

## Exploiting Google Apps for Health Professional Training's: A Case of a Rural University (Masinde Muliro University of Science and Technology)

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**Abstract:** The use of eLearning in Africa is still hampered by a host of many factors. Chief among them is low internet connectivity and lack of expertise to tweak the systems. Google has grown a number of tools that can be exploited by teachers. The great thing is that the tools are free, and secondly, they don't require any management and they are hosted in the cloud with Google.

It is for this reason that we decide to use the free Google apps for teaching and learning. Specifically, we picked on the Google docs and the Wikispaces. The Google docs were very ideal for formative assessment, and when we incorporated flavor, it graded, analyzed and dispatched the feedback to the learners. The Wikispaces are a wonderful learning management system. Albeit some limitations, we could use to create and disseminate content and monitor discussions. The platform allowed, also an assessment of learners, it was possible to embed quizzes among other resources. Collaboration among students was enhanced. Students were satisfied with the use of the Google apps and the performance was enhanced as demonstrated by the results. The other humanitarian benefit, was that most of the learners were health workers, so they could, take their lesson in their respective workstations and attend to their patients.

**Key words:** Google apps, Wikispaces, learning management system

### 1. Introduction

Despite the rapid connectivity being experience in Africa, a big part of Kenya still lacks adequate connectivity, particularly Universities and Institutions located outside the cities. This is a situation that has impacts negatively on the quality and quantity of education being offered (Gudo, Olel, & Oanda, 2011).

Yet it is a known phenomenon that Kenya has made tremendous progress in ICT as demonstrated by innovations, i.e., Mpesa, a mobile money solution that allow people to make payments, transfer cash to banks and vice versa, pay fees and services to name but a few (Jack & Suri, 2011). The next innovations is "Ushahidi" a platform developed that was developed in Kenya to collect information and alleviate suffering of persons in slums of Nairobi during the post-election violence in Kenya, it has since been used in Bosnia and other parts of the world to sort for information from person in a crisis, it is platform that can receive information from mobile phones, and promptly identifies the location of the sender (Okolloh, 2009)..

It is a recognized phenomenon that Google offers itself as SAAS service that can be exploited by learners to

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acquired knowledge through the network it creates, Google apps is an example of SaaS that educators more those from the developing world should look into (Wang & Jin, 2010).

The other challenge is expertise to set up networks and computer labs for eLearning. Even when ICT experts are recruited, institutions lack the funds to pay handsomely. Attrition remains an issue.

From the aforementioned, we choose to explore some free Google apps. We choose them having reviewed literature and established that the apps were free and robust. There was no down time and no expertise was required once you have set them up.

So we used wikispaces and Google Docs. The wikispaces, supported the uploading of power points, URLs, embedding of videos and mostly powerfully discussions forums. We could still embed quizzes including hot potatoes and it was possible to construct some within the wikispaces (Sulisworo, 2012).

The Google docs was our choice for examination (student assessment) and we used it with fluburo to allow automatic marking and instant feedback to students. We used this approach in teaching two subjects, students were able to get instant feedback and were thus successful in building an efficient and effective way of teaching and grading students (Peacock & Grande, 2015).

## **2. Benefits**

It is possible to have quality eLearning using free Google apps. This app don't require much expertise. There is reasonable security and marks and grades are authentic. Put different we confirmed what others may have already realized, i.e., there is a cloud computing that we are not using effectively as educators. Many youths are creating personal learning or social networks by combining various web 2.0 tools they prefer, i.e., Facebook, what's up, but we in the education sector have not utilized the educational apps from Google that have remarkable educational value (Sclater, 2010).

This project had an immediate and significant effect on improving learning for students as well as inspiring teachers to integrate technology in the classroom in order to engage students. We, found strong features of Google Apps which uses the paradigm of cloud computing. Google Apps has powerful applications available as part of their cloud including a word processor as well as spreadsheet and presentation software. All that is needed to use Google Apps is a browser and access to the Internet. These applications (Word, Excel, PowerPoint, etc.) allow students and teachers to create documents, share calendars, email, and chat, create web pages, video, and more. It is secure as everything stays within the registered domain and cannot be accessed by people who do not have a login. It is an excellent tool to provide e-learning. It works on any computer including Macs and many Personal Digital Assistants (PDAs) such as cell phones, iPhones, and netbooks (Nevin, 2009).

## **3. Practical Outcomes**

### **3.1 What Did This Initiative/Project Do?**

Whereas we are aware of the Google apps suite, we only took a small aspect of it, i.e. the Google docs and the wikispaces. We realized that the cloud computing was popular among students, staff and it allowed efficient use of resources, in reality we migrated from our desktop to the cloud, we didn't need software, hardware, cables only the student connectivity and gadgets. Students participated in discussion forums via the wikispaces and the Google docs in combination with flubaroo (Google, 2015) provided instant feedback on assessment (Oishi, 2007).

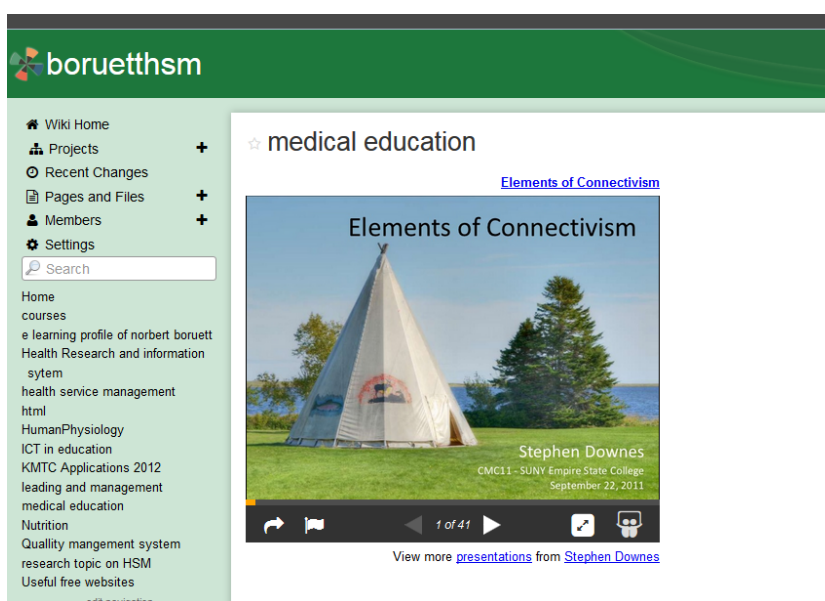
As educationist we make reference to the Kolb's learning cycle that: demonstrates that using Google Apps

promotes a collaborative learning environment and recommend some Google apps, i.e., the Quiz fused with Flubaroo is a classic example of how competence-oriented e-learning activities can be created. Our findings reinforce the accepted position that web 2.0 tools enable a shift from a distributive to a more collaborative mode in e-learning. In particular, the ease of use and intuition of web 2.0 technologies allow creating learning environments, which realize activity-rich pedagogical models and facilitate competence development of students to name but a few (Schneckenberg, Ehlers, & Adelsberger, 2011).

### 3.2 Why Was the Initiative/Project Undertaken?

The lack of internet and funds to set up conventional eLearning units, made us explore the use of this free apps. The learners that were using this apps are adult learners who follow attend campus for two day and the rest of the time they are working at home or in their workstations (Health facilities). Logistically we would need a powerful initiative to reach these learners who are scattered around the Country. With Google apps that are hosted by Google and they have a run time 24/7, which is an asset for us here where eLearning initiatives have failed because of huge down time, that discourages learners.

As with most parts of the developing world, we have issues with finances, and as usual technological approaches do not rank high in the priority list. As richer countries afford commercial cloud computing solutions, we saw our messiah with Google apps (Sultan, 2010).



### 3.3 What Were the Results of the Initiative/Project?

We were able to cover a big part of the curriculum effectively, in that most students were access content in their respective stations.

24 (100%) of the students reported that “Blogger-Wikispaces” was an effective place for online discussion of health profession topics and questions. 22 (92%) of the students reported that the “Forms/Flubaroo” grade-reporting system was helpful. Overall, 24 (100%) of the students found that the app platform was helpful in establishing a collaborative, online classroom environment.

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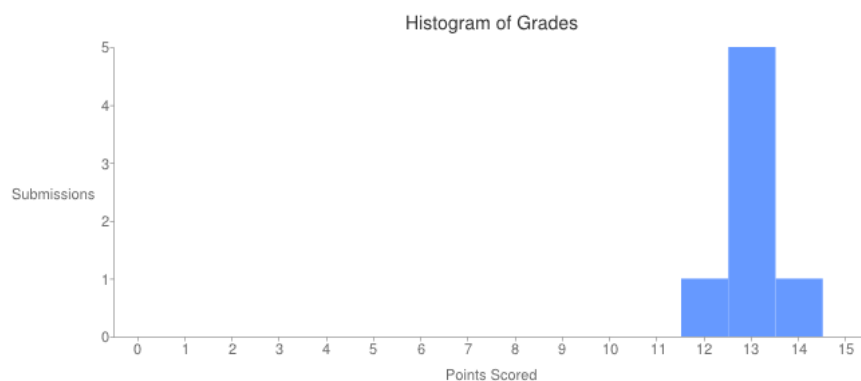
### Flubaroo - Grading Report

Report for: HPE 306 Micro-teaching Skills Masinde Muliro University (Responses)

Points Possible: 15

Average Points: 13

Counted Submissions: 7



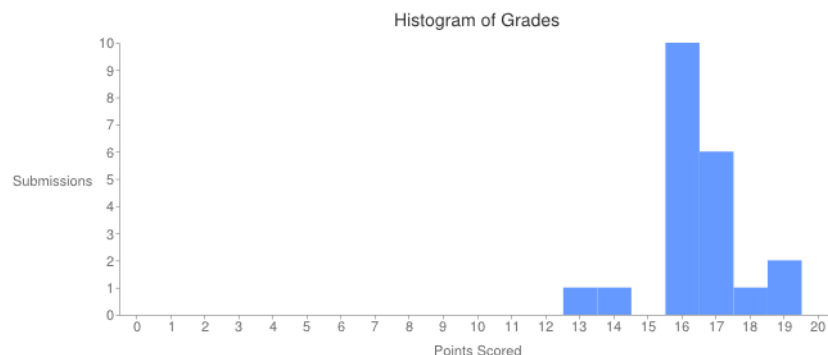
### Flubaroo - Grading Report

Report for: ICT in Education Masinde Muliro University HPE 206 (Responses)

Points Possible: 20

Average Points: 16.42

Counted Submissions: 21



### 3.4 What Impact Did This Initiative/Project Have?

Students performed very well in their examinations and when asked if they would use them if they were teachers, the response was an overwhelming “yes”. It likely that more learners became more comfortable internet and technology and they are likely to remain lifelong learners

There was strong ownership of created documents, and a strong perception that the documents were of high quality (Blau & Caspi, 2009). This phenomenon is important considering this is health workers who are required to collaborate in their place of work

Students became techy savvy, and were able to store other valuable documents within the free two gigabytes, and many gained Gmail accounts enabled them search and tag emails as observed by Barlow & Lane (2007).

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