E-learning Implementation Critical Success Factors

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***Abstract*— One of the threats to our University education and standards are student low success rate and high dropout rate which remains on the increase persistently over the years. Understanding this phenomenon and finding a lasting solution to improve students teaching and learning experience should be the priority of any purposeful University management. The intense advancement in Information Communication Technology that gave rise to online education is reshaping business and education worldwide to their pedagogy. The Universities have over the year invest heavily in online education in a bid to gain competitive edge and provides portable education that transcend the boundary of the institutions, defy the constraint of time and geographical location, provides vast access to universal knowledge and reduce the dropout rate to a bearable minimum. The menace of high dropout rate continues unabated and in turn affects our graduating and success rates which are at all-time low. Our solace is placed on e-learning as a viable alternative to provide continuous education opportunities for dropped out student. It becomes very clear that we cannot afford e-learning to fail us. Hence this paper provides suggestions on some Critical Success Factors (CSF's) to enhance e-learning or online education implementation using a living theory and descriptive research methodologies. This paper will provides insight into some considerable factors and make suggestions on how to ensure a successful e-learning implementation.**

***Index Terms*— Dropout rate, Success rate, Critical Success Factors (CSF), e-learning, on-line education**

I. Introduction

The previous government in South Africa with their form of apartheid system of government has "flourished" on their minority rule, growing divide, uneven form of education, uneven human, capital and population developments, de-franchising and a host lot of atrocities. The Apartheid government ensures that wealth, education, opportunities, infrastructural development, e.t.c. are distributed according to specific race. The right for education was restricted and highly censored. A lower grade education curriculum was developed for the need and growth of the black populace. In those days, only few black elites were able to make it to the four comers of the University at a very high price and amidst uncertain future professional development and growth. The apartheid regime was cumulative of centuries of white colonization, domination, hegemony, institutionalized racial segregation, high marginalization of blacks aimed at depriving them basic and quality education while preserving them mainly to serve on as laborers on their secured farm and industrial factories. The resultant effects were high drop-out rate and low success rate [1-3], [5-7].

The advent of democracy government becomes the beacon of hope and ray of light to many previously deprived communities. It ushered in equal education opportunities for all as enshrined in the constitution that basic education remains a non-negotiable fundamental human right provision. The new government has an obligation to provide portable education and has put numerous measures in place to progressively achieve the objective of equal education access with success. It is worthy to note that the government invests more in education than any sectors of the economy which translate to about 20% of the total expenditure. South Africa enjoys one of the highest rate and fast growing public investment in education bringing about 7% Gross Domestic Product. Since the academic year 2000, the student enrolment has surged by 4.2% annual growth with a slowdown of 2.3% annually between 2005 and 2009. An increase of 6.2% with an estimate of about 55,000 additional student's enrolment was recorded between 2010 and 2011. Indeed, it is not over emphasis to conclude that South Africa has a vibrant higher education sector with a bright future, good prospect and world class academic institution at the cutting edge of technology, research and innovation [3-4].

The present government acknowledged the ills and legacies of apartheid regime dated back to over 40years will not just disappear in brief years of our democratic rule. The government is very clear about their mandate to achieve equity and improve accessibility rate for black South African. Greater percentage of the challenges lie in the poorer / rural area but the government is not relenting in its effort in the quest to provide the much needed support to rectify and remove the imbalances education of the past. Although the road to achieving equity is slow but progress has been made over the years. In 2008, the DoE [3] reported that Black African student population now stood at 62.5% of contact programme enrolments and 67.5% of distance programme enrolments. The government has recently renewed its strategy in turning education around in its Action Plan to 2014: Towards the Realization of Schooling 2025. This will among other things oversee the improvement of teaching and learning, improvement in the

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work of the teachers, development of new curriculum with focus on curriculum implementation, literacy and numeracy support through the nation educational portal – Thutong - place of learning, ICT rollout for schools and a host of other initiatives [3].

The battle against the challenges of apartheid has been fought, won and it's now referred to the dustbin of history. The new dilemmas and challenges in the new education dispensation are the low success rate and high dropout rate. Despite all strategies and action plans to increase access to quality education, these two factors are opposing the government efforts and are fast eroding the progress made in educational reform. The DoE [3] reported that out of 120,000 students enrolled in the 2000 academic year; about 36,000 representing 30% dropped out in their first year and further 24,000 students representing 20% dropped out in their second and third years. Only a handful of 60,000 (20%) manage to graduate within the minimum required three years for an undergraduate course. In some notable University, the dropout rate is as high as 35% [7], [2].

There has been increase in registration for distance education between 2000 -2008, from a high of 31% in 2000 to a low of 24% in 2005 reaching another high of 29% in 2008 with the projected figure of 31% high in 2013. However, the success rate for the same period as at 2008 was recorded to be between 69 and 91% for contact education with overall average of 77% while the success rate figure for distance education is between 26 and 97% with an average of 59%. The success rate was put at all times low of 20% in 2006. It is evident that only small fraction of students enrolled for distance education actually finishes their studies in 3years minimum required period [49], [3-4]. We note that the dropout rate is on the increase year-in, year-out. Efforts and plans should be carefully devised to accommodate this category of students otherwise, collapse of our educational and economic system are imminent because we believe that our Universities are the critical enabler of our democracy and economic growth. This factor will hampers the University from producing the required number of employable graduate in various disciplines to sustain our civil society and competes in global economic fronts to move South Africa forward.

The concerns of educationists these days more than ever and about 18years years into our democracy have been the gradual erosion of progress made by the promise of education equality by the new slogs in the wheel of success termed low success rate and high dropout rate. The irony of this debacle is that most of these atrocities are perpetrated by the same Black Africans and colored group that suffers lot of setbacks and exclusion from the past apartheid regime and hitherto have been attracting lots of incentives and encouragement from the government. We argued that most of these students have "baggage" before gaining tertiary admission and would opt out of their studies whenever an employment opportunity beacons. In some instances, some of them are bread winners and responsible for their family upkeeps having lost their parents way back to the violent civil unrest that reign over our society during the apartheid impasses. Others have lost their parent to deadly diseases especially HIV-AIDS. The 15% graduation rate as reported by DoE remains one of the lowest in the world with dire consequence on the critical shortage of required high level skills needed to supplement the development of our labor market [3].

Despite the provision of numerous incentives, policies and strategies towards encouraging the students to study without hesitation and with less financial constraints or burdens, the trend of low success rate and high dropout rate continues unabated and threaten our funding, post-graduate enrolment, research outputs, teaching and learning, economic development e.t.c. because students continue to take up employment at the slightest opportunity during their year of studies. One common characteristic of this group of students is their inabilities to find another suitable platform to continue their study after dropping out. Obviously, the contact and classroom education is not their option because we argued that apart from their low concentration, there will also be a conflict of interest in term of allowing the students to attend classroom education while they are gainfully employed. In our opinion, e-learning or internet education ranked high in bridging the gap and provide opportunities for these students to complete their studies. Their enrolment for e-learning will contribute immensely to improve our graduation rate and positively regulate the dropout rate.

We hear argument that instructional technology and e-learning are the key focus of educational teaching, learning and pedagogy. It is associated with lot of innovations and pool of knowledge that provides student with learning experiences at their convenient. The technological innovations of e-learning is altering and profoundly influencing the way teaching and learning are impacted, it is re-defining classroom teaching and learning to extent of its scope, boundaries and pedagogy. In this case, learning is not confine to the four walls of the University. The students can study at their own time, space and are not bounded by geographical location. The e-learning seems as the only hope to provide favorable Return on Investment (RoI) and complement government efforts and spending in education. It will help to tackle the recklessness of high dropout rate that impede our responsibility to provides student access to education with success. Hence we cannot afford e-learning implementation and management to fail us and thus lead to our research question:

What are the Critical Success Factors (CSFs) that can influence e-learning implementation success?

The main effort of this research is to identify and explain some Critical Success Factors (CSFs) that will ensure that our efforts in improving graduation and success rate through the implementation of e-learning is not easily derailed. E-learning provides a supplementary educational opportunity for dropped out students to complete their studies. The introduction explains our journey so far from the inception of the apartheid regime, the efforts made by the new government to provide equitable education access to previously disadvantage communities, the success story and the new dilemma of high dropout rate, the solace and expectation placed on e-learning implementation. Furthermore and towards answering our research question, the following section II will briefly discuss the research methodology and design for this article. Section III will highlight and presents the details of e-learning and the CSFSs with reference to the contribution of each factor.

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Finally, section IV will conclude the study. This section will make informed conclusion and recommendations on e-learning implementation CSFs and its contribution.

II. RESEARCH METHODOLOGY AND DESIGN

A living theory is an explanation produced by individuals for their educational influences in their own learning, in the learning of others and in the learning of the social formation in which they live and work [42-45], [49]. Living theory methodology can be seen in practical sense as either narrative or phenomenological or grounded theory or Ethnographic or case study or as an action research plus the living "I".

The theory places emphasizes on the uniqueness, inventiveness, self-study and creativity of individual in devising educational theories based on their own intuition, observations, practices, studies, influences and experiences toward improving knowledge and general practice from within historical and social-cultural perspective of our daily walks of life and work [43], [50-51], [45]. The living theory methodology presents the action researcher with platform such as action reflection cycle to explain their claim or educational problems, why and how they intend to solve their problems using the living theory approach. Hence the CSFs of e-learning implementation as proposed by this article will be based on our life experiences with e-learning and its implementation with the influences of learning from others that have shown interests in the topic.

III. E-LEARNING IMPLEMENTATION CRITICAL SUCCESS FACTORS

Advances in Information Technology are increasingly bringing various new tools to facilitate teaching and learning. Consequently, varieties of new modes of learning are also emerging with a greater push for new initiatives in classroom teaching and learning [31]. One of the products of Information Communication Technology (ICT) advancement is e-learning. E-learning or on-line education is fast becoming a force to be reckoned with in tertiary institutions with the kind of education that use internet technology as its driving force. E-education involves e-teaching and e-learning along with various administrative and strategic measures needed to support teaching and learning in an internet environment. Furthermore e-education could be further defined as the delivery of education by electronic means or simply an internet enabled teaching and learning [52], [12], [53]. The delivery of e-learning will includes amongst other thing, an additional features such as live chats between students and lecturers, online assignments, discussion boards, playback of recorded material and email support. It provides student with opportunity to study at their own pace, time and provide access to remotely vast knowledge. It defies geographical boundaries and equip student with teaching and learning experience that are not limited to the classroom education. E-learning will provide an avenue for dropped out students to complete their studies and path ways for improving our success and graduation rate.

Although there is high consensus by educational institutions that e-learning offering and implementation remain their priority. The response and leadership provided is not adequate to complement full fledge e-learning implementation process, adoption and offering. There are evident that e-learning is beleaguered with numerous challenges and issues that threaten the implementation and sustainability especially in our rural communities. Even the responses from the student taking e-learning offering have been very slow, not encouraging and does not commensurate the high dropout rate. In some instances, the e-learning registration account for about 5% only. The full online course is not available in most institutions despite having the required technology and infrastructure. In 2002, 18% of Commonwealth institutions have institution-wide online strategy or plans while the figure slides further low of 9% in 2004 [37-40], [55]. The general concern is how do we cater for the dropout students? Hence the purpose of this study is to suggest some e-learning implementation critical success factors that will enhance the process of adopting e-learning as viable alternative teaching and learning instructional offering type.

The implementation of a project enormous and tasking as e-learning requires the understanding of its typical role in teaching and learning pedagogy. More importantly, understanding the critical success factors will go a long way in establishing it as a preferable alternative instructional offering choice on our campus. The CSFs can be seen as those factors that must be accomplished before e-learning implementation can be regarded as being successful. It can be define as set of factors that can positively influence e-learning implementation success. It addresses its standards, operation, sustainability and mission. It is advisable that those factors be quantifiable, adjustable, manageable and sustainable. These factors may be applicable to pre-implementation, during / on-going and post-implementation stages. It is critical because it may make or mar the whole process of planning and implementation [8-12], [53]. There are different school of thoughts on e-learning implementation CSFs, Selim [12] grouped e-learning CSFs into four namely, instructor, student, Information Technology and University support. Vollery and Lord [14] identify technology, instructor and previous experience with technology usage as their three main e-learning CSFs. Whereas Soong et al [13] listed human factors such as instructors, instructor technical competency, student competency, constructivism, mindset of both instructors and students, collaboration, user-friendly and skilled technical infrastructure support team as their CSFs. We are proposing e-learning CSFs under the following headings as fine-tuned e-learning readiness, sustainability plans, adoption of renowned best practices, training, e-learning collaboration, maximization of Learning Management System (LMS) usage, Online Contents and Curriculum Development.

A. *Adequate Planning for E-Learning Readiness*

ICT projects have failed for so many reasons ranging from inadequate planning, improper budgeting, human error and a host lot of factors [15-16]. A project as magnitude as e-learning implementation scope is massive and capital intensive. Various authors, notably Aldrich and Ross [17], Bonk [18], Colbrunn and Van Tiem [19] reiterates that the main logical starting point for implementing e-learning is to evaluates the readiness by assessing the organization

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readiness, evaluating and identifying with the organization goals, objectives, needs, motivation, resources and constraints. We emphasis there should be proper monitoring and assessment of e-learning implementation readiness under the following heading Business Readiness, Stake holders Readiness, Technology Readiness, Content Management Readiness, Training Process Readiness, Culture Readiness, Financial Readiness. In addition, we advised the management to take initiatives and include preliminary evaluation of sustainability readiness [21-22]. [17], [54].

B. Sustainability Plans

The e-learning is an alternative form of teaching and learning that afford students with the opportunity to conduct their studies without necessarily being available on the University premises using internet technology. This technological advancement is profoundly influencing traditional university teaching and learning pedagogy to its core principle and practice. The call for sustainability plans is to ensure that the momentum and gain of e-learning education continues unabated beyond their present initial accolades well into the future. It emphasizes the capabilities of equitably meeting the need of present e-learning challenges without compromising the future. Otherwise, disruption to academic teaching and learning are imminent and the e-learning investments may be ruined. We suggests that sustainability plans should take a lead under the following headings: Financial support sustainability, Stakeholders sustainability, Social and Political sustainability, Technological sustainability, Security sustainability, Energy sustainability, Internet connection sustainability, Content development and management sustainability, Training sustainability and Best practice sustainability [26-34], [47-48]

C. Adoption of Best Practices

As a mark for quality control, we advocates the benchmarking of any e-learning implementation and practice with world renowned best practices to ensure that the quality of e-learning education is not in any way compromised. There are numerous standards and best practices relating to the use of Learning Management System (LMS), content development and management, administration of students and class list, administration of test and examination, management and access control. It is desirable for us to know what practice works, what practice does not work, what practice we need to improve, e.t.c [35], [16], [36].

D. Training

One of the reasons for slow adoption of e-learning enrolment could be attributed to lack of adequate training of staff or instructor. When the training is available and scheduled, it always coincide with academic programme thereby making participants either to skip the training schedule or have less concentration due to their work load. Adequate training is a very important enabler of e-learning implementation because we agree that technology does not teach by itself. Its operative relies solely on the human expertise. Training provides capacity, skills and knowledge that will drive the e-learning as an instructional offering. We advise that the training should be adequately planned not to coincide with academic programme and should be on-going throughout e-learning life span [23]. When training is lacking, instructors always become resistant to change by shunning the use of e-learning as their mode of teaching and learning. The resultant effect is the underutilization of the LMS.

E. E-Learning Collaboration

E-learning implementation is capital and technological demanding. Institutions can pool their resources together to gain advantages of large economics of scale. We are aware of the challenges and issues of enduring a community of practice among collaborators but insist that partnerships and sharing a wide range of ideas on research, best practices, knowledge, technology and intelligence are some of the key attributes that can influence e-learning implementation at a lower cost [37-40].

F. Maximization of LMS Usage

The present mode of using the LMS to supplement classroom education has achieved little or no progress for e-learning implementation. Currently, the LMS is used for student administration, provide access to study materials, conduct assessment, and provide interaction and feedback to students. The LMS current mode of usage often leads to underutilization and low return on investments. We are convinced that a drastic change in the way we presently use our LMS will improve its underutilization. Further more, a positive review of our e-learning practice and engagement may lead to e-learning implementation success, improve underutilization, increased return on investment and foster online education [46], [41].

G. Online Contents and Curriculum Development

The educator has always been at the receiving end of any invented teaching and learning technology. From time-to-time, teachers are requested to learn one form of technology to another in order to keep abreast of teaching and learning aids that keep flooding the tradition classroom education. It ranges from chalk to blackboard to stylus to tape to CD-ROM to projector to computers to presentation slides to Computer Aided Teaching, e.t.c. The list is inexhaustible [18]. There have been some challenges in designing online contents and curriculum. It had been one of the reasons for under-utilization of our LMS and low e-learning offering patronage. We are proposing that curriculum practitioner with vast knowledge in LMS and online education assists in guiding and coaching educators in developing their online documents and curriculum.

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IV. Conclusion

Our graduating rate and success rate has been under siege for sometimes now. Improving complex problem like low student success rate and high dropout rate needs deep understanding of the causal effect. Understanding the characteristic of dropped out students and the danger it possess to our success and graduating rates will go a long way in help the government to device more supports, means and strategies that will further address the issues. Apart from high failure rate, the other contributory reason we are suggesting for high dropout rate is that most students become gainfully employed before they could finish their studies. From our understanding, one of the reasons the success and graduating rate remain very low is the fact that dropped out students does not have another platforms to complete their studies. Providing e-learning offering would provide another opportunity for this group of student to continue their studies at their own time, pace and location.

The e-learning implementation CSFs is to provide management with insight of such factors that could influence its success rate and make e-learning offering an alternative mode of teaching and learning. The successful implementation of e-learning will afford another opportunity for dropped out student to enroll and complete their studies. This will contributes some positive numbers to improve our low graduating rate and also justify government huge spending in education sector of the economy. More importantly, it will provides the much needed generation of knowledge work force to drives our economy in the nearest future and accord us the opportunity to compete effectively in global economy.

To this end, we conclude that our living experiences and review of various literatures on e-learning implementation CSFs are not far-fetched. We agreed that implementing a capital or budget intensive project like e-learning implementation requires serious review of factors that are critical to its success - CSFs. The review of these CSFs should be iterative. It gives opportunity for proper planning of e-learning implementation and subsequently influences its outcome. We conclude that evaluation of e-learning CSFs have good bearing on its success. It is one the remedies for improving online education patronage and effective Return on e-learning Investment.

References

[1] L. Moeketsi and M. Simeon (2008), Human Sciences Research Council - HSRC Policy Brief, High University drop-out rates: a threat to South Africa's future [online] Available: www.hsrc.ac.za

[2] E.B Fiske and H.F Ladd, Elusive equity: Education reform in post-apartheid South Africa, Brookings Institution Press, Washington D.C., 2004

[3] Department of Education – DoE (2010a) Education Statistics in South Africa – 2008, Pretoria: DoE. [Online] Available www.education.gov.za Date accessed: 10/06/2012

[4] University of South Africa, Annual Report 2008, Pretoria, 2009, UNISA.

[5] Department of Education – DoE (1997) A programme for the transformation of higher education: Education White Paper 3, Pretoria: DoE. [Online] Available www.education.gov.za Date accessed: 10/06/2012

[6] Department of Education – DoE (2004) Transforming learning and teaching through information and communication technologies, E-Education White Paper, Pretoria: DoE. [Online] Available www.education.gov.za Date accessed: 10/06/2012

[7] Department of Education – DoE (2006) Education statistics in South Africa at a glance, Pretoria: DoE. [Online] Available www.education.gov.za Date accessed: 10/06/2012

[8] J. F. Rockart, "Chief executives define their own data needs", Harvard Business Review, Vol 2, 1979, pp81-93.

[9] A. C. Boynlon and R. W. Zmud, "An Assessment of Critical Success Factors," Sloan Management Review, Vol 25:4), 1984, pp 17-27.

[10] J. F. Rockart, "A Primer on Critical Success Factors" published in The Rise of Managerial Computing: The Best of the Center for Information Systems Research, edited with Christine V. Bullen. (Homewood, IL: Dow Jones-Irwin), 1981, OR, McGraw-Hill School Education Group, 1986

[11] J. A. Johnson and F. Michael,The Success Paradigm: Creating Organizational Effectiveness Through Quality and Strategy New York, 1995

[12] H. Selim, Critical success factors for e-learning acceptance confirmatory factor models, Computer & Education, vol49, 2007, pp 396-413

[13] B. M. H Soong, H. C. Fhan, B. C. Chua, and K. F. Loh, "Critical Success Factors for on-line Course Resources", Computer & Education, vol 36, 2001, pp 101-120.

[14] T. Vollery and D. Lord, The Critical Success Factors in Online Education. The International Journal of Education Management, vol 14,2005, pp 216-223.

[15] C. M. Christensen, The Innovator's Dilemma: When new technologies cause great firms to fail. New York HarperBusiness, 2000.

[16] K. J. Kim and C. J. Bonk, "The future of online teaching and learning in higher education", European Journal of Engineering Education, vol 26 no 2, 2006, pp 107-115.

[17] C. Aldrich and C. Ross, Evaluating an end-to-end e-leaerning infrastructural provider. Stamford, CT. Gartner Group, 2000.

[18] C. J. Bonk, Online training in an online world. Bloomington. Indiana. courseshare.com, 2001.

[19] S. R. Colbrunn, and D. Van Tiem, From binder to browsers: Converting classroom training to the web performance improvement, 2000.

[20] C. Aldrich, The e-learning 2000 hype cycle. Stamford, CT. Gartner Group, 2000.

[21] T. Barron, The LMS guess [on-line]. Available: www.learncircuits.org/apr2000/barron.html Date accessed: 25/6/2012

[22] B. Hall, Web-based training crook book. New York. Wiley, 1997.

[23] G. Attwell and Hughes, "A Framework for the Evaluation of E-learning", paper presented at the European Conference on Educational Research, Lisbon, 2007.

[24] L. Attwell, P. Dirckinck-Hornfeld, A. Fabian, A. Karpati and P. Littig, "E-learning in Europe – Results and Recommendations", BiBB, Bonn, 2003.

[25] S. H. Billig, "Adoption, implementation, and sustainability of K–12 service-learning", In A. Furco & S. H. Billig (Eds.), *Advances in service-learning research: Vol. 1. Service-learning: The essence of the pedagogy* pp. 245–267, Greenwich, CT: Information Age Publishers, 2002.

[26] Cisler, S, Planning for sustainability: How to keep your ICT project running, [Online]: available http://www.ctcnet.org/ctc/Cisler/sustain.doc Retrieved 12 May 2011.

[27] C. W. Holsapple and A. Lee-Post, "Defining, assessing and promoting e-learning success: An information system perspective", Decision Sciences Journal of Innovation Education, vol 4, no 1, 2006, pp 67-85.

[28] D. Keegan, J. Lossenko, I. Mazar, P. F. Michells, M. F. Paulsen and T. Rekkedal, E-learning initiatives that did not reach the targeted goals, Bekkestua, Norway: MegaTrend in E-learning provision, NKI Publishing House, 2007.

[29] B. McClelland, "Digital learning and teaching: Evaluation of developments for students in higher education", European Journal of Engineering Education, vol 26, no 2, 2001, pp 107-115.

[30] L. Motiwallo and S. Tello, "Distance learning on the internet: An exploratory study", The Internet and Higher Education, vol 2, no 4, 2000. pp 253-264.

[31] M. Rosenberg, E-learning: strategies for delivering knowledge in the digital age, New York McGraw-Hill, 2001.

[32] L. Sherry, D. Jesse and S. H.Billig, "Creating a WEB of student performance in a technology-rich learning environment", International Journal on E-Learning, vol 1, no 1, 2002, pp 31-40.

ISBN: 978-988-19251-8-3
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[33] L. J Smith, "Content and delivery: A comparison and contrast of electronic and traditional MBA marketing planning courses", Journal of Marketing Education, vol 23, no 1, 2001, pp 35-44.
[34] L. C. C. Wang and J. G. Bagaka, "Understanding the dimensions of self exploration in Web-based learning environment", Journal of Research on Technology in Education, vol 34, no 3, 2003, pp 364-373.
[35] T. Bates, " Technology should be used as integral part of teaching and learning activities", EQUIBELT Project Newsletter, Vol 6, Z.Bekic.
[36] C. J. Bonk, The world is open: How web technology is revolutionizing education, Jossey-Bass, 2009.
[37] Organization for Economic Co-operation and Development (OECD), E-Learning: The Partnership Challenge, pp 114, Paris, 2005
[38] Organization for Economic Co-operation and Development (OECD), "Changinging Patterns of Governance in Higher Education", Education Policy Analysis, pp 116, Paris, 2003
[39] Organization for Economic Co-operation and Development (OECD), Internationalization and Trade in Higher Education: Opportunities and Challenges, pp320, Paris, 2004
[40] Organization for Economic Co-operation and Development (OECD), E-Learning in Tertiary Education: Where Do we Stand? pp292, Paris, 2005
[41] S. Vovides, S. Sanchez-Alonzo, V. Mitropoulou, and G. Nickman, "The use of e-Learning course strategies and to improve self-regulated learning". *Education Research Review*, vol 2, 2007, pp 64–74.
[42] J. Whitehead, "Creating a Living Educational Theory from a Question of the kind, How do I Improve my practice?" Cambridge Journal of Education, vol 19(1), 1998, pp 41-52.'
[43] J. Whitehead and J. McNiff, Action Research Living Theory, London, Sage, 2006.
[44] J. Whitehead, "Increasing Inclusion in Educational Research: A Response to Pip Bruce Ferguson. Research Intelligence", vol 103, 2008, pp 16-17
[45] J. Whitehead, "How do I Influence the Generation of Living Educational Theories for Personal and Social Accountability in Improving Practice: Using a Living Theory Methodology in Improving Eduactional Practice", pp. 173 - 194, in Tidwell, D, L., Heston, M. L. & Fitzgerald, L. M. (Eds.) Research Methods for the SelfStudy of Practice, Chicago; Springer, 2009.
[46] T. Govindasamy, "Successful implementation of e-learning pedagogical considerations". *The Internet and Higher Education*. Vol 4, 2002, pp 287–299.
[47] S.A. Odunaike, N.D. Chuene, O.O. Olugbara and S. O. Ojo "Institutional e-learning sustainability for rural settings". Proceedings of the World Congress on Engineering and Computer Science 2011 Vol. 1 WCECS 2011, San Francisco, USA. 2011, pp 245 – 249.
[48] S. A. Odunaike, O.O. Olugbara and S. O. Ojo, "Using cloud computing to mitigate rural e-learning sustainability and challenges". Proceedings of the World Congress on Engineering and Computer Science 2012 Vol. 1. WCECS 2012, San Francisco, USA, 2012, pp 265 – 270.
[49] Council on Higher Education (CHE), Enhancing the Contribution of Distance Higher Education in South Africa: Report of an Investigation Led by the South African Institute for Distance Education, Pretoria, CHE 2009.
[50] J. W. Cresswell, Qualitative Inquiry & Research Design: Choosing Among Five Approaches, California, London, New Dehli, Sage. 2007.
[51] A. P. Samara, Self-study teacher research: Improving your practice through collaborative inquiry. Thousand Oaks, CA: SAGE, 2010.
[52] N. Campbell , e-teaching, e-learning and e-education: A paper to inform the development of the ICT strategy in New Zealand for Ministry of Education, 2001.
[53] H. M. Selim, "E-Learning Critical Success Factors: An explanatory Investigation of Student Perceptions", In M. Khosrow-Pour (ed.) Managing Modern Organizations with Information Technology, Proceedings of the 2005 IRMA International Conference, San Diego, pp. 340-346.
[54] S. A. Odunaike and J. Dehinbo, "*Institutional e-readiness: the case of Tshwane University of Technology (TUT).* In: *Proceedings of the Information Systems Education conference (ISECON),* November 2009. Online. Available from http://proc.isecon.org/2009/4342/ISECON.2009.Odunaike.pdf
[55] M. Breier and M. Mabizela, Higher education. Kraak A & Press K (eds), 2008, pp278-299.