Challenges and Opportunities for the Implementation of Social Network Technologies (SNTs) in Teaching in Universities in Ghana

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Abstract

The introduction of Information and Communication Technology (ICT) has changed the mode of delivery in many higher institutions and enhance student participation. In most developing countries however, ICT has not pervaded. This study is descriptive, which adopts a case study approach to investigate the challenges and opportunities in the implementation of Social Network Technologies (SNTs) in four private universities in the Greater Accra Region, Ghana. Eighty (80) lecturers in private universities were used as the sample for the study. A well-developed tool on the implementation challenges and opportunities of SNTs was used for data collection. The instrument contained twenty three (23) listings/items. The data collected were analyzed using frequency distribution and mean. From the research the findings reached with regard to the challenges which are higher cost of licensing the SNTs and purchase of sophisticated devices, incompetence in the use of multimedia tools, safety and privacy issues, and change in teaching methodology brings about dissatisfaction and the notion of uncertainty due to lack of exposure to technological devices. The opportunities available with SNTs for teaching are that SNTs support different teaching methods due to their flexibility, creation of effective teaching and learning environment and making teachers location independent. The following recommendations are made management needs to train its faculty on how to use cutting edge technologies such as SNTs to be implemented in teaching. University management should consider how to make laptops available for all of their lecturers so that they will be encouraged to have a strong affiliation with the technology and they will overcome the lack of exposure and change their teaching methods and move away from the traditional methods of the teaching. It will also boost their frequency of usage.

Keywords: Social Network Technologies, information technology, ICT Infrastructure, multimedia tools.

1. Introduction

Advances in technology have over the years seen a drastic improvement in the development of highly sophisticated devices (mobile) and other tools which can be adopted in enhancing teaching. According to Jung (2008) technology has the potential of improving quality of education, increasing access to education, pedagogical innovation and creating high market value.

In increasing access, ICT expands the learning opportunities as people will be able to learn any time and everywhere. This will lessen the gap in education by reaching to remote, underdeveloped and marginalized population (Zamza, n.d.). Apart from the hardware infrastructure, there has been improvement in software development which seems to bring the globe closer and closer. Social networking facilities as an ICT tool have the potential to increasing performance of students when effectively used by lecturers.

Social networking has become one of the most important communication tools among people nowadays (Zamza, n.d.). Teachers are gaining interest in online education and students' participation is high. There are several challenges as well as opportunities with the use of technologies (e.g. social media tools) in teaching.

Generally in developing countries, access to internet is expensive, teachers lack technical and pedagogical skills to use technology and inadequate funds for staff and infrastructure development (Zamzam, n.d., & Chapman et al.2004). Amidst these challenges, Ghana has seen high



increase in the usage of mobile devices and other technological devices which both faculty members within the universities have access. According to Sife et al.(2007), the pedagogical and socio-economic forces that have driven the higher learning institutions to adopt and incorporate ICTs in teaching and learning include greater information access; greater communication; synchronous and asynchronous learning; increased cooperation and collaboration, cost-effectiveness and pedagogical improvement.

According to Turban et al. (2010), in their paper Ecommerce a managerial Perspective stated that, "social networking is built on the idea of how people know and interact with each other". It gives people the power to share, making the world more open and connected. Nowadays, social networking has a vital influence on our live as it helps a lot in every field of life such as political field, economic field and educational field. However, this paper tries to highlight on the use of social networking in education and explain the advantages and disadvantages of using social networking for educational purpose (Zaidieh, 2012).

The use of social technologies for educational purposes has changed the demands and direction of higher education. Lecturers are now being encouraged to use social technologies in their teaching in order to encourage social learning and to prepare students as graduates who will contribute to a society that now relies heavily on social technologies (Hamid, 2011). It is against this background that the researchers intend to find out the challenges and opportunities available for the implementation of the social media technologies in the private universities in Ghana.

2 Statement of Problem

In Ghana and other developing countries, SNTs are challenged with the problem of internet facilities and other devices that contribute to the service. Emails have been used in China to facilitate communication among students themselves and their instructors, to submit assignments to their teachers and to post e-learning materials for students to read (Lee, 2004; & Guo & Cai, 2006).

The problem is that SNTs usage by lecturers in the universities (private or public) is challenged by the introduction of new technologies in terms of its availability and use amidst the challenges and the numerous opportunities these technologies offer to both the teacher and the learner. It is against this background that the study is carried out to determine the opportunities available to lecturers when using SNTs for teaching and secondly, the research seeks to identify the challenges faced by lecturers in adopting SNTs in teaching.

3. Objectives

This research examines

- 1. The challenges lecturers can face in implementing SNTs in teaching at the private universities.
- 2. The opportunities available for the use of SNTs in teaching in private/public universities.

4. Research questions

- 1. What challenges can lecturers face in the implementation of SNTs in teaching in the universities?
- 2. What opportunities are available to lecturers in implementing SNTs to improve teaching in the universities?

5. Review of Literature

Teachers often do not feel confident enough with their ICT skills to experiment with Learning 2.0 strategies (Redecker, 2010), which is one of the examples of social networking technologies. According to Conlon & Simpson as cited by Picardo (2011), early adopters see SNTs as tools that can help refine and develop teaching and learning. On the contrary, it is also perceived by teachers who remain skeptical about the adoption of emerging technologies because of the demands placed upon them for learning and understanding the new pedagogy involved and they often feel constrained by the contexts and pressures in which they work.

This will implicate the acceptance of the technology by teachers. According to Redecker (2010), embedding social media tools in education demands a change in the role of teachers, who have to act as guides and mentors, enabling and facilitating self-regulated learning processes. There are many uncertainties regarding the benefits of technology and the changes that the adoption of technology necessitates, such as the demand for technical support, pedagogical and instructional management issues, teacher professional development, network infrastructure, and costs of all components (Dooley, 1999).

According to Redecker (2010), Social media support more engaging and playful approaches, provide new formats for creative expression, and encourage learners and teachers to experiment with different, innovative, ways of articulating their thoughts and ideas. Using these social networking technologies such as twitter, Google+, WhatsApp, both the students and lecturers have an opportunity to create their own content. Posting on wall,



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replying, commenting, and blogging aids creativity and innovations in both the students and the lecturers.

According to Zaidieh (2012), Social networking technologies can provide stronger understanding and increase retention on the subject, due to using many elements which exist under e-learning, e.g. multimedia, quizzes, interaction ... etcetera and the ability to retry training and over in order to understand. According to Zaidieh (2012) the networking potential of social media, together with its power to overcome time and space barriers, supports interaction and collaboration among and between learners and teachers who are geographically dispersed and enables students to broaden their horizons, and collaborate across borders, language barriers, and institutional walls.

6 Methodology

The research employed a survey research design. It is a descriptive research since it will purposely be used to describe, observe and document aspects of situation as it naturally occurs. It serves as a starting point for hypothesis generation or theory development. The population of the study was composed of all lecturers in four (4) selected universities in Ghana.

The sample size for the study was composed of eighty (80) lecturers who were selected from the total population of 300 lecturers. Two (2) sampling methods was deployed – the stratified sampling method and non-random sampling for effective selection. The research instrument used for the data collection was questionnaire designed for the respondents (lecturers). It was structured on a seven-point scale and has three sections (1-3) which sought information on the two (2) research questions.

The content validation of the instrument was established by three experts each in the area of Education, Information Technology and Business Administration respectively. The primary data for the study was obtained from respondents drawn from the population and were analyzed using frequency distribution and mean. Since the questions were rated on a seven-point scale, the researchers based on a mid-point scale of 3.50 as the ceiling value to make decisions. Mean values that fell below 3.50 were regarded as not agreeing to the factors itemized and mean values above 3.50 were considered as agreeing to the listings. The Statistical Package for Social Science (SPSS) was used to analyze the data.

7 Results/Discussions

The discussions here are based on the research questions. The first question states that; what challenges can lecturers face in the implementation of SNTs in teaching in the private universities? Whereas the second question looks at what opportunities are available to lecturers/teachers in implementing SNTs to improving teaching in the private universities? From the survey conducted, the results were tabulated and summarized in the tables 1 and 2.

The columns in Table 1 are labelled as follows: S/N represents the Item Number; Opportunities available for implementing SNTs describe the items (as identified by S/N) as possible challenges one can face in implementing SNTs; CA represents Completely Agree that it is a challenge; MA represents Moderately Agree that it is a challenge; SA represents Somewhat Agree that it is a challenge; NT represents Neutral that is not sure whether or not is a challenge; SD represents Somewhat Disagree that it is a challenge; MD represents Moderately Disagree that it is a challenge; CD represents completely disagree that it is a challenge, X represents the mean score of responses for each item. From the Table above, it shows that all the items (1 to 9) with mean ratings of 4.0375, 5.3125, 5.35, 3.8375, 4.6875, 4.475, 5.2125, 4.4375 and 4.0125 are challenges.

The columns in Table 2 are labelled as follows: S/N represents the Item Number; Opportunities available for implementing SNTs describe the items (as identified by S/N) as possible challenges one can face in implementing SNTs; CA represents Completely Agree that it is an opportunity; MA represents Moderately Agree that it is a challenge; SA represent Somewhat Agree that it is a challenge; NT represents Neutral that is not sure whether or not an opportunity; SD represents Somewhat Disagree that it is an opportunity; MD represents Moderately Disagree that it is an opportunity; CD represents completely disagree that it is an opportunity, X represents the mean score of responses for each item. From the Table above, it shows that all the items (10 to 14) with mean ratings of 4.7375, 5.1625, 5.00, 4.6875, and 5.45 are opportunities.



S/N	Table 1: Response to challenges in Possible Challenges in implementing SNTs	CA	MA	SA	NT	SD	MD	CD	X
1	Inadequacy/Lack of ICT resources/infrastructure will negatively affect the use of SNTs for teaching	8	17	2	22	18	0	13	4.0375
2	Incompetence in the use digital and multimedia tools will negatively affect the implementation of SNTs	24	8	23	19	6	0	0	5.3125
3	Costs for licensing SNTs for the purpose of utilizing their full features will negatively affect their implementation	16	21	30	9	0	0	4	5.35
4	Physically challenged lecturers may have difficulty in the usage of SNTs therefore negatively will affect the implementation of SNTs	8	16	0	33	0	0	23	3.8375
5	The use of SNTs will call for change in learning methodologies and will negatively affect their implementation	16	8	30	7	9	0	10	4.6875
6	The notion of uncertainty to the use of SNTs in teaching	16	8	30	7	9	0	10	4.475
7	Safety and privacy concern on the use of SNTs will negatively affect its implementation	27	3	10	40	0	0	0	5.2125
8	The lack of gestures as experienced in the use of SNTs may result in Miscommunication, thereby affecting their implementation	18	2	9	38	0	7	6	4.4375
9	The implementation of SNTs for learning may result in misappropriation of time and health hazards	6	9	18	27	0	7	13	4.0125

Table 1: Response to challenges in implementing SNTs in teaching

S/N	Opportunities available for implementing SNTs	CA	MA	SA	NT	SD	MD	CD	X
10	The use of SNTs for teaching through blogging, writing on wall, commenting, and replying, posting events will bring up creativity and innovation in teaching.	16	12	9	31	7	0	5	4.7375
11	SNTs can provide effective learning environment for studies, thereby resulting in quality academic outcomes because they have elements such as multimedia quizzes.	16	27	8	20	5	0	4	5.1625
12	SNTs will make teaching location independent	11	21	22	14	7	5	0	5.00
13	SNTs are convenient and easy to use	16	10	18	13	19	0	4	4.6875
14	SNTs are flexible and have support for different styles of teaching.	35	10	9	14	6	6	0	5.45

Table 2: response to opr	portunities av	vailable to	lecturers

7.1 Findings on Research Question 1

The findings from research question 1 indicated in table 1 show that lecturers/teachers go through a great deal of challenge when it comes to implementing social network in teaching. There are many challenges to bringing social media to the learning environment. Some of them are technical and some of them are conceptual and cultural. In this implementation of a social learning environment several challenges have been discovered.

The challenge for educators is to adapt to these technologies correctly: taking advantage of their strengths and avoiding their weaknesses (Dooley, 1999). It is evident from the survey that there are several challenges lecturers/teachers face in the implementation of social network platforms such as:

- 1. Safety and privacy issues
- 2. Misuse of time
- 3. Lack of gesture resulting in miscommunication
- 4. The notion of uncertainty due to lack of exposure to SNTs
- 5. Incompetence in the use of multimedia tools
- 6. Change in teaching methodology brings about dissatisfaction since most teachers prefer the traditional methods for teaching
- 7. Less privileged lecturers (lecturers with disability) inability to access SNT system
- 8. Higher cost of licensing the SNTs and purchase of sophisticated devices
- 9. Exposure to chemicals leading to health problems

The mean values obtained from the table 1 above compared to the mean value of 3.50 (the decision mean value), show that all respondents agree to the fact that SNT creates opportunities for lecturers to improve their teaching methodology and improve student involvement.

From the table 1 above, it could be realized that majority of the respondents considered the following challenges as the most prevalent among the listed items. This is noticeable with reference to the mean values obtained per the survey results. These are ranked with the most challenging factor first.

- Higher cost of licensing the SNTs and purchase of sophisticated devices (mean value = 5.35)
- Incompetence in the use of multimedia tools (mean value = 5.31)
- Safety and privacy issues (mean value = 5.21)
- Change in teaching methodology brings about dissatisfaction since most teachers prefer the traditional methods for teaching (mean value = 4.69)

• The notion of uncertainty due to lack of exposure to SNTs (mean value = 4.48)

Lecturers in these private/public universities consider cost as the most challenging factor when it comes to the implementation of SNTs in teaching especially in a developing country like Ghana.

The findings are also in line and support the findings of Zaidieh(2012) in which the author stated challenges such as privacy, taking time up and miscommunication to hinder the implementation of SNTs. The findings of Education MS(2010) report, educators who have used social networking technology are more positive about the benefits as compared to those who have not. This supports the notion of uncertainty due to lack of exposure to SNTs as listed as part of the challenges in this research.

The respondents also supported the idea of misuse of time. This is because the respondents argued that there are no clear systems in put in place for monitoring the activities of learners on a regular basis. This is a barrier to the implementation of social networking in schools. Lack of monitoring mechanism to check user activity makes it a challenge to implement SNTs in teaching.

Similarly, the findings agree with research reports of Hamid (2011), that time management is an issue lecturer's face when it comes to the implementation of online social networks for teaching. They also reported or argued that the challenges of using social networks in higher education could be lecturer-specific. This is because their findings showed that some lecturers had not faced any major problems in using the social technologies.

This observation might be true especially in the case of proactive lecturers who are appropriating and using these technologies without being asked to do so by the faculty. On the contrary, others argued that it is challenging to introduce students to a new tool that was not familiar to them.

According to Hamid (2011), implementing social network technologies is a challenge since most students have limited access to the Internet. Additionally, some students did not have the latest range of mobile phones that are capable of running mobile social technologies, particularly for Twitter and Facebook.

Some students could not afford to own smart phones although all of them carried mobile phones. Due to this reason also, the use of social technologies could only be considered as complementary due to limitation in its ubiquitous access. This also agrees with the point made earlier that there is a high cost of licensing SNTs and



purchasing other sophisticated devices to support the usage of social networks in teaching.

In Ghana, most teachers do not welcome the new technologies that aid in teaching. Change in teaching methodology brings about dissatisfaction since most teachers prefer the traditional methods for teaching. This is consistent with the report by Hu (2005) that traditional means of teaching and instruction still dominate, especially in developing countries.

This then becomes a challenge introducing social network technologies in teaching in private universities in Ghana.

7.2 Findings on research question 2

The findings from research question 2 indicated in table 2 show that there is great deal of opportunities for lecturers who adopt these technologies in their teaching. In the field of education, social-networking sites offer a student the opportunity to connect with other students, educators, administrators, alumni, both within and outside his current institution (Zamza, n.d.).

This offer is not limited to students alone but, the faculty as well since it creates the platform for lecturers to communicate with their students, post quizzes and assignments and other relevant materials to students. The faculty members get the opportunity to connect with other colleagues within the institution and without.

Scholars praise social-networking tools for their capability to attract, motivate and engage students in meaningful communicative practice, content exchange, and collaboration (Mills, 2012).

To emphasize again, despite the challenges, its advantages or opportunities cannot be overlooked. Lecturers must capitalize on the numerous opportunities and implement the social network tool in teaching. Some of these opportunities are as follows:

- It supports different teaching methods/styles due to its flexibility
- It creates effective teaching and learning environment
- Teaching location is independent
- It brings up creativity and innovation
- It is convenient and easy to use for teaching due to its interactivity
- It enhances quality academic outcomes due to its numerous opportunities

The research findings are consistent with the finds of Dooley (1999) in which they discussed that in a teaching environment where SNTs are implemented or adopted for lecturing, as the lecture progresses, a student may miss something or maybe unclear on a certain point (in the traditional classroom).

The learning environment addresses this problem in a social media centric way. It allows the student to ask the question not just of the instructor but, of his fellow classmates. This crowd-sourcing allows the student to catch up or gain clarification without disrupting the entire class or limiting his answer pool to those classmates directly adjacent to him, and it allows him to do so in a minimally disruptive way.

This point supports the point made in this research that it is convenient and easy to use due to its interactivity and creates effective teaching and learning environment.

The findings are consistent with the report by Brown (2010) and Schroeder et al. (2010) which states that the driving factors for adoption of online social networks include the increasingly ubiquitous access, ease of use, functionality, and flexibility of social technologies.

8. Conclusions

There are some implementation challenges and opportunities that face the use of social networking technologies as educational tool in private tertiary institutions in Ghana. The key indicators or factors dominating among the challenges are higher cost of licensing the SNTs and purchase of sophisticated devices, Incompetence in the use of multimedia tools, safety and privacy issues, change in teaching methodology brings about dissatisfaction since most teachers prefer the traditional methods for teaching and the notion of uncertainty due to lack of exposure to SNTs are the major challenges that face the implementation of social network technologies in private universities.

Other factors such as exposure to chemicals leading to health problems such as eye related problems, back ache, wrist injuries and the like and the inability for lecturers with disability to use the technology are also challenges that affects the implementation of SNTs in teaching.

On the other hand, supporting different teaching methods due to its flexibility, creating effective teaching and learning environment, independent teaching location, convenience and ease of use and interactivity and enhancement of academic performance have created vast



opportunities and have vital influence in the use of social networking in education (for teaching and learning).

The research paper addressed some of previous studies about the challenges and opportunities in the implantation of SNTs for teaching and learning in education especially distance education and other online programs.

9. Recommendation

Information Communication Technologies offers immense opportunity for both private and public universities in developing countries to advance their teachings and learning processes to equip both faculty and students to compete with colleagues in the developed countries.

The use ICT tools are gradually closing the gap between educators and students. So far, most of the universities in developing countries possess basic ICT infrastructure such as Local Area Network (LAN), internet, computers, video, audio, CDs and DVDs, and mobile technology facilities that form the basis for the establishment of e-learning. It is argued that, universities in developing countries should adopt social network technologies to improve teaching and learning processes. Therefore, the university management should consider integrating ICT tools such as SNTs in teaching and learning practices.

Management needs to train its faculty on how to use cutting-edge technologies such as SNTs to be implemented in teaching. They should regularly organize seminars and workshops that will enhance the knowledge base of these faculties on the new trends of technology and students on how to use the SNTs for teaching and learning respectively. They should include a comprehensive budget covering the maintenance of the entire infrastructure for running the SNTs.

This will help since SNTs require payment to use some features, like video conferencing and the like to be enabled. A good wireless network should be situated in every private university. Access to network only through cables would affect mobility of the lecturers and the students in the usage of the technology. At worse case, hot spots should be created on campus where students can cluster around and use.

University management should consider how to make laptops available for all of their lecturers.

When lecturers have laptops that will encourage them to have a strong affiliation with the technology and they will overcome the lack of exposure and change their teaching methods and move away from the traditional methods of the teaching. It will also boost their frequency of usage. The absence of the laptops means that lecturers will still be computer phobia and will resist the technology despite, its vast benefit.

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