**INTRODUCTION**

**BACKGROUND OF THE STUDY**

Define key terms here in this paragraph

**Education** is the process of facilitating learning, or the acquisition of knowledge, skills, values, beliefs, and habits. Educational methods include storytelling, discussion, teaching, training, and directed research. Education frequently takes place under the guidance of educators, but learners may also educate themselves. Education can take place in formal or informal settings and any experience that has a formative effect on the way one thinks, feels, or acts may be considered educational. The methodology of teaching is called pedagogy. The system of **education in Uganda** has a structure of 7 years of primary education, 6 years of secondary education (divided into 4 years of lower secondary and 2 years of upper secondary school), and 3 to 5 years of post-secondary education. The present system has existed since the early 1960s (Wikipedia, 2017).

According to Coughlan (2014), Uganda, like many sub-Saharan African countries, faces major challenges to build up its education system. At the most fundamental level it has to provide enough places for one of the world's fastest growing populations. There are more Ugandans under the age of 18 than there are adults.The challenge that they face the most is teacher absenteeism. This is due to the fact that since teachers are not paid enough they are forced to take second or third jobs in order to be able to pay the bills and this means that there is no one to teach the children when it is time for classes. It is reported that teachers’ absenteeism, whatever the cause, meant that "40% of public school classrooms did not have a teacher teaching in them" (Coughlan, 2014). ***(challenges in Ugandan Education system)***

A ‘sage on stage’ is an instructor who lectures almost exclusively, who has the philosophy that s/he has knowledge to ‘give’ learners who would benefit from this.  Conversely, a ‘guide on the side’ is a facilitator who helps learners discover knowledge and steer them in ways that would help them. (Janssens-Bevernage , 2014). Janssens-Bevernage (2014), argues that a ‘guide on the side’ approach means we’re placing the learner at the center of the learning process which is essential when training for workplace skills that involve problem solving and critical thinking. \****(Pedagogies)***

**The Web2.0** is a set of web user-centered design applications. These popular new services implement innovative services designed to facilitate the use and to save time, effort and energy, they allow smooth communication and enhance knowledge sharing on global scale (Tarik & Karim, 2012). The integration of Web 2 tools in learning can also assist users overcome the problems of isolation that can face learners in distance education. Thus, the main contribution of web 2.0 tools is to push learners to participate actively, to involve the social side in distance learning and to motivate them as they practice. these tools are extensive and are attracted ergonomics, easy to use and create social bonds. This motivation leads to a better ownership of learning and promote collaboration and group work. (Tarik & Karim, 2012)

Social media plays an important role in every student’s life. It is easier and convenient to access information, provide information and communicate via social media. Teachers and students are connected to each other and can make good use of these platforms for the working of their education. One of the main reasons behind professors adapting to [social media in classrooms](http://edtechreview.in/tags/152-social-media-in-education) is that they can do marketing via social media. Not only they are able to make the work easy but also are branding themselves professionally, creating a name for them in the community (Gupta, 2015). Gupta also claims that people today are intimately involved with social media at every stage. If you’re missing onto the usage of social media you are pushing away a lot of potential audience. Using it in Higher Education Institutions can prove to be a very effective measure (Gupta, 2015). Furthermore, Webchanakya claims that the only way to influence education institutes for engaging students and their parents is by providing a number of features like connectivity, community building, stimulating knowledge/discussion, and allow for parent involvement (webchanakya, 2015). ***(Social media in education)***

**E-learning is** learning conducted via electronic media, typically on the Internet. By 2019, roughly half of all college classes will be eLearning-based. It is more than obvious that eLearning has revolutionized and changed the way that we look at knowledge and skill acquisition (Pappas , 2014).

**MOOCs (Massive Open Online Courses)**; a course of study made available over the Internet without charge to a very large number of people. According to (BBC Active, 2017), Early data from some of the most successful MOOCs indicates that student participation is greatly increased when social media platforms are integrated with the learning Program, and at the same time, student drop-out rates are reduced. While MOOCs may be a relatively new phenomenon, these early indications suggest that the introduction of social media can have a very positive influence, one which universities can perhaps ill afford to ignore for long.

Over the past decade, communication methods have changed drastically, with social media platforms like Facebook, LinkedIn, Twitter and many such platforms on the go, it comes as no surprise that there is a close connection between social media and students. The only way to influence education institutes for engaging students and their parents is by providing a number of features like connectivity, community building, stimulating knowledge/discussion, and allow for parent involvement. (webchanakya, 2015)

**PROBLEM STATEMENT**

The education sector of Uganda faces a number of challenges one of which include inadequate physical infrastructure i.e. schools lack scholastic materials, classroom blocks, water and sanitation, and power supply (FortuneOfAfrica, 2017). FortuneOfAfrica, 2017 also indicates that in primary and secondary levels, many students leave school without having mastered the required levels of literacy and numeracy.

Mostly students from schools with adequate resources excel today and go on to other levels of education in Uganda. A big number of students in low quality schools don’t have access to these resources which calls for the need to bridge the gap between these schools and students by providing a platform where students and teachers can share knowledge and resources and collaborate in the process of learning.

**OBJECTIVES**

**Main Objective**

To develop an educational platform that can allow students and educators to co-create / co-author, share and collaborate in process of learning thereby minimizing the challenges of inadequate resources and bridge the gap between the students in all levels of education.

Studylink project aims at providing an educational platform that supports collaborative learning among students and educators.

**Specific Objectives**

* To study and determine the information needs, protocols, steps in order to come up with constructs and models for the new artifact.
* To develop Study Link that will enhance the student learning and improve efficiency and effectiveness in the education sector.
* To test and evaluate Study Link in order to determine its usability and applicability in Uganda

**SCOPE**

Study Link is going to be developed for the education sector of Uganda targeting all levels of education from kindergarten to University level. We are choosing Uganda first because of easy access to information from the respective stakeholders in the sector.

The product scope will include functionalities below;

* Access to an Online Library
* Discussion rooms (forums) for distant discussions among users (students and educationists)
* Ability to Co-author or Co-create learning resources by both students and educationists
* Ability of learners and educators to share and collaborate
* Build authentic audience (bring together people in the same fields of study)
* Ability to guide learners while learning (**“guide on the side”** pedagogy)
* Provision of career guidance on the platform
* Chats (creation of virtual communities), audio and video streamlining
* Updates on new trends in education (portal where people can post opportunities e.g. scholarships, internship etc.)
* Rating institutions and educationists basing on their contributions to student’s learning
* BOT assistant to learners.

**SIGNIFICANCE**

* All students and educator no matter the level of access to resources will all gain from those resources through sharing and collaboration

**LITERATURE REVIEW**

**Published articles, reports etc.**

**Existing Systems**

**Comparison of existing systems with the proposed system**

**Conclusion**

**METHODOLOGY**

This section discusses the methodology that will be used to carry out the research. It elaborates the research design, setting and data collection procedure of the study.

## **3.1 RESEARCH DESIGN**

The research design shows how the target population will be identified, selected and how data will be collected, and analyzed to formulate appropriate system requirements.

### ***3.1.1 Population of the Study***

The target population of the study will constitute students and educators selected from different schools in the country. A few schools shall be selected from all regions of Uganda.

### ***3.1.2 Sampling Techniques and the Sample Size***

The study target population will constitute of six schools and 20 students from all the regions in Uganda. The project team will use simple random sampling technique because it gives all respondents an equal chance to be part of the study.

The project team will ask respondents to provide personal information after which they will all be asked a number of questions which will be stated in the interview guide whilst being recorded. The recordings will help the project team remember every single answer from the respondents. English will be used to communicate to all students and educators that shell participate in the interviews.

## **3.2 Research Methods**

***Objective 1: To study and determine the information needs, protocols, steps in order to come up with constructs and models for the new artifact*.**

In order to acquired data required for analysis, and systems requirements, the following methods/techniques shall be used;

***Document Review***

The team will use this methodology to understand and analyze published reports, books and articles, in order to gain a better understanding of how the current education system is and how the platform can positively affect the education of Uganda and Africa at large.

With this methodology, the team will be able to identify the strengths, weaknesses, opportunities and threats in the existing related platforms.

**Interview**

The interviews will be conducted in different schools from the different regions in Uganda. The interviews will guide the team to understand how best the students and educators in Uganda can adopt to this new technology, to assess the feasibility of the project and to get the people’s view of the current education system in Uganda.

***Objective 2: To develop Study Link that will enhance the student learning and improve efficiency and effectiveness in the education sector.***

In order to develop Study Link, several steps will be undertaken after data collection. These steps will include;

**System Design**

Uniform Modelling Language (UML) will be used to realize the logical design of the platform. UML will be used to visualize system elements such as processes, individual components and the interaction between the components. The project team will use software process models including Use case diagrams, sequence diagrams and class diagrams to model the requirement specifications of Study Link. These models will be modeled using Microsoft Visio.

**System Development**

In order to develop a fully functional proposed platform, Rapid Application Development (RAD) will be used since it relies heavily on prototyping and user involvement. The RAD process will allow the project team to; examine a working model of the platform as early as possible, determine if it meets user’s needs, and implement the necessary changes.

**System implementation**

For the realization of the system design, the final product is an *android mobile application (safe neighborhood)*developed using Android Studio. Safe neighborhood application functions only on android phones and/or tablets.

In order to realize the final product design, Study Link will be both a web and mobile application that will run on all operating systems. The web application will be developed using python Flask and the mobile application using native script.

***Objective 3: To test and evaluate Study Link in order to determine its usability and applicability in Uganda***

Study Link will be tested in order to identify the bugs and errors while will be fixed by the developer team. The test team will also test for the performance, efficiency and effectiveness of Study Link basing on very many test cases in order to prove that it meets all the requirements.

**REFERENCES**