Topic

E-Learning in Journalism Education – Experiences of Students of the GIJ

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Abstract

The Ghana Institute of Journalism is a latecomer to adopting ICT for learning and teaching. The Institute has yet to develop a comprehensive strategic policy for integrating ICTs and e-learning as part of its teaching and learning curricula. Any effort is rather disparate and mostly an outcome of personal initiatives on the part of lecturers. These efforts cannot be a scientific framework on which to base a viable policy for integrating ICT and e-learning into journalism education. Educational pedagogy in the age of ICT requires a versatile teacher with capacity to design and structure courses. Individual lecturers at the Institute have implemented some courses using Web 2.0 learning and teaching platforms that integrate the interactive nature of ICT as a viable complimentary tool to teaching and learning. The study uses the website testing tool of usability to measure the extent of students' appreciation, perceptions and experiences with the use of ICT and web based tools to complimenting classroom learning. The study hopes to assess the impact of using ICT and web-based learning to compliment studies in journalism. It therefore sees students' interaction with the various learning platforms and ICT as critical in developing a more effective strategic ICT integration policy for the Institute. The study would peruse a quantitative survey method by administering evaluation questionnaires to the sample population of second year diploma students of the Ghana Institute of Journalism who took a course in mass communication in the first semester of the 2009-2010 academic year. Finally, it is hoped this study would provide an African perspective to the field of literature in this area.

Introduction

Web-based learning or e-learning has been an integral aspect of learning in many tertiary institutions around the world. In journalism training and learning, e-learning, web-based learning or online learning is a fundamental necessity, especially in the light of the growing shift into online reporting and its generative social media phenomenon.

This shift in pedagogy training in journalism as already stated is not a recent trend. Various countries and journalism training institutions have anticipated the dynamic technological trends and implemented strategic policies that capture the potentials of such technologies. As far back as 1996, Len Masterman (1996) joined the existing chorus calling for the creation of an enabling environment

in which media educators could acquire appropriate capacity to handle the ever-growing intrusion of the new media technology into traditional modes of practicing and teaching journalism.

Despite Masterman's skepticism about the excessive emphasis media educators place on the interactive nature of developing new media in teaching, he, like others before him – Marshall McLuhan - for instance, persistently argued for recognizing the inherent potentials and threats of the new media to journalism training and the journalism profession. In his article- 'Media Education Worldwide: Objective, Values and Superhighways' – he proffers a series of what he terms 'guidelines' for media educators. He argued that teachers or media educators as it were should begin to appreciate the modern day's students' capabilities in ICT use and other forms of technology-assisted means of learning and acquiring knowledge.

Interestingly modern students have embraced the Internet wholeheartedly modifying their perception about the Internet and its potentials as learning tools. The development social networking tools and software applications have engendered incremental interactivity among student users. From this standpoint, learning and teaching methods need to catch-up and integrate these dynamic developments into educational pedagogy.

More importantly, the burden has been on teachers to acquaint themselves about the dynamics of technological development, especially in relation to transformation of the Web. A 2009 study on

Higher Education in Web 2.0 World prepared by the Committee of Inquiry into Changing Learner Experience stressed that: 'Staff capability with ICT is a further dimension of the digital divide, and effective use of technology, is enhance learning, is a much an issue as practical operation...." (http://www.clex.org.uk/ourfindings.php)

The generality of the above arguments must be contextualized and operationalized.. E-learning in Africa and especially, in Ghana is not a recent phenomenon. In Ghana, e-learning and its sister, distance learning concept has been part of the vocabulary and education policy since the early 1990s. Government policies point to grand efforts since the 1990s in integrating e-learning and distance learning into the Higher Education systems; first as a means of providing alternative education platforms for students denied placements in University and tertiary institutions due to limited infrastructural space. Secondly, as a means blending face-to-face learning and teaching with online learning thereby providing and enriching the student's learning environment.

For the emphasis of this paper, is on the students' responses to the blending of web-based learning with the normal face-to-face lectures. As earlier stated latest innovations in internet technology such as developments in Web 2.0 enables increased interactivity and collaboration between learners and end-users. Various Web-based learning management systems (LMS) now enable sharing, collaboration and exchange of knowledge on the cheap. Tim Unwin's (2008) questionnaire survey on e-learning in Africa reported on the popularity of free Open Educational Resources (OER), mainly because they fall within the financial reach of most financial challenged tertiary institutions in Africa determined to implement e-learning in their Universities. However, and due to its flexibility and affordability a sizable number of teachers in tertiary institutions worldwide advocate the use of these

Web 2.0 applications—like Wikis, Facebook, and Ning, and others as complimentary teaching tools or viable platforms for e-learning. While these LMS have all the interactive and collaborative potentials, a number of studies have proved that they are difficult learning platforms for students. For instance, Unwin reports that OER Learning Management System- LMS- like Moodle are perceived by some African students as having a '.... a quite steep learning curve and it needs a fair time investment in face-to-face, hands-on, training to get started....' (Unwin 2008, p. 6)

The position of this paper is not to access the capabilities of these platforms, however, since the platforms provide set structures for teachers to design effective courses with these platforms, the point is to assess how best teachers tend to design effective courses using the built-in features of the LMS platforms and how best student users are satisfied with the use of the platforms for their courses.

The study employs the concept of usability as a framework for analysis for assessment. As would be discussed in the paper, usability is a recent testing tool and an analytical framework for assessing website design, applications and in part assessing users experience with the website. In most cases, usability is described as a quality management system aimed at measuring how a web site assists the users achieves his or her needs. Quesenbery Whitney (2002-2004) offers an interesting proposition about usability that say it is '.... a belief in designing to meet user needs and to focus on creating an excellent user experience....'

In the next sections, the paper would delve deeper into the concept of usability and draw a relationship between its conceptual elements and the positional arguments to be raised here.

E-learning

E-learning as an pedagogical tool has come to the fore in most University and Vocational institutions due to accelerated developments in ICT. The concept and practice of e-learning is relatively young compared to the thinking and implementation of other means of distance teaching and learning. E-learning describes a teaching and learning processes that relies mainly on Internet and Web-based technology. E-learning is also equated to computer based training that was in vogue sometime in the 1980s, however, e-learning has become popular in most institution cheapness of personal computers, the increase in use of laptops and the pervasiveness of the Internet and wireless technologies. (Munguillon 2008).

E-learning has gained additional vitality due to innovations in web-based technologies and further advances in Web 2.0 enabling software. Web 2.0 refers to fourth generation systems that allow asynchronous interaction on the web between the learner and teacher without the physical presence of both interactants. Significantly, Web 2.0 is an innovative development in website technology and design that enable easy exchange and sharing of information and ideas among people. As Dave Duarte (2009) emphasizes Web 2.0 technologies transform websites from ordinary websites into web applications or tools. (Duarte 2009) Some of these applications and collaborative tools include Facebook, MySpace, Wikis, Blog, Flickr and Twitter.

The innate advantages of Web 2.0 are its enabling capacity that favours a 'sense of community of interests and networks' and induces in users separated by physical space a high sense of communication, collaboration, creativity and technological proficiency.

(http://www.clex.org.uk/ourfindings.php) Munguillion points to the empowering nature of Web 2.0 in that end -users and creators, publishers and managers of content share almost equal power. As the Clex Report indicate Web 2.0 draws a distinct demarcation in the use of web space. For once, the virtual space engendered by the web is split into three inter-related spaces. The Personal space defined by messaging tools Google mail, Yahoo and others. The second space is embedded in the Group Space formulation where collaborative tools like FaceBook are prominent while the third virtual space can be envisaged as the publishing space inherent in blogs, social media and YouTube.

On the pedagogical front, Web 2.0 facilitates essential learning skills like information search and retrieval and induces the students the ability to critically evaluate information from a variety of relevant sources. Munguillion bolsters this assertion by explaining that in education Web 2.0 encourages collaborative participation from students in the learning process.

This invariably places a burden on teachers who must keep abreast with the latest technological skills for utilizing in the learning and teaching process. The burden is further aggravated by the level and age at which students gain competence in the use of Web 2.0 learning tools. As the Clex Report findings indicates, the competence level of most users surveyed were between the ages of 5 and 15 years. In addition, teachers are burdened by the expectations of students brought about by Web 2.0 that learning needs are not achieved solely through face-to-face contact. Thus for some students lack of physical space should not act as a learning impediment. Web 2.0 provides instantaneous communication opportunities such as video conferencing, chat, SMS messaging, skyping and others.

However, there is a need for caution here, again as the Clex Report indicates a section of students abhor the use of collaborative or social networking tools like YouTube and Facebook as learning tools, they tend to believe that these tools are meant for other informal activities. This is evident in the statement that: 'Facebook and MySpace are avenues to get away from learning not to help learning'. (http://www.jisc.ac.uk/media/documents/publications/heweb20rptv1.pdf - Retrieved 6/5/2010)

The prime focus of this study is on the capabilities and potentials of Wiki as an effective Web 2.0 application for teaching and learning or in complimenting teaching as in blended learning in tertiary journalism studies. And the fact that it provides enabling tools for the teacher to design lessons and courses content which allow for collaboration and sharing of ideas.

The most popular form of Wikis is the Wikipedia – the free online encyclopedia regularly utilized by students all over the world for information retrieval and reference. Wikis appeared as web tool in the mid-90s and have been described as web sites that encourage 'democratic' usage. As one of the popular Web 2.0 applications Wikis permit asynchronous communication and collaboration among groups of users. More significantly, Wikis are web based and therefore useful in meeting the pedagogical needs of students-which encourages instructors or lecturers and students to collaborate and share information even outside the confines of the physical classroom. (www.educase.edu/eli July 2005)

Wiki experts enumerate the advantages as:

- Anyone can edit
- Easy to use and learn

- Wikis are instantaneous so there is no need to wait for a publisher to create a new edition or update information
- People located in different parts of the world can work on the same document
- The wiki software keeps track of every edit made and it's a simple process to revert back to a previous version of an article
- Widens access to the power of web publishing to non-technical users
- The wiki has no predetermined structure consequently it is a flexible tool
 which can be used for a wide range of applications
- There are a wide range of open source software wiki's to choose from so licensing costs shouldn't be a barrier to installing an institutional wikis

These advantages of wikis make them attractive options as OERs for cash-strapped institutions.

Ghana Institute of Journalism

The Ghana Institute of Journalism (GIJ) as a case of study for this paper occupies a unique place in the development of journalism practice in West Africa and particularly Ghana. As the foremost professional Institute in the country, it aims at providing up-to-date quality training for journalists, communicators and Public Relations Officers. The Institute celebrated 50 years of its establishment only last year. Two years ago the Institute was granted a Presidential Charter making it a full-fledged University mandated to run Communication and Public Relations.

The Institute offers two programs – the traditional 2-year diploma program leading to a professional diploma in Journalism and Public Relations, including a 4- year program leading to a Bachelor of Arts degree with a major in Journalism or Public Relations. In addition, the Institute runs certificate short-courses related to Communication, Journalism, Public Relations and Advertising.

The University runs morning and evening streams for both programs to accommodate the over 600 students in seven lecture halls. As at 2009 the number of applicants to the Institute was 1240 of which 822 qualified for admission. However, only 37.9 percent of these were duly admitted. This meant only 312 applicants were admitted for studies into the Institute. (GIJ Registry). The Institute's expansion is limited by its inadequate infrastructural facilities. This impedes it from increasing its student and staff population. This is evident by high percentage of potential students who are denied learning opportunities annually.

For the last 25 years, the Institute has had on its drawing board plans to move to a new multi-purpose site that have modern facilities for teaching communication and journalism. However, these plans are still hampered by perennial of lack of funding from government.

Distance and e-learning technology could provide a viable alternative for GIJ out of its precarious problem. In the past two years, the Institute has been implementing an initiative to test the viability of the implementation of e-learning possibilities. The Institute lacks the technically and pedagogical wherewithal to embark on such ambitious project. However, in 2008 it signed a Memorandum of Understanding (MOU) with the MKFC – Multicultural Popular Education Centre - Stockholm College to initiate a pilot project on the training of teachers in content and curricula development for e-learning. MKFC Stockholm College is a Swedish government funded adult education organization that provides training in various areas and disciplines online for primary and tertiary institutions. The College has online training programmes in countries like Pakistan, Afghanistan, Eriteria, Somalia, Ethiopia and other Third World countries. (See - http://www.mkfc.se/om-mkfc/about-stockholm-college & http://www.networkedblogs.com/blog/mkfc_stockholm_college/)

Of the ten lecturers, who signed up for the online training programme only 7 participated actively and 4 graduated successfully. Unfortunately and due the lack of interest, enthusiasm, work overload and commitment the project has foundered. (See- http://www.slideshare.net/mkfc/social-media-journalism)

As part of the learning objectives of the project, participating lecturers were tasked to introduce some aspects of what they learnt in their classroom teaching. This paper, therefore serves as an evaluation of a course implemented in a mass communication using web-based wiki called wikispaces as a learning platform for teaching and content delivery. A significant aspect of the course and the use of

wikispaces in classroom was a need for teachers to re-orient teaching methods from traditional lecture delivery to student-centred approach to teaching. (http://educationaltechnology20.wikispaces.com/Wikis Retrieved 1/5/2010)

The course wiki - http://diploma2masscomm.wikispaces.com/ - was designed to allow students to access and retrieve information for independent critical learning. The course frontpage opened immediately to a course outline with a weekly calendar. A simple scroll down displayed recommended readings and chapters from course literature, while, relevant and appropriate online literature were linked from the wikispace to allow students access and explore other perspectives on the issue. To lighten the mode of the course, the lecturer embedded a carton and picture appropriate to the various topics to be treated for the semester.

The second page of the course opened to an opened on to an assignment page. In line with shifts in pedadogical thinking afforded by wikis, the lecturer designed assignments to encourage group collaboration and enhance students' independent thinking. A second assignment required students to learn to create personal blogs based on a required assignment.

(http://diploma2masscomm.wikispaces.com/Assignments)

To deepen collaboration, students were required to post their blogs into the discuss forum for comments by other students. Over 153 students participated in the discussion on the forum or visited the discussion forum to read issues under discussion.

Features of Wikispaces

Wikispaces major advantage is its ease of use-based principally on WYSIWYG (What You See Is What You Get) –page editor. According to the creators of Wikispaces, it is basically a word processor,

simple toolbars to enable users to create text, upload and download files, insert images and link other web pages to the document. Wikispace allows users to simply paste video, audio, calendars, group chat and other widgets from html from any web service. (http://www.wikispaces.com/site/features)

Usability

Usability provides an analytical framework for assessing the effectiveness and efficiency of tangible and intangible products and services developed for consumers and users. It is a primary testing tool often called usability testing used in most industries – a kind of qualitative approach to measuring and evaluating products and services. Usability provides user-centric and user-friendly testing technique used universally. With the onset of websites and the pervasiveness of software applications in life, usability has also assumed a prime place as a testing mechanism for measuring various aspects of a product in relation to users experience with that product. Abran et.al (2003) assert that usability has no homogenous definition. Most definitions are dependent on the purposes of the user. For instance, for the end-user, usability can be explained as 'a set of multiple concepts, such as execution time, performance, user satisfaction and ease of learning (usability) taken together'. After critical analysis of various ISO (International Standards Organization) standards and guidelines they arrive on a list of authoritative definitions as follows:

- > Nielsen and Schnederman characterized five attributes for errors, satisfaction and memorization
- > Boehm software usability is the extent to which the product is convenient and practical to use

- ➤ Capers Jones usability is the total effort required to learn, operate and use software and hardware
- ➤ ISO/IEC 9126-1 usability as the capacity of the software product to be included/understand learned, used and attractive to the user, when it is used under specified conditions.
- ➤ IEEE Std. 610.12 is the case with which a user can learn how to operate, prepare inputs for and interpret the outputs of a system or component.
- The Music project identifies learnability as the attribute of usability

(Abran, Khelifi, Witold & Seffah, 2003)

Five units for analyzing software applications and websites can be gleaned out of the definitional analysis provided by Abran et.al and Queensbery. These five are used as units to analyze responses about the course wikispace created and designed for the mass communication course.

Diploma 2 – 2008 – 2010 year group comprises 53 students in the morning session and 109 in the afternoon session. 25 questionnaires were randomly distributed to respondents in the morning session and 55 distributed to respondents in the afternoon sessions. Of the 80 questionnaires administered only 48 per cent was returned, an indication of apathy on the part of the students.

Analysis & Findings

The usability framework provides 5 robust units for analysis for website testing. Those units stem from analysis of the definitions given above and the features and characteristics of usability in

practice. Jakob Nielsen's Alertbox explain the 5 component units in terms of the utility of website. In this case, utility refers to the sites' functionality. The 5 units adopted for analyzing data in this paper are:

- 1. **Learnability**: How easy is it for users to accomplish basic tasks the first time they encounter the design?
- 2. **Efficiency**: Once users have learned the design, how quickly can they perform tasks?
- 3. **Memorability**: When users return to the design after a period of not using it, how easily can they reestablish proficiency?
- 4. **Errors**: How many errors do users make, how severe are these errors, and how easily can they recover from the errors?
- 5. **Satisfaction**: How pleasant is it to use the design?

(http://www.useit.com/alertbox/20030825.html Retrieved 25/4/2010)

Interestingly, 18% of respondents indicated that the course wikispace was easy to learn to use, while 39% found it fairly easy to learn to use the features of the site. However, an interesting finding was that about 5% of students and 11% found the features confusing and cumbersome to learn. This is inspite of the fact that 39% of the respondents reported that prior to this course they had had experience with the wikispace platform. In the meantime, about 30% of users of the course wikispace platform reported they needed about 60 minutes to learn to master the features of the wiki, which therefore made it easier for them to use. On the opposite end, about 8% of students admitted they used about a day and more to master the features of the course platform.

Concerning the efficiency of the course's wikispace learning platform, half the students reported that they needed assistance to upload or download materials on the learning platform, This took between 30 to 60 minutes to carry out set tasks.

For memorability, 58% reported that they could remember the address of the website after the first day of use, with 47% needed less than 20 minutes to remember how to use the features of the platform after the first use. Incidentally, 18% of the users said they needed assistance from colleagues in other to use the platform after the first time

Interestingly, a high number of students – 63% of respondents reported high level of error in using the course's wikispace. They indicated that they made between 5 to 10 mistakes in using the features of the wikispace, however, 57% of them believed the manage to recover immediately from the errors they made. Meanwhile over 30% of respondents sought help from colleagues or used the Help feature of the Wikispace.

Finally, 57% of respondents expressed their satisfaction with the taking the course on wikispace. Unfortunately, 26% of respondents expressed dissatisfaction with the course being held online. Coincidentally, 52% of the number agreed to have more courses online using wikispace as a the learning platform. Inspite of the number of enthusiastic respondents, about 28% of them could not give any opinion about the use of wikispace as platforms for future courses.

Conclusion and Recommendations

The mandate for this paper was to access students' experiences and satisfaction with a second year diploma course in Mass Communication offered as a blend of Web-based and face-to-face

contact lessons. However, before conclusions can be drawn from the data, it is necessary to explain to some extent the situational conditions in which the conclusions can be drawn.

The availability of ICT infrastructure is germane to the insertion and introduction of courses partially or fully dependent on Internet for learning. The Ghana Institute of Journalism lacks the requisite technical infrastructure and facilities for implementing any meaningful e-learning programme. This includes a conscious and deliberately thought of policy guideline on the adoption of ICT into classroom teaching, the expedited training programme in pedagogy and ICT for faculty and complete re-orientation of the traditional administrative mindset that sees physical infrastructure and the classroom as the only platform for engaging in learning and teaching.

First, the foremost pre-requisite facility the institute needs to acquire are optimum number of computers proportionate to the number of users on campus. Currently, the Ghana Institute of Journalism currently has 87 computers with dedicated 256k/s broadband Internet access. Of these 29 are available for student use in various different departments of the Institute. There are 8 computers located in a small section of the Institute's library; 14 are in the computer laboratory intended for audio and video editing, graphics and browsing. 5 other computers are in use at the audio-visual unit for video editing and packaging of audio-visual productions. These are however, not networked or connected to the Internet. Another two are used at the media centre for production of campus magazines, newsletters and newspapers. Three other computers are installed at the lecturer's common room. The rest of the 29 computers are located in the administration section of the Institute for administrative purposes.

For a student population of over 600, 29 computers are awfully inadequate to meet the demands of information retrieval, research and writing assignments. It also smacks in the face of efforts to train and develop students to be critical and independent thinkers. For instance, one respondent expressed frustration about the lack of access to the Internet and the slowness of downloading or uploading information on the net on campus. And for most part, this frustration overshadowed the excitement of introducing and using the wikispace as platform for the course. Such sentiments re-enforce Unwin's findings that online learning management systems are constrained by 'low connectivity speeds' and 'unreliable Internet connections'.

Significantly, half of the students who responded to the survey expressed satisfaction with the web-course. It is also necessary to point out that despite the fact that students did not particularly have prior lessons about the workings of the Wikispace, the degree and extent of satisfaction and enthusiasm outlined in their responses and displayed during the course is evident such that if given the necessary advanced lessons a large majority of students may be enticed into participating eagerly in web-based courses. As David Hollow (2009) recommends in his collaborative study with International Conference on Web Engineering (ICWE) on 147 e-learning practitioners in Africa, some desired outcomes of the introduction e-learning into African institutions are to achieve an extent of student motivation, and improved student attainment (Hollow & ICWE, May 2009)

For the Institute the entry into the world of ICT comes at a great cost and a strain on their budget.

The Institute operates an unsecured WIFI system on campus, which incidentally is patchy and

accessible from certain specific locations on campus. In addition, the network infrastructure is not centralized or server-based but router based which makes its administration and management difficult. Monthly recurrent cost for the service according to the Systems Administrator is \$1100 with the initial set up cost amounting to \$3000 and other Router cost an additional \$600. Other technical infrastructural glitches, maintenance costs, software license fees and persistent virus attacks combine to aggravate the situation. For instance, power fluctuations and blackouts can cut electricity supply to the campus for hours rendering any work impossible.

For a majority of students, the use of ICT and web-based courses are exciting alternatives to their studies, however expensive and cumbersome it maybe for some of them. Web-based courses admittedly open the world to students and increase their curiosity to learning. As one student suggests "... such courses must be adopted by all lecturers. It makes learning quite easier". Regrettably not all lecturers have the capabilities, pedagogical skills and technological acumen to develop content for web-based courses; mainly due to the fact that the Institute has no clear-cut forward looking policy that aims at transforming and complimenting traditional teaching approaches with ICT and web-based courses. It is recommended here that the Institute begin to formulate cutting edge policies that can act as drivers toward a full-fledged distance learning or e-learning implementation. The Institute must as a matter of urgency adopt one or both forms of formulae that can help absorb the growing number interested potential students who are often denied access to the University mainly based on inadequate physical space, while enabling existing students aware of modern trends in media and journalism development.

The policy must recognize the essence of offering lecturers the requisite training in content development, assessment procedures for web-based courses and achieving collaboration and encouraging critical learning with the use of Web 2.0 applications. This provides for students competent and confident lecturers with the know-how to utilize the latest use-friendly technology for teaching.

The cost-effective way for avoiding and minimizing the pitfalls and challenges in the implementation of ICT in Journalism pedagogy is for the Institute to benchmark the practices of other tertiary institutions both in and outside the country who are well advanced in the implementation of ICT in journalism training.

Lastly, the Institute should develop strategies that could reduce the cost of accessing the net by students. The University could liaise with IT firms to provide laptops for students on credit or payment by installments, thereby transforming the high cost of acquiring computers, maintenance, provision of anti-virus software and payment of software license fees. Any savings could go into acquiring fast dedicated Internet connectivity for the Institute. As a journalism training institution, the GIJ cannot afford to lag 20 years behind pedagogical development. It is a disservice to journalism students if the current situation persists for long

References

Abran, Alain, Khelifi, Adel, Suryn, Witold & Seffah, Ahmed (2003) – Consolidating the ISO Usability Models. Retrieved 15 April 2010

Committee of Inquiry into the Changing Learner Experience (CLEX Report 2009) – 'Higher Education in Web 2.0 World' http://www.jisc.ac.uk/media/documents/publications/heweb20rptv1.pdf - Retrieved 6/5/2010

Duarte, Dave (2009) – *How African Traditional Media can tap into New Social Media and Blogs* in Mdlongwa, Francis (ed.) – Doing Digital Media in Africa – Prospects, Promises and Problems. Konrad Adenauer Stiftung

Educational Technology 20 http://educationaltechnology20.wikispaces.com/Wikis Retrieved 25/4/2010

Hollow, David & ICWE (May 2009) – elearning in Africa: Challenges, priorities and future direction

http://www.informaworld.com/smpp/section?content=a918784418&fulltext=713240928 - Retrieved 20/4/2010

Jakob Nielsen's Alertbox – Usability 101: Introduction to Usability http://www.useit.com/alertbox/20030825.html - Retrieved 25/4/2010

Masterman, Len (1996) - Media Education Worldwide: Objective, Values and Superhighways

http://digital.lib.msu.edu/projects/africanjournals/pdfs/africa%20media%20review/vol10no 2/jamr010002004.pdf Retrieved 20/4/2010

Munguillion, Julia (2008) – E-learning from the Perspective of Web Science: Looking to the Future in 'Web Science' Dossier – Issue 7 October 2008 UOC Papers – e-Journal of Knowledge Society- http://uocpapers.uoc.edu Retrieved 28/4/2010

Personal Interview – GIJ Registrar

Queensbery, Whitney (2003-2006) User-centered design works - http://www.wqusability.com/ Retrieved 15/4/2020

Unwin, Tim (2009) - http://www.elearning-africa.com/newsportal/english/news192.php - Retrieved 15/4/2010

Wiki Features - http://www.wikispaces.com/site/features Retrieved 2/5/2010

Websites

www.educase.edu/eli

http://diploma2masscomm.wikispaces.com/Assignments

http://www.mkfc.se/om-mkfc/about-stockholm-college

http://www.networkedblogs.com/blog/mkfc_stockholm_college