



Quality eLearning in Distance Learning: Benefits and Implications for National eLearning Policy in Ghana

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Abstract

The continual innovation in technology has ripple effect on the way services are offered and undoubtedly has affected educational policies leading to educational reform. Governments, including the Government of Ghana have shown support to Universities in their implementation of eLearning. However, there is gap in the eLearning practice in Ghana. A well structured eLearning system with a supervisory role of Government and support system from university management for eLearners is little to none. How should online course be accredited? What pedagogy would ensure that the impact of skills and knowledge are not compromise for distance learners? What security measures should be put in place to ensure that learner's data is secured? How Universities collaboration challenges can be minimized? and How students' satisfaction level of eLearning system can be enhanced? This study seeks to answer these questions as a basis for eLearning policy debate at the National level.

Keywords: Ghana; ELearning; Distance learning; National policies; University; Benefits

Introduction

Ghana as a nation has made strides towards the effective use of ICTs in education. The Government instituted the "ICT in Education Policy" in 2008 after the first policy called ICT for Accelerated Development (ICT4D). The ICT in Education Policy has an overall goal "To enable graduates from Ghanaian educational institutions—formal and non-formal to confidently and creatively use ICT tools and resources to develop requisite skills" (ICT for Education Policy 2008). The recent document is the "Education Strategic Plan for 2010-2020" which was finalized in 2012. One of it focal area is to expand tertiary education to include Open University and new Universities.

There has been gradual improvement in the measures to ensure that the right infrastructure is put in place to facilitate ICT use in schools. Collaboration between the Government of Ghana, Oracle and the New Partnership for Africa's Development (NEPAD) launched the e-school programmes which benefited six schools and by mid 2013, 459 schools were provided with computer laboratories (eLearning Africa Report Elletson (ed.) 2014). The price of bandwidth has reduced by tenfold since the year 2007. The

Eastern Corridor Fibre Optic Infrastructure which commenced in 2013 upon completion, would further enhance the connectivity speed of the internet, reliability, and bridge the digital divide between the rural and urban communities (eLearning Africa Report Elletson (ed.) 2014). Ghana had three million, five hundred and sixty-eight thousand, seven hundred and fifty-seven (3,568,757) internet users in the year 2012. The internet penetration for the same year was 17.1% (eLearning Africa Report Elletson (ed.) 2014). Facebook users were one million, six hundred and thirty-eight thousand, four hundred and twenty (1,630,420) in the year 2012 as well (eLearning Africa Report Elletson (ed.) 2014). These stated numbers include the statistics of internet use for educational purposes.

Education in Ghana is heavily financed by the government from the primary schools to the tertiary level. With reference to the Education for All National Action Plan, the projected cost of education using 2002 as the base year indicated that total domestically- financed recurrent expenditure on education as a percentage of GDP was 5.3% in 2002, 2003, 2004, 2005, and 2010. However, it is projected to decline in 2015 to about 5.2% of GDP. During the same year the domestically-finance capital spending on education as a percentage of GDP was 0.4% in 2002, 1.0% in 2003, 0.9% in 2004, 2005, 2010 and projected as 0.9% in 2015.

At the tertiary educational level, the total expenditure is made up of 51% from the Government of Ghana, 9% from GETFund (Ghana Education Trust Fund-Public Trust set up by Act of parliament in 2000) and 40% from Internally Generated Fund (IGF), (NCTE 2014). The available funding is woefully inadequate due to the increased pressure on infrastructure and resources. Despite the issues of inadequate funding, tertiary institutions are doing their bit to increase enrolment and subsequently achieved a Gross Enrolment Ratio (GER) of 5.71% in 2005, 12.08% in 2011, and 12.20 in 2012 (UNESCO Institute for Statistics 2014), yet it is still below the National Council for Tertiary Education (NCTE) target of 25% (NCTE, 2014). The Tertiary Education Policy was instituted to help Government to control student intake, to maintain Government spending on tertiary education, cost recovery and cost sharing mechanisms, student staff ratio, gender ratios and to also ensure Quality control (Girwood, 1999). The cost-sharing and cost recovery programme was then instituted at the tertiary level as a result of these challenges. Therefore HEI (Higher Educational Institutions) which are faced with the challenge of funding can increase student intake to subsequently increase IGF, but would have to be strategic and ensure that the quality of education is not compromised.

ELearning Trend in Ghana

Some Higher Educational Institutions (HEI) in Ghana are members of the largest eLearning Network in Africa, the African Virtual University (AVU). AVU was established in 1997 and headquartered in Nairobi, Kenya. The aim of AVU is to provide quality, affordable education which is accessible to the society. AVU has helped trained more than forty thousand (40,000) students. AVU is also the widest reached eLearning network in the continent. It has fifty-three (53) partners in twenty-seven (27) countries (AVU 2015).

Some HEI in Ghana are also active participants of the African Council for Distance Education Quality Assurance and Accreditation Agency (ACDE QAAA). The ACDE is headquartered in Kenya and is responsible for programme reviews and capacity building, institutional audits (which are solely evidenced-based), accreditation of institutions and programmes, and articulation and credits transfer (ACDE QAAA April 2011). The purpose of the ACDE is also to expand access of quality education through Open Distance Learning, including eLearning. The ACDE is a continental body made up of Universities in the sub-region.

At the West African sub-regional level, Ghana has hosted the Regional Training and Research Institute for Open and Distance Learning (RETRIDAL) training workshops, among other nations such as

Sierra Leon, The Gambia, and Nigeria. In all, RETRIDAL organized a total of twenty-five (25) training workshops in member countries (Ogunlela & Ogunleye 2015). RETRIDAL is hosted at the National Open University of Nigeria (NOUN) and was established in August 2003 in collaboration with Commonwealth of Learning (COL), Vancouver, Canada. RETRIDAL is the organizational body in the West Africa Region responsible for ensuring that online distance learning programs meet quality standards. RETRIDAL efforts are geared towards the realization of the benefits of open Distance Learning. RETRIDAL also provides training for ODL staff in Nigeria and the West Africa sub-region. In addition, it is focused on “training the trainers” in Nigerian and West Africa Sub-regions as well as serving as a centre of excellence promoting quality education in ODL programmes. As such RETRIDAL plays a monitoring role to NOUN (National Open University of Nigeria) and a significant role in ensuring that the eLearning facilitators are equipped to be able to produce self-instruction course material. As part of its efforts to ensure improvement in teaching methods, RETRIDAL had two edition of WAJOFE (a publication on research in open and Distance education to help members learn and improve) (Ogunlela & Ogunleye 2015).

The Ministry of Education in Ghana established an Agency called Centre for National Distance Learning and Open Schooling (CENDLOS) with the role to “reinforce Open and Distance Learning (ODL) at the tertiary level and make it a reality at the pre-tertiary stage” CENDLOS as it role demands, has produce and distributed content on various subjects run in Junior High schools and Senior High schools. There have been efforts made towards using simulation for laboratory lessons for science education in Ghana.

However, much has not been done at the tertiary level. Various tertiary institutions are grabbing with content production. Efforts in the use of technology for Learning have experienced 49% failure in the continent (eLearning Africa Report, 2013). Each institution has their own sets of standards when it comes to delivery of online courses in supplementing face to face learning. Some institutions have Distance Learning centres (DL) where they use mostly internet and ICT tools as the medium of teaching and learning. To this end, the National Information Technology Agency (the ICT policy arm of the Ghana Ministry of Communications) is advocating eLearning delivery approaches for the Distance Learning centres.

The integration of eLearning in the tertiary institutions can result to changes in the learning and teaching processes. Universities use curricula suitable for Face-Face and import for e-courses. There is no specific National policy on eLearning to facilitate the accreditation of e-courses to ensure that they meet required standards. Weak collaboration among the various universities to maximize resources is another challenge. There is therefore a gap in National policy in the area of eLearning implementation in Ghana.

Lack of National Policy to steer the affairs of eLearning can result to eLearning implementation stagnation, less obligation to seek accreditation by university authorities and drained valuable resources (Durah, Alraddadi, Alzubi & Alzubi.2011; Borokhovski, Bernard, Mills, Abrami, Wade, Tamim & Surkes 2011; Adali 2009, and Hardt & Misité 2008.). A preliminary review of five (5) major National education documents in Ghana revealed that issues on pedagogy and curriculum suitable for eLearning is not adequately discussed in national policy. In addition, the absence of integration issues on e-pedagogy and e-curricula was noticed.

Literature Review

The need for the leading role of Government in the achievement of quality eLearning is a well documented fact in literature. Dondi & Morett (2007) report on reviewed projects in Europe clearly confirm the effect of Government lead projects facilitating the birthing of the European Foundation of Quality in eLearning. The survey report of Elameer & Idrus (2011) indicated that assigning appropriate

responsibilities to the government and the ministries can result in effective eLearning. The eLearning Africa survey in 2012 and 2013 revealed that the highest percentage of respondents indicated that the government is the most influential change agent. In the 2014 eLearning Africa survey, 52% of respondents also noted that the government is the most influential body if success is to be achieved in eLearning (eLearning Africa Report Elletson (ed.) 2014). Therefore the role of government at the National level in achieving eLearning quality cannot be overemphasized.

Accreditation or licensing of eLearning programs must be accompanied by a monitoring body to ensure that institutions adhere to the set standards. According to Ogunlela & Ogunleye (2015) in Distance learning, the study material has a significant effect on the success of the course and also impacts requisite knowledge and skills. Therefore Distance learning staff should be equipped and trained to be able to design self-instruction course materials. The training need is very critical due to the limited number of trained staff to manage face to face education and Distance Learning courses independently. In light of this challenge, some institutions require the same staff members to teach both face to face and Distance Learning courses. Dondi & Morett (2007) called for Institutional self- assessment in instructional design. Faculty would therefore need the support of management, student involvement, faculty professional identity, and institutional strategy to ensure appropriate teaching materials are in place for quality eLearning.

Elameer & Idrus (2011) noted how Government collaboration can foster quality eLearning. eLearning can be used to foster collaboration (Gaebel, Kupriyanova, Morais, & Colucci 2014), and ensure effective contribution from practicing institutions. Durah, Alraddadi, Alzubi, and Alzubi (2011) indicated that collaboration could help prevent wastage of recourses. Collaborations make it possible for practicing institutions to notice the benefits of eLearning. Due to the nature of eLearning the benefits are not “loud” thus closeness would enable practicing institutions to observe the benefits (Rogers’ Observability).

eLearning exploited at its full potential would yield the anticipated benefits. However, 49% of respondents indicated that institutions in Africa have experienced failure in the use of technology for learning (eLearning Africa Report Isaacs (ed.) 2013). In contrast a third of the member institutions of European Universities Association survey noted an average response of 67.3% benefits of eLearning associated with pedagogy (Gaebel, Kupriyanova, Morais, & Colucci 2014). Despite these benefits, the practice of eLearning is not mainstreamed or institutionalized. According to Gaebel, Kupriyanova, Morais, & Colucci (2014), 5% of respondents indicated that eLearning has been institutionalized while 28% of respondents indicated it is being practice by individual faculty for online degree programmes. By large and far, Europe has very detailed standards spelt out and has embarked on many projects. These investments have yielded benefits for their institutions in the implementation of eLearning. The fact still remains that the practiced is not mainstreamed yet.

In Gaebel, Kupriyanova, Morais, & Colucci (2014) survey 63% noted they do not have external eLearning quality assurance in place. 49% of Respondents revealed they have institutional eLearning policies while 16% indicated that they have national eLearning policy. This is consistent with the eLearning Africa survey where only 35% of respondents indicated that government is doing enough to promote eLearning. Thus, 30% indicated that teachers are aware of eLearning benefits while 55% of the respondents indicated that government is aware of eLearning benefits (eLearning Africa Report Elletson (ed.) 2014). In view of this, there is a gap in benefits awareness. Concluding from the statistics, government must take the lead role in bringing teachers to par on eLearning benefits. This would require government lead collaboration as indicated by Elameer & Idrus (2011).

With reference to the survey conducted by Gaebel, Kupriyanova, Morais, and Colucci (2014), it can be deduced that most institutions set their own standards of practicing eLearning. These standards are likely to be set in order not to affect their comfort level of practicing eLearning. Consequently, eLearning would be practiced without the assurance of quality from an instituted body in charge of applying

sanctions for non-adherence. Though most practitioners are now calling for more institutional involvement to accreditation bodies (Dondi & Morett 2007), these bodies would also have to ensure the autonomy of the institutions. Governments have accreditation and monitoring bodies for the established face to face courses. Ogunlela & Ogunleye (2015) stated that “the QA (Quality Assurance) mechanism being adopted for programmes in conventional higher institutions cannot be superimposed on those of ODL and dual mode institutions”. Clearly, it is of importance to put new structures in place to monitor eLearning courses.

Security concerns on the success and quality of eLearning is also a major concern to practitioners. There has been research on eLearning security measures. In the study by Liu, Huang & Lin (2012) they found that information security affects the system quality. They provided a top-down view of eLearning success for managers. Salisbury, Pearson, Pearson, & Miller (2001) in their research found that perceived security had a greater impact on intention to buy than the ease and utility of the product. They stated that security issues have the potential to limit web-base customer activities. Flavián & Guinalú (2006) in their study found that customer trust, perceived security, and privacy policy affects loyalty to a website.

Research has shown that students are very concern of the safety of their data on learning systems. Shonola & Joy (2014) in their survey titled “Learners’ Perception on Security Issues in M-learning” found that almost all students are very concern about the security of their data and only 3.33% of students indicated that security issues are neither important nor unimportant. Therefore it has been well established in literature that students are very concern about how safe the environment of their learning is.

Current Study

Banya (2015) discussed extensively the lapses of accreditation system and the lack of personnel to perform accreditation duties in the ministries. However, the author did not elicit data to be used to analysed accreditation concerns for the universities. This is necessary to inform national level debate regarding the need of setting up appropriate structures for accreditation and monitoring eLearning course to ensure that quality is not compromised. Though Ogunlela & Ogunleye (2015), Elameer & Idrus (2011) indicated that there is the need to establish a separate body for eLearning, their works did not also include final data in relation to accreditation from the institutions surveyed.

In light of the data shortfalls, Gaebel, Kupriyanova, Morais, & Colucci (2014) survey was an attempt to provide data from the European Universities Association to serve as an input for policy debate. Considering the fact that eLearning policy is shaped by the political regime (Erichsen, & Salajan, 2014), it stand to reason that local factors such as the political regime, and socio-economic factors in the mix is necessary in obtaining quality eLearning. Erichsen & Salajan (2014) also elicited data on how eLearning can impact collaboration. However Erichsen & Salajan (2014) did not collect data on how the collaboration of practicing institutions can help foster eLearning practice. Though Elameer & Idrus (2011) research indicated the need for government to take a lead role in collaboration, their study did not indicate how institutions would like collaboration to be co-ordinated.

This study at the policy level is designed to provide data on accreditation issues from the institutions perspective, collaboration impact on eLearning in the light of local factors pertaining to Ghana. The current study would also address recommendations for more institutional involvement by Ogunlela & Ogunleye (2015), Dondi & Morett (2007), and Keil & Brown (2014). The study would provide data input for eLearning policy debate at the national level in Ghana. At the theory level, the study would investigate security concerns and put it in the light of its effects on the diffusion of eLearning practice. eLearning involves the use of the web, all forms of digital media to deliver knowledge and skills. This study proposes perceived security and how it affects the diffusion of eLearning practices in HEI as an additional perceived eLearning (innovation) attribute. The findings would well inform distance

learning students on their responsibilities and help reduce the dropout rate. The study also hopes to facilitate institutions ensure good curriculum design to ensure quality, meeting students need, maintaining student trust, and subsequently making monetary and non monetary benefits.

Methodology

This study is based on three theories: Information System Success Model (Delone & McLean 2003), Diffusion of Innovations theory (Rogers 2003), and Agency Theory (Ross 1970s). The current study is in two parts. The first part is a review of five (5) national education policies in Ghana. The result of this first part is indicated in the findings section of this article. The second part which is yet to be worked on is in two phases which would be researched concurrently. Phase one, a quantitative method would elicit student data on perceive security in addition to Rogers perceive innovation attributes and investigate it effects on eLearning diffusion in Higher Educational Institutions. Phase two, a qualitative method would elicit data from lecturers in relations to accreditation issues, collaboration, institutional security measures, and institutions monitoring. The sample size would be chosen randomly for the student population by using Kotrlik, & Higgins (2001) Sampling techniques table as a guide while accidental sampling techniques would be used for the lecturer population. There are five distance learning centres in Ghana and three (60%) would be chosen for this study. The data would be analyzed using SPSS, SmartPLS, and pattern matching for the quantitative and qualitative methods respectively.

Findings

There is documentary evidence about how the eLearning issues are not adequately dealt with in policy. Five major national education policies were reviewed for themes relating to pedagogy and curriculum and provision for its integration were extracted. Using the method of word extraction and the statistical value of occurrence from Table 1.1, Table 1.2, Table 1.3 and Table 1.4 (see Appendix 1) the probability of word occurrence is shown in Table 1.5.

The result revealed that with each new policy, there is a general increase of provision in the area of the appropriate pedagogy and curriculum for the evolving kind of education. However, the occurrences were not adequate. The probability of total occurrence in all five policies is 0.0045 (refer to Appendix). The result shows how matters of provision for integration of appropriate pedagogy are little to none in the present policies and pedagogyreceives little attention in the present policies. Co-occurrence matrix was not conducted because it is outside the scope of the current study.

Conclusion

The agency relationship between Government and HEI (Higher Educational Institutions) should reflect in the adoption of eLearning. The advocate for using technology in education should be such that the core business of HEI is not compromised. Governments have shown keen interest in eLearning adoption in various countries because they have come to accept the fact that elearning plays a major role in achieving a knowledge based economy.

Developing countries have also shown support for eLearning even though there is a big gap between eLearning practice in developing countries and that of the developed countries. There are obvious issues of finance and economic problems that are of disadvantage to developing countries. The issue at stake is to deal with the human resource and the skills that would be desired in the near future. The leadership has an onus to galvanized HEI in the quest for a suitable curriculum and pedagogy for

distance learning students so that quality, standards, the basic aim of imparting knowledge and skills are not compromised. Despite their well structured systems, the developed countries are also thriving to achieved curriculum and pedagogy that would deliver the kind of human resource needed for the twenty-first century.

There is the need for a supervisory role in accreditation, collaboration of HEI, and information security issues by the Government. There is also the need for constant improvement of student satisfaction of eLearning system as well, the need for combined efforts of the enterprise and HEI to support eLearners. Meeting these needs would help reduce issues of misadoption and overadoption of eLearning practice. This would subsequently give benefits to HEI and would also help in achieving the knowledge based society desired.

Table 1.5 Probability Table of word frequency-based on total occurrence

Themes	a	b	c	d	E	F	g	h	i	j	Total
Frequency	9	94	5	64	0	22	2	0	94	65	355
Probability	0.0254	0.2648	0.0141	0.1803	0	0.0620	0.0056	0	0.2648	0.1831	

(4 d.p.)

(a=pedagogy, b=curriculum/curricula, c=instructional design, d=course, e=lecturer identity, f=incentives, g=management support, h=student involvement, i=strategy, j=collaboration (total occurrence = 355, total number of standard words = 78484, probability based on five documents $(355/78484) = 0.0045$)

References

- Adali, T. (2009). Accreditation in e-learning: North Cyprus higher education case. *Procedia-Social and Behavioural Sciences*, 1(1), 2077-2080.
- Banya, K. (2015). Globalization, Policy Directions, and Higher Education in Sub-Saharan Africa. In *Second International Handbook on Globalisation, Education and Policy Research* (pp. 181-202). Springer Netherlands.
- Borokhovski, E., Bernard, R., Mills, E., Abrami, P. C., Wade, C. A., Tamim, R., ... & Surkes, M. A. (2011). An extended systematic review of Canadian policy documents on e-Learning: What we're doing and not doing. *Canadian Journal of Learning and Technology/La revue canadienne de l'apprentissage et de la technologies*, 37(3).
- Delone, W. H., & McLean, E. R. (2003). The DeLone and McLean model of information systems success: a ten-year update. *Journal of management information systems*, 19(4), 9-30.
- Dondi, C., & Moretti, M. (2007). Elearning Quality In European Universities: Different Approaches For Different Purposes. URL: http://unique.europace.org/pdf/WP1-reportv5_FINAL.pdf (дата обращения: 03.06. 2013).11/5/2015

- Durah, K., Alraddadi, A., Alzubi, O., & Alzubi, B. (2011). Strategic Elearning. *Global Journal of Computer Science and Technology*, 11(2).
- Elameer, A. S., & Idrus, R. M. (2011). National E-Learning Strategy to Enhance and Enrich the Iraqi Universities. Online Submission.
- Erichsen, E. R., & Salajan, F. D. (2014). A comparative analysis of e-learning policy formulation in the European Union and the United States: Discursive convergence and divergence. *Comparative Education Review*, 58(1), 135-165.
- Flavián, C., & Guinalú, M. (2006). Consumer trust, perceived security and privacy policy: three basic elements of loyalty to a web site. *Industrial Management & Data Systems*, 106(5), 601-620.
- Gaebel, M., Kupriyanova, V., Morais, R., & Colucci, E. (2014). E-learning in European higher education institutions: results of a mapping survey conducted in October-December 2013.
- Hardt, P. O., & Misit , P. A. (2008). Effective Online Teaching and Learning: A question of alignment. *Journal of Excellence in e-learning* Volume 1 Number 2
- Keil, S., & Brown, A. (2014). Distance Education Policy Standards: A Review of Current Regional and National Accrediting Organizations in the United States. *Online Journal of Distance Learning Administration*, 17(3).
- Kotrlik, J. W. K. J. W., & Higgins, C. C. H. C. C. (2001). Organizational research: Determining appropriate sample size in survey research appropriate sample size in survey research. *Information technology, learning, and performance journal*, 19(1), 43.
- Liu, Y. C., Huang, Y. A., & Lin, C. (2012). Organizational factors' effects on the success of e-learning systems and organizational benefits: An empirical study in Taiwan. *The International Review of Research in Open and Distributed Learning*, 13(4), 130-151
- Ogunlela, V. B., & Ogunleye, B. O. (2015). Promoting Quality Assurance Practices for ODL Programmes in West African Higher Education Institutions: The Role of RETRIDAL. *International Open and Distance Learning Journal*, 1(1).
- Rogers, E. M. (2010). *Diffusion of innovations'*, Simon and Schuster. The Free Press, A Division of Simon & Schuster Inc. 1230 Avenue of the Americas New York, NY 10020
- Ross, S. A. (1973). The economic theory of agency: The principal's problem. *The American Economic Review*, 134-139.
- Salisbury, W. D., Pearson, R. A., Pearson, A. W., & Miller, D. W. (2001). Perceived security and World Wide Web purchase intention. *Industrial Management & Data Systems*, 101(4), 165-177.
- Shonola, S. A., & Joy, M. S. (2014). Learners' Perception on Security Issues in M-learning (Nigerian Universities Case Study). *Exchanges: the Warwick Research Journal*, 2(1). Learners' Perception on Security Issues in M-learning (Nigerian Universities Case Study). *Exchanges: the Warwick Research Journal*, 2(1).

Web Publication

ACDE QAAA Report

Available at <http://www.nou.edu.ng/acde-qaaa/announcement/ACDE%20QAAA%20PROGRESS%20REPORT%20JUNE,%202011.pdf>
[Accessed on 15/5/2015]

AVU

Available at <http://www.avu.org/AVU-in-the-News/africauniversity-ict-theavu-has-trained-over-40000-african-students-according-to-its-rector.html> [Accessed on 15/5/2015]

Elearning Africa Report, (2013, 2014) Available at http://www.elearning-africa.com/press_media_ela_report_2015.php [Accessed on 01/04/2015]

Girwood, Alison, (1999). Tertiary Education Policy in Ghana: An Assessment: 1988-1998
Available at http://www.wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2000/07/19/000094946_00050605435265/Rendered/PDF/multi_page.pdf
[Accessed on 20/09/2014]

UNESCO Institute for Statistics Report (2014). *Gross Enrolment Ratio, Tertiary, both sexes*. Available at <http://data.uis.unesco.org/?queryid=142> [Accessed on 10/09/2014]

National Education Documents Reviewed

Education Strategic Plan – 2010-2020, vol 2 2012
Education Strategic Plan – 2010-2020, vol 1 2012
Education for All –National Action Plan-2003 – 2015

ICT in Education Policy 2008
ICT for accelerated development 2003

NCTE (2014). Information is from Interview with Policy Unit of NCTE and unpublished PowerPoint Documentation

Appendix 1*Document Count and Occurrence of specific themes related to eLearning (Aim of the research)***Table 1.1** Document Count

Policy Name	Standard Words	Numeric Words	Non-Standard Symbols
Education Strategic Plan 2010-2020, vol 2	16,477	1,897	310
Education Strategic Plan–2010-2020, vol 1	16,357	1,777	491
Education for All –National Action Plan-2003-2015	10,215	2,736	1,108
ICT in Education Policy	9,748	392	108
ICT for accelerated development	25,669	591	844
Total	78,466	7,393	2,861

Table 1.2 Policy Code Name

Policy Name	Policy Code Name
Education Strategic Plan–2010-2020, vol 2	1
Education Strategic Plan–2010-2020, vol 1	2
Education for all–National Action Plan-2003-2015	3
ICT in Education Policy	4
ICT for accelerated development	5

Table 1.3 Word Occurrence

Policy	Date	Number of occurrence			
		Pedagogy	Curriculum (a)	Instruction/Design	Course
1	2012	1	42	0	45
2	2012	0	12	0	7
3	2003	0	18	5	8
4	2008	8	20	0	2
5	2003	0	2	0	2
Total		9	94	5	64

Table 1.4 Word Occurrence

Policy	Date	Number of occurrence						Total
		Lecture Identity	Incentives	Management support	Student involvement	Strategy	Collaboration	
1	2012	0	7	0	0	47	43	97
2	2012	0	5	0	0	4	3	12
3	2003	0	2	0	0	7	5	14
4	2008	0	2	2	0	8	8	20
5	2003	0	6	0	0	28	6	40
Total		0	22	2	0	94	65	183

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