

***Social media technology as a disruptive and/or complementary technology in
Higher Education: A case study of Vhembe Further Education Training College***

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Abstract

Social media technologies are being widely used by students in institutions of higher learning and these are transforming their way of learning, social conduct, communication and networking. Complements and disruptions of social media technologies appear to be blurred in the technologies that are currently on the market. It was with this intend that this research was conducted to determine whether the use of social media technologies by students in higher education are being considered as disruptive or complimentary technologies in the context of further education training college. Another goal of the study was to establish how the students are benefiting from these technologies in a rural environment where technological changes lag behind as compared to urban areas. A random sample of 105 students was involved in the study and theses were obtained from Business/Finance, Engineering, Hospitality and Tourism departments of the institution that was used as study site. Analysis of the collected data was executed through application of a statistical package of SPSS. Findings show that social media technology has infused a new culture of learning among students. In addition, social media applications which are on the increase in usage by students for activities that include studying, access of education content, social communication are Facebook, Whatsapp, Twitter and Youtube.

Keywords: Learning culture, Social media, Social networking technologies

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Background of study

Trends in technology developments are altering the course of some existing models and methodologies of enhancing student learning to those who are who are engaged in both formal and informal education. Most initiatives for educational technologies are affected by a broad range of challenges that include weak bandwidth, lack of qualified personnel in the field of technology and old infrastructure, (Carr & Czerniewicz, 2011). Social media technology usage has increased in the past five years due to a combination of factors that entails affordability of the mobile devices and increased internet bandwidth amongst the consumers. (Bell, 2010; Selwyn, 2012). This paper will address the concept of social media technology as a disruptive technology or complementary to existing technologies being used in the field of higher education. Social media is being widely used through desktop computers and mobile devices. Trubitt and Overholtzer (2009) indicated in their research that social networks have been embedded in people's cultures resulting in creation of personal and professional networks. The most popular interfaces being used are Facebook, Flickr and Twitter although the list of some is endless. Users can connect in cyberspace, creating groups that enable sharing, exchange of information and ideas. According to Zanamwe, Rupere and Kufandirimbwa (2013), social networking technologies were received with mixed reactions by academics in developing countries although the trend seems to be in their favour of adoption. The social networking technologies improve computer skills of a student who may not have had access to formal introductory computer courses. The increase of social media tools has contributed towards an increase in user generated content through use of self-help tutorials that are freely available from the internet.

Research Objectives

This research seeks to establish whether social media technologies are being considered as disruptive or complimentary technologies in the context of Further Education Training College located in the rural environment. Another aspect will focus on how the technologies are benefiting students in the rural environment where technological changes lag behind unlike in the urban areas.

Literature review

Social media technology is becoming an essential requirement in people's daily lives contributed by a combination of factors that include growth of affordability of mobile computing devices, improved internet wireless bandwidth, social media technologies and several other web 2 technologies, Lenhart et.al (2010). In social media, people use the web based and mobile applications for social interaction. In addition, individuals and organisations can generate new content, share existing content in the cyberspace. A number of interfaces used for social media have increased with Twitter, Facebook, Whatsapp, Myspace, Flickr being among the top, Davis III et.al (2012).

The social media tools and networking sites enables students to engage with one another, express and share their creativity. There are drawbacks associated with social media technology especially when students develop a continuous usage of internet which encompasses reduction in higher-order reasoning processes. In addition

continuous internet use is likely to expose students to interactive, repetitive, and addictive stimuli that produce permanent changes in brain structure, WCER (2011).

International universities have embraced social media for international recruitment of students due to increased competition and reduced funding by the governments. In order to meet the recruitment targets, it is important for colleges and universities to adapt to changes as the social media technology platforms enable reaching out a large target of potential students across the world, Choudaha (2013). The use of websites by the institutions reduces communication costs over geographic distances and in addition, disintermediation will reduce the communication channel since students are able to connect directly. However institutions need to remain guarding against loss of information control due to the unlimited number of social applications available. It should be noted that social media conversations are informal which requires high interaction for the parties involved which enables deep engagement with prospective students intending to enrol at a given institution.

Zanamwe, et. al (2013), Greenhow and Gleason (2012), Junco, Elasky and Heighberger (2012) revealed in their research, that students improved in their communication, technology and research skills, assist in helping student connection with application concept, student engagement increases in course material, through use of social media which are critical in their development. This is an indication that social media technologies contribute positively behind the classroom but to a student's life experience, knowledge and skills that develops over a period of time. Application of social media in education would imply that learners have to take lead by participating, producing knowledge rather than consuming only which in turn contribute towards support of personal life goals and needs (Lee & McLoughlin, 2010). A point to note is that learners do not only engage in social interaction on the social media but contribute in the shaping of their career and personal life that form key components of personal development.

Disruptive technologies in higher education

Higher Education Institutions (HEIs) have significantly invested in electronic learning technologies such as Blackboard, Moodle, but they have not been universally adopted and used by students and staff. Instead, other technologies such as social media or social networking technologies which are not owned or controlled by the institutions are widely used to support learning and teaching, Flavin (2012). Disruptive technologies are those that disrupt established practices, often starting with a small number of users, but growing over time to the extent that they displace a previously dominant, incumbent technology. Christensen's theory of Disruptive Innovation, emphasizes that the disruptive technologies are not designed explicitly to support learning and teaching in higher education, but have educational potential. The theory propounded by Christensen (1997) shows that new technology can disrupt existing practices which may run a risk of rejection, but also that the new technology can go on to change the practice itself.

Complementary technologies in Higher Education

Social media supported learning seems to be occurring more outside the formal higher education system as opposed to the internal systems since several platforms are being

used to distribute learning content and courseware, a list among them include YouTube, EDU, iTunes U, Academic Earth. Applications used by students do differ from across the continent although there is a list of popular interfaces widely accessed, (Selwyn, 2011). In the South African context, MXit which is an indigenous mobile social networking platform, has played a crucial role in the spread of the mobile Internet in South Africa (Bosch, 2008; Chigona, Chigona, Ngqokelela, & Mpofu, 2009; Nitsckie & Parker, 2009). The cost of social media technology is minimal to such an extent that students can be able to afford both the devices and amount of data required to access applications such as Whatsapp, Facebook, and Twitter, Mixit. For example, more than 7.4 million registered MXit users (Worldwideworx, 2014) in South Africa pay only 1 South African cent (US\$.0012) per instant message. A latest encouraging trend among the general population that will entail the overall population of students was the announcement by CNBCAFRICA (2014) that will give East African customers free access to Facebook social networking site across all mobile networks after a strategic partnership with Tigo. A very positive development will be its ability of the Facebook site to be offered in English and Swahili, the national language of Tanzanians and the majority of people in East, Central and Southern Africa. Below was a quote from the general manager, Diego Gutierrez.

“Facebook has been a fantastic driver of data on mobile networks. With this unique partnership, we are making Tigo stand out from the crowd and giving many customers their first taste of the internet and social media, including in Swahili. That’s what creating the digital lifestyle all is about, and it reinforces our strategy to encourage more Tigo customers to use data as part of their daily communications activity,”

Past research indicates that incorporation of social media in learning and teaching has the power to bring new ways of enquiry, communication, collaboration, knowledge development; in addition it can have negative or positive cognitive, social and emotional impacts. (Gao, Luo & Zhang, 2012; Greenhow & Burton, 2011; Pimmer, Linxen & Grohbiel, 2012; Ranieri, Manca & Fini, 2012).

Methodology

Case study approach was considered most suitable for this study as it seeks to *“build up a rich picture of an entity, using different kinds of data collection and gathering the views, perceptions, experiences and/or ideas of diverse individuals relating to the case.”* (Hamilton, 2011). Yin (1994), defined a case study as *“an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident and it relies on multiple sources of evidence”*. This enhances the understanding of the reality in the rural settings thereby enhancing the development of conclusion that will enable to determine the contribution of social media technology in higher education.

This research covered Vhembe Further Education Training College. A questionnaire was used to collect primary data. It comprised of three sections namely demographics, experience in the use of social media and benefits of using social media technology. A random sample of 105 students from all the departments (Business and Finance Engineering, Hospitality and Tourism) at the institution were drawn that formed

sample size of the population. Thirteen students were used to pre validate the questionnaire. A mixed methodology approach for this research was adopted and a combination of quantitative and qualitative data was collected, through use of a case study that involved questionnaires being administered. A single case study was used as this enabled data to be collected from a wider range of different subjects which in the case are students. The case study approach allows for multi perspective analysis in such that there is the interaction of the researcher and a relevant group of actors involved (Tellis, 1997).

Results and Discussion

This section shows the analysis and discussion of results of the study that was conducted after the survey. In this analysis, there were various presentation graphical tools used to illustrate varying responses that were solicited from the survey.

Table 1 : gender of respondents

Gender	Frequency	Percent
male	58	55.2
female	47	44.8
Total	105	100.0

The table 1 shows the demographic information of the participants. A total number of 105 students participated in the survey and their gender showed that there were 55.2% male and 44.8% female students as shown in table 1.

Figure 1: Social media application usage

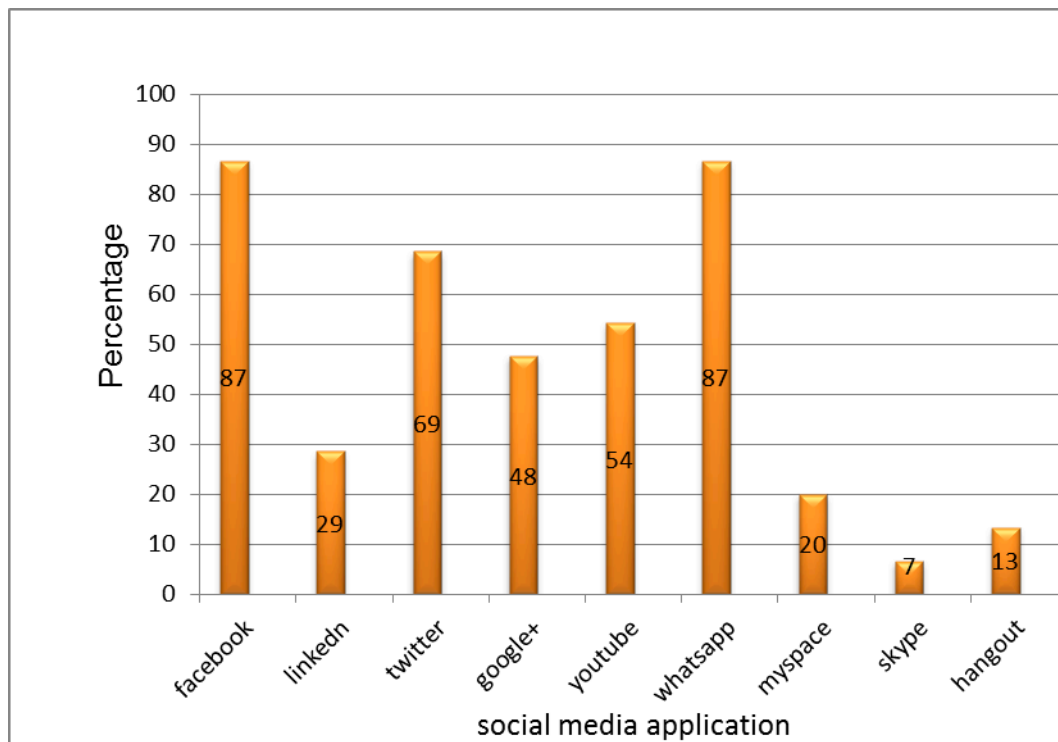


Figure 1 shows the responses of the students and their frequencies to the use of various social media application. High usage of the applications can be noted on facebook which has 87%, and whatsapp (87%) which are at par, followed by twitter (69%), youtube (54%) and google+ (48). Although there are other applications included in the survey, their usage among students is below 30% and these include linkedin, myspace, skype, hangout.

Figure 2: Devices used to connect to internet by students

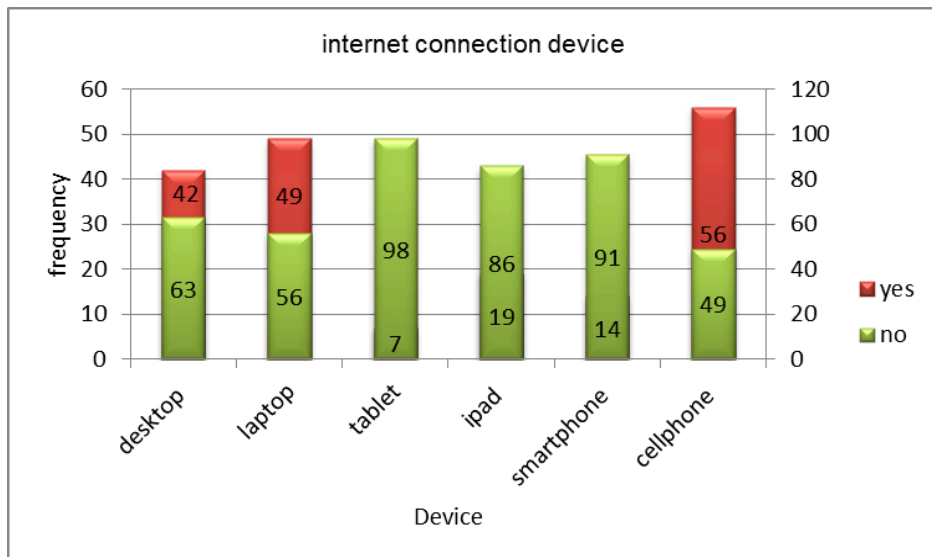
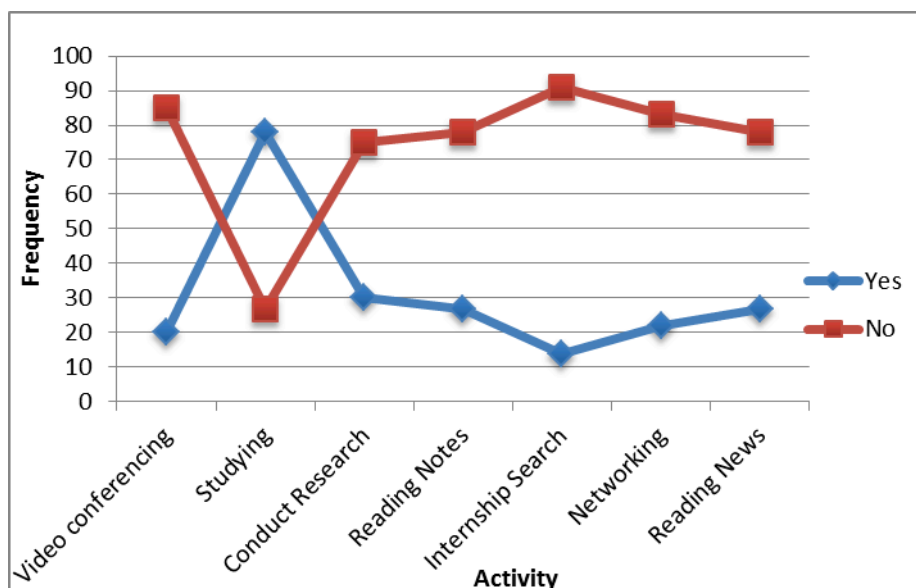


Figure 2 shows the devices used by students to access internet connectivity. The highest percentage is depicted on cellphones which tops 56%, followed by laptop (49%) and desktop (42%). This indicates that students access internet from their mobile devices through the use of 2G or 3G network. All other remaining handheld devices that include tablets, ipads and smartphones, rank low in terms of their usage by students (below 20%).

Figure 3: Social media usage



A result depicted in Figure 3 indicates that students use the social media application in their various study activities which are listed along the horizontal axis. Highest response confirms that social media is being widely used for studying purposes followed by research, reading both news and notes.

Figure 4: Time spent on various social application media.

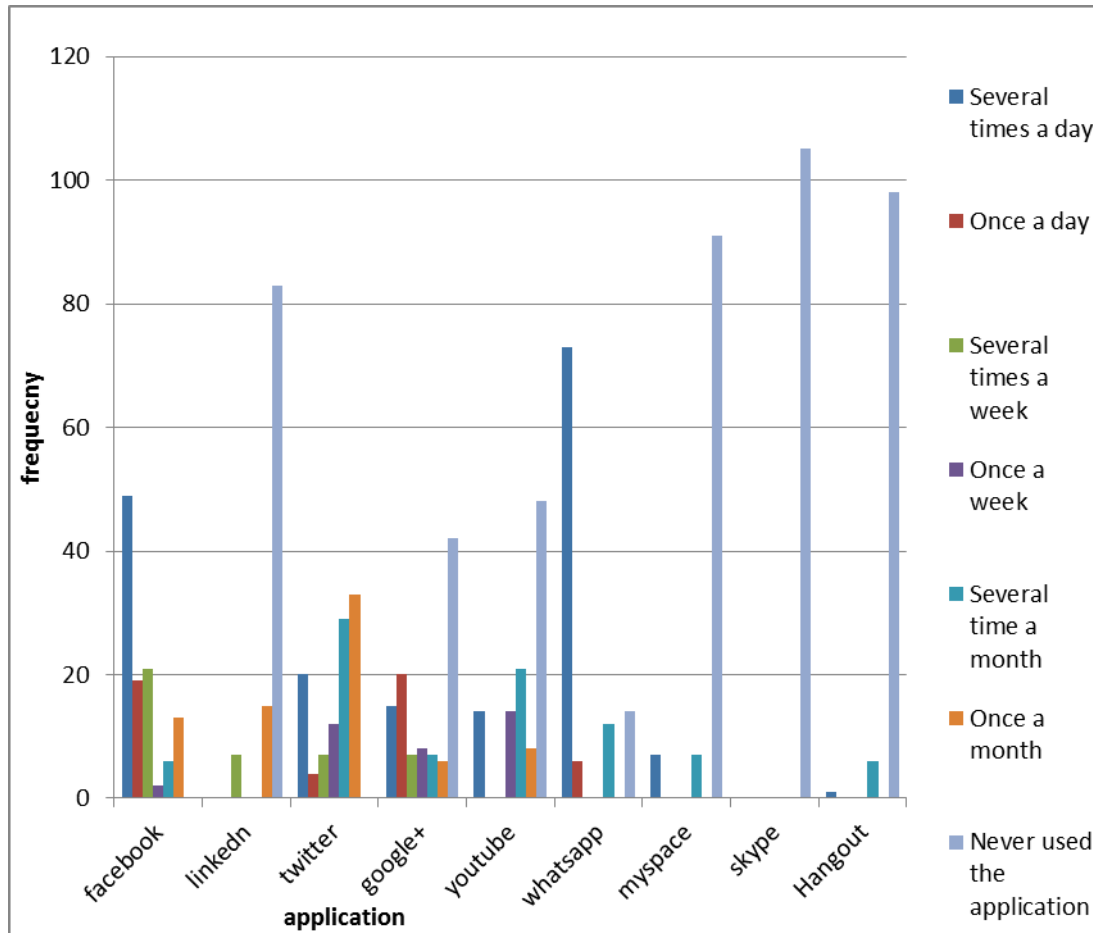
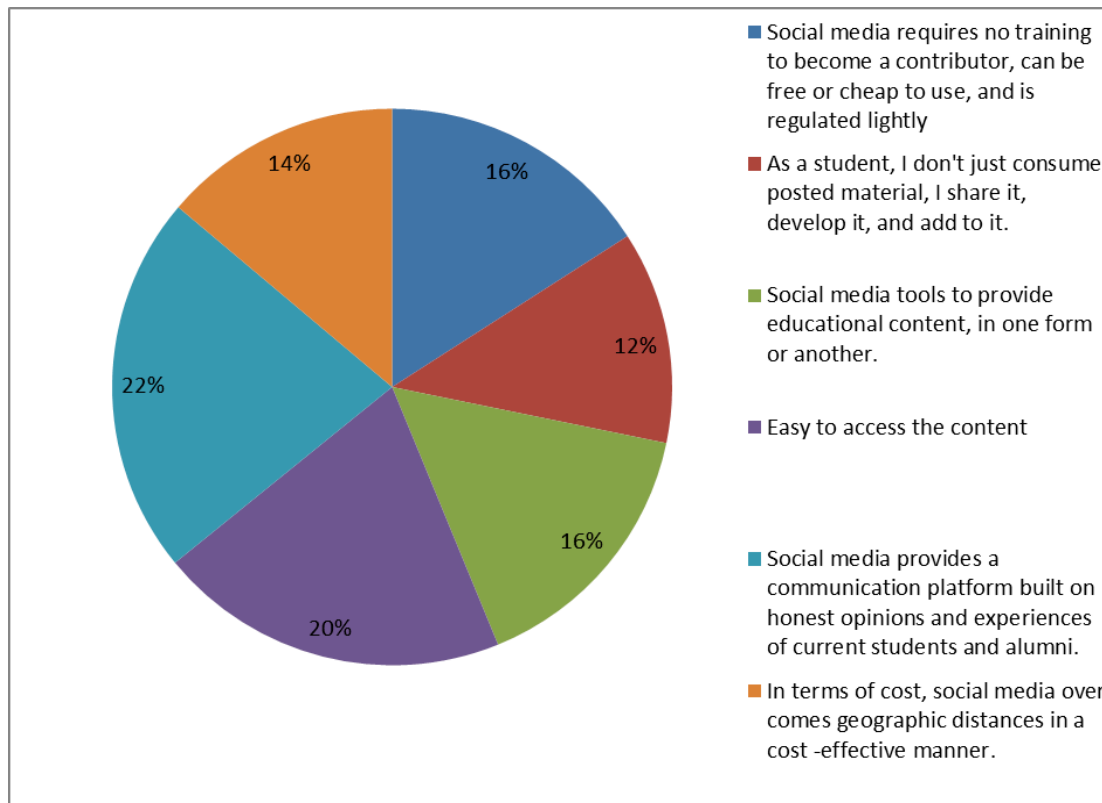


Figure 4 shows the frequency of access to a wide range of social media applications used by the students who were involved in the study. It can be deduced that they spent more time on the social networking sites. Whatsapp is being the popularly used application on a daily basis. Facebook is the second in category and twitter being on third position. However results indicate that there are applications which were rarely used and these point to myspace, hangout and skype.

Figure 5: Benefits of using social media technology



The results in Figure 5 shows that summarises the benefits gained by students through the use of social media technologies. 22% of the respondents highlighted that social media enabled them to learn from the past experiences of their current and former counterparts who shared information, 20% indicated the easy access to content. 16 % of the respondents indicated that they either used social media as source of educational learning content or its affordability with less training required. Geographic distances and costs are reduced as indicated by the 14% population of the respondents who participated in the study.

Conclusion

Research findings indicate that the popularly used social media applications by the students are Facebook, Whatsapp, Twitter and Youtube. Furthermore the results showed that students spent quite a considerable amount of their time as shown by the frequencies of access to these applications. These findings conform to the results of Reuben (n.d), Pewinternet (2013) which reflects a growing number of Facebook users on comparative basis of year 2012-2013. Whatsapp which has become the most popular tested application as it is distributed among various smart-phone platforms is being widely used by the students because of reasons that include affordability of smartphones, decreasing data costs and improved internet bandwidth, (Schrittwieser, Frühwirt, Kieseberg, Manuel, Mulazzani, Markus Huber, & Weippl, 2012).

Findings show that social media technology has infused a new culture of learning among students which is in line with the research of Thomas and Seely-Brown

(2011). In addition, students attending institutions in the rural settings are benefiting from use of technology through interaction and exchange of information online with counterparts from within the local community and outside the geographical boundaries. It is evident that internet is replacing traditional publishing, digital camera on handheld mobile devices is replacing film photography, and downloadable media such as movies from Youtube are replacing theaters, mobile cell phones are replacing pay phones and hardwired home phones, massive online open courses (MOOCS) are replacing the traditional classroom, Redding and Walberg (2012). Furthermore results from the study indicate that students have adopted the new technologies which are enhancing their learning and networking process in college setting.

Limitations

This research was confined to a single institution focusing on Further education training of students. As a result there was not opportunity to carry out a comparative analysis of more than one institution which would have enabled the researchers to gain a broader view of the aspects under investigation. Further research is required to cover the whole region of South Africa.

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