy strategy for use and cybercrimes, key stake holders, cultural traits and awareness of users. The study employed qualitative and quantitative methods to determine requirements for the proposed model. A questionnaire was used to collect data from respondents and a checklist was also employed to check available requirements in the institution. The study revealed that most of the requirements for the proposed model were picked from existing models. However, additional requirements were picked from field studies. The proposed model was validated and confirmed by educated, experienced and mature persons. This model will guide teachers to integrate social media platforms in teaching and learning in teacher training institutions.

5.3 Recommendations

The existing models mainly focused on equipping institutions with infrastructure, training of teachers, recruiting technical staff and attitude towards social media platforms. The proposed model

combines the aspects of existing models and also addresses the issues of policies in the integration of social media platforms in teaching and learning. Therefore there is need to include the requirements of the proposed model in the college strategic plan by the top management of the college.

The proposed model extended the existing models by adding social media policy strategy for use and cybercrimes. This requires key stakeholders in government and teacher training institutions to spearhead the development and approval of policies for social media platforms. Furthermore, there is need to create awareness about the proposed model and trainings should be conducted to orient teachers, heads of departments and administrators.

Even though, social media policies and laws have been suggested by the proposed model, they do not exist in teacher training institutions. The policies and laws for ICT including social media platforms are at their infancy and more scholarly work is lacking in this area. Therefore, there is need for studies aimed at generating institutional policy guidelines, regulations and standards for social media use.

5.4 Limitations of the study

The following were the limitations faced during the study;

It was very difficult to access some of the documents from relevant authorities due poor filling mechanisms and lack of time to look for them.

It was also very difficult for some teachers and administrators to complete questionnaires in time due to nature of their work.

The existing model in the college was not clear and silent about social media integration in teaching and learning.

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APPENDICES

APPENDIX I: QUESTIONNAIRE FOR STAFF

SECTION A: DEMOGRAPHIC INFORMATION

For questions 1 to 9 please tick the most appropriate option.

1. **What is your position at the College?**

   Administrative Staff ☐

   Student ☐

   Academic Staff ☐

   Other (specify)………………………………………

2. **What is your gender?**

   Male ☐   Female ☐

3. **Select your age range below**

   18-25 ☐   26-33 ☐ 34-41 ☐   42-50 ☐   51 and above ☐

4. **What is your highest qualification?**

   Certificate ☐

   Diploma ☐

   First Degree ☐

   Master's Degree ☐

   PhD ☐

   if other, specify………..

5. **How long have you been at the College?**

2 years ☐

2-5 years ☐

5-10 years ☐

10 and above ☐

Over 10 years ☐

6. **Which of the following represents your knowledge of social media platforms?**

Basic ☐

Intermediate ☐

Advanced ☐

7. **Do you own a laptop computer or a tablet or a smart phone?** Yes ☐ No

SECTION B: USERS OPINIONS ABOUT SOCIAL MEDIA INTEGRATION

Rate each statement and tick in the appropriate box using the scale 1= strongly disagree (SD), 2 = disagree (D), 3 = Not sure (NS), 4 = Agree (A), 5 = Strongly Agree (SA)

Statement	SD	D	NS	A	SA
The availability of social media infrastructure in the college supports the integration and use of social media platforms in teaching and learning					
Availability of policies in the college influences the integration of social media platforms in teaching and					

Statement					
learning					
Teachers' competences supports them to use social media platforms in teaching and learning					
Perceived Usefulness of social media by students and teachers influences social media integration and use					
Perceived Ease of Use of social media by students and teachers influence social media platforms integration and use					
The experience of teachers and top managers positively supports the integration and use of social media platforms in teaching and learning					
The skills and knowledge of teachers promote the adoption and use of social media platforms					
The Institution is very supportive and has provided the required infrastructure needed for me to use social media					
I have the required skills and knowledge to use social media platforms					
IT support staff are available to provide support for me in case of difficulties					
The institutional cultural traits affects the intent of users to adopt social media platforms					
The Institution is very supportive and has provided the required technical support needed for me to use social					

media					
I have the required skills and knowledge to use social media platforms					
The institution has high speed internet connection that allows me to use social media platforms					

In your opinion, what are the other requirements for social media integration in teaching and learning in your institution?

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THANK YOU

APPENDIX II: CHECKLIST FOR ASSESSING REQUIREMENTS AVAILABLE IN

THE COLLEGE

	Requirement	Available	Not available
1.	Electricity		
2.	Laptop computers		
3.	Desktop computers		
4.	Smartphones		
5.	Tablets		
6.	Internet access(LAN &WiFi)		
7.	Technical support manuals for social media use		
8.	Budget for social media activities		
9.	Social media policies and laws		
10.	Training program for teachers		
11.	Computer labs with adequate social media infrastructure		
12.	Social media infrastructure plan		

APPENDIX III: QUESTIONNAIRE FOR VALIDATING THE PROPOSED MODEL

Rate each statement and tick in the appropriate box using the scale 1= strongly disagree (SD), 2 = disagree (D), 3 = Not sure (NS), 4 = Agree (A), 5 = Strongly Agree (SA).

	Statement	SD	D	NA	A	SA
1	The requirements of the model are well explained					
2	The model uses simple language					
3	The requirements of the model are dependent on each other					
4	The model is easy to understand and use					
5	The model provides for infrastructure to support use of social media platforms					
6	The model provides for technical support of users in case of challenges with the use of social media					
7	The model caters for policies to regulate use of social media platforms					
9	The model links integration with skills and knowledge of users					
10	The model provides for resource allocation in the budgeting process					
	The model caters for gender and age issues that can hinder social media usage in teaching and learning					
11	The model caters for mobile technologies					

THANK YOU

APPENDIX IV: DETERMINING SAMPLE SIZE FOR A FINITE POPULATION

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

Note.—N is population size. S is sample size.

Source: Krejcie & Morgan, 1970