Open Learning, Distance Education and Transformative Learning: An Agenda for Action and its Challenges

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Abstract

Nations all over the world are fast accepting the open and distance learning mode as the option that creates access and opportunity for education for all irrespective of location, position and age. It is an avenue for capacity building and human capital development in terms of the quality output required in the world of work and nation's economy. There has been a persistent call for a review of the pedagogical strategies in use in our schools. Transformative learning that involves a structural shift is being considered as an alternative to -the traditional teaching-learning pedagogy. Therefore, this paper explored the concept of open learning, distance education and the integration of characteristics of transformative learning as they relate to teaching and learning activities for the purpose of pedagogical outcomes in terms of learning goals and objectives. The question is, can open and distance learning serve as a good medium for transformative learning. Some of the benefits of transformative learning particularly in the area of giving recognition to certificates that are earned from open and distance learning institutions are mentioned while the challenges of transformative learning as it affects teaching and learning are discussed.

Introduction

The conventional method of teaching and learning gives opportunity to learners to have physical interaction with one another and with their teachers. The method also gives opportunity for the teachers to physically assess the learning abilities of their learners. The learners who are found to be academically poor are easily identified and guided by the teacher. However, the conventional method can no more accommodate the needed increase in access to formal education especially at the higher level of learning as is the

case in Nigeria. Similarly, computer- mediated learning which is a common feature in Open and Distance Learning (ODL) is not characteristic of the conventional education delivery mode. In fact, open and distance learning is increasingly being advocated as an alternative means of assuring delivery of qualitative education. The continuous increase in the demand for university education as reflected in the application and admission data of the Joint Admission and Matriculation Board (JAMB,2009) which showed a rejection rate of 89.61 %. (Table 1)

Table 1: **Application and Admission Data of the Joint Admission and Matriculation Board**

Year	Number of applicants	Number Admitted	Percentage Admitted
2001	749,417	749,301	99.98
2002	994,380	51,845	5.21
2003	1,132,392	114,490	10.11
2004	841,878	122,492	14.55
2005	916,371	77,085	8.41
2006	803,472	88,524	11.2
2007	911,551	107,144	11.75
2008	1,272,312	113,100	8.89

Source: (JAMB,2009)

This implies that only a mean of 10.39% applicants were offered admission. The reason for the high rejection of candidates is known to be associated in part with maintaining the carrying capacity in Nigerian universities, which is linked to inability to provide the required facilities for teaching and learning. Olabisi Onabanjo University, Ago Iwoye had the highest excess enrolment of +24,628 as presented by NUC (2005:1). One of the resultant effects of exceeding carrying capacity is reduction in the quality of education delivery.

To increase access to quality university education, the Nigerian government encouraged open and distance education. The government gave vent to the policy with the establishment of the National Open University of Nigeria (NOUN) in 2002. The question is, how can open learning be used as a

transformational process in the country to meet the human capacity need of vision 20-2020?

Open Learning and Distance Education

Open education is a teaching and learning method that is linked to the work of Celestin Freinet in France and Maria Montessori in Italy. Open learning is allowing learners to be self-determined, independent and interest-guided (Wikipedia, 2009). Butcher (2011) noted that, open learning seeks to remove all unnecessary barriers to learning. Lewis (2006) identified the barriers as physical, education training design, individual and finance. The physical barriers cover the distance or time, work pattern, personal circumstances and fixed time for courses. The barriers associated with education training design may be in the area of the curricula and restricted scope of study such that learners may not be able to study different topics at different depths or different speeds. With open learning, the learner has the opportunity to select place, time, course/programme and the depth of study. A learner may be interested in just a course or two within a programme. Therefore, it can be said that open learning programme can be used by learners that are interested in acquiring higher degrees, professional updating and personal enrichment (University of Guelph, 2013).

The open nature of distance learning might be formally institutionalised in national policy to include issues like; open admissions, freedom of selection of what to learn, when and where to learn (United Nations Educational, Scientific and Cultural Organisation - UNESCO, 2013). However, it is important to note that, open learning or open education differs from distance education, although people sometimes use them interchangeably. Similarly, open education essentially operates on open access and the removal of restrictions, exclusions and privileges which make distance education a 'closed' system" (Jegede, 2010). Rumble (1989) stated that open education and distance education are at either end of the continuum of non-contiguous education. Open learning is a flexible mode of teaching and learning being used as a method to eliminate or reduce barriers to the use and reuse of knowledge. It is a purposefully directed method of learning rather than simple accumulation of knowledge without really understanding what should be learnt about a topic or subject. Open learning is aimed at providing students with a reasonable chance of success in an education and training

system that is centred on some specific needs (Butcher, 2011).

Open learning may be supported with a variety of teaching and learning materials including course materials, textbooks, learner guides, video and other digital media. Other facilities of open learning may include a course web site that may be accompanied by manual, video tapes, DVDs, audio CDs, CD-ROMs and open educational resources.

The Theory behind Open Learning

Reciprocal teaching and jigsaw are basic models underlying open learning. Brown and Paliscar (1982) developed reciprocal teaching. It is a cooperative technique that allows for pairing of students. The theory involves how participants take turn to read and ask questions from each other and receive immediate feedback. This model allows students to use important meta- cognitive techniques. Jigsaw as a model was proposed by Slavin (1990). In this model, students are described as members of two groups; home group and expert group. Members of the home group are assigned the same materials but with focus on separate sections of the material. Each member must be expert in the assigned portion and teach other members of the home group. But the reverse Jigsaw model which was created by Hedeen (2003) deviated from the original Jigsaw model by making the expert groups teach the whole class rather than return to their home groups.

The two models give opportunity to students to explore and discover new ideas which they share among themselves. Students interact more with their course materials and co-students rather than with the teacher. Similarly, students share what they know with others. It is glaring that these activities are associated with open learning. Open learning is synonymous with cooperative learning. It is a learning system that encourages a pool of ideas. Similarly, it is a type of learning which leads to positive impact in mastering of knowledge that is acquired or transferred. This can be exemplified in students who participate in group activities during which they exhibit collaborative behaviours, provide constructive feedback, motivate and encourage one another to be independent and support the notion that co-operative learning is an active pedagogy that fosters higher educational achievement (Brady and Tsays, 2010).

Slavin (1990) states that through cooperative learning, students demonstrate academic achievement since cooperative learning methods are effective for all ability levels and all ethnic groups, give opportunity to work with one another, increase self-esteem and self-concept, and breakdown ethnic and physical/mental handicaps and barriers thus allowing for positive interaction. Johnson and Johnson (1989) also reported that cooperative learning increases higher level of reasoning and generation of new ideas and solutions which enable transfer of learning. Open learning accommodates a very broad mixture of learning provisions, provides learning for all ages and removes the old divides between formal and informal education. Moreover, it makes learning go beyond the classroom walls, recognises the value of engagement while at the same time offers and delivers learning that is social, contextual and continuous (Qayoumi and Polese, 2013).

Transformation

From the point of organisation, transformation can be described as a process of radical change that positions an organisation in a new direction. This takes the organisation to a new level of effectiveness. Transformation requires input, process and output. In a transformation process, two things are likely to happen: increase or introspection. Introspection includes fear of failure and fear of success. The fear hinges on uncertainty of the system behaviour. Wikipedia (2013) described transformation as transition or change. In every sector including education, change is often resisted by stakeholders for the fear of uncertainty. In education, the uncertainties include the fear of falling standard in the quality of education, staff adaptation to the new method, losing a job as a result of inability to adapt to the new system and the justification of the cost that may be involved. Therefore, for a change to be acceptable, there must be a justification for that change while for transformation to take place, the old must yield to the new.

Process of Transformation

The first stage of the transformation process is the identification of a suitable model. This would imply understanding the environment where the teaching and learning is to take place with the core processes and the expected outcome. The second step is to identify the gap in the current situation that calls for change. The traditional method of teaching and learning has been

found to limit the transfer and sharing of ideas and also to limit the opportunity of acquiring knowledge in the specific course(s) that may be required by the learner to improve his/her job performance, just as it inhibits life-long learning. This is followed by the redefinition of the aims and objectives for the method of instruction. The third stage is the identification of the stakeholders and their roles. In the education sector, the stakeholders are students, teachers, parents and government. The attention of the stakeholders is drawn to the gap that has been identified. The effect of the gap would be explained to the stakeholders. Their formal roles and the expected roles would be differentiated. The advantages of the expected roles over their formal roles would be explained. The stakeholders need to be convinced of the need for a change. The fourth step is to identify the instruments for change. The instructional materials required in the traditional method; mainly the chalkboard/whiteboard, textbooks, writing materials and the resource persons. Open learning requires new ways of engaging students, new techniques for organising knowledge, new forms of assessment and credentialing, different models of investment and funding, and the infrastructure that fits to these purposes. The instrument for change is influenced by the social and economy of the environment. The fifth stage is to strategise. All the instruments for implementation are mapped out with the time lines. The sixth stage is the implementation stage and the last stage is the evaluation stage. Evaluation should be carried out periodically to ensure that the proposed aims and objectives are met.

Transformative Learning

It is often said that the only thing that is permanent is "change". In whatever way it is looked at, whether from geographical, physical and or social perspective, it is evident that the need for change cannot be ruled out even in the life of human beings. This is why, all the important aspects of other social sector, education inclusive, have witnessed a lot of changes. The changes may have been systematic or planned, natural or accidental. What is important is that change has occurred. As a matter of fact, for any discipline or field of study to remain relevant to societal needs, it must be flexible enough to accommodate change. With the recent knowledge explosion, emergence of new knowledge encompassing theories and concepts, renewed efforts in research activities which have tremendously extended the frontier of knowledge, no discipline particularly education, can afford to resist

change.

One thing that has been globally recognised as a statement of truism is the that is accorded to education as a strong instrument for change, this position is well argued by educationists like; Senteni (2004, 2005), Stam and Taurison (2005), Hakkarainen et al. (2004), Brown and Diguid 2001). There have been calls from educationists and indeed non-educationists on the need to re-examine the pedagogical strategies that are used in schools. The questions being asked are whether the old approaches to teaching and learning in schools are not due for review? Or whether the old/traditional means of imparting knowledge, skills and attitude can still be relied upon in the face of modem societal challenges?

O'Sullivan (1999) defined transformative learning as:

> Learning that involves experiencing a deep, structural shift in the basic premises of thought, feelings and actions. It is a shift of consciousness that dramatically and irreversibly alters our way of understanding and doing things. Such a shift involves understanding of ourselves and our self-locations; our relationships with other humans and with the natural world; our understanding of relations of power in interlocking structures of class, race and gender; our body awareness, our visions of alternative approaches to living; and our sense of possibilities for social justice, peace and personal joy. (Transformative learning is now the trend being looked at as an alternative to the traditional approach to teaching-learning pedagogy).

Transformative learning equips the learner with the concepts and understanding which are necessary to make success of transiting from a earning stage to the complex world of work, study and the accompanying social responsibilities. It is deduced from an adult education theory; which also suggests ways in which adults make meaning of their lives. Transformative learning theory looks at "deep learning," not just content or process learning and examines what it takes for adults to move from a limited knowledge of knowing what they know without questioning with reference to their cultures, families, organisations and society. It looks at the

mechanisms that are required for adults to identify, assess and evaluate alternative sources of information, and in some cases, reframe their world-view through the incorporation of new knowledge or information into their world-view or belief system.

Transformative learning is based on the premises that learners' are by nature critical beings that can be challenged for deeper understanding of concepts and issues. In transformative learning, learners will need the tools of transformative learning in order to be effective change agents as they are required to develop their critical and reflective thinking skills. The learners are. therefore, required to understand the nature of transformation and the impact it will have on our society and culture. For meaningful deductions that will suit human needs, there must be a first order thinking which is achievable through reading and comprehension, a meta-cognition achievable through monitoring of progress and products of first order thinking and lastly transformative learning which has to do with reflecting on the limits of knowledge, the certainty of knowledge, and the criteria for knowing. These three cognitive processing levels help to prove, according to Mezirow et al. (2000) any of the four ways in which learning occurs in transformative learning namely (a.) elaborating existing frames of reference (b.) learning new frames of reference (c.) transforming points of view, or (d.) transforming habits of mind.

It is on this understanding that Mezirow et al. (2000) discussed learning as a transformator on the basis of transformative learning theory whose focus

> — *is on how we learn to negotiate and act on our own purposes, values, feelings, and meanings rather than those we have uncritically assimilated from others — to gain greater control over our lives as socially responsible, clear thinking decision makers.*

Merriam (2007) also claimed that "transformational learning is about change, dramatic, fundamental change in the way we see ourselves and the world in which we live" He claimed that the foundation of transformational learning was built on the psychoanalytic theory and the critical social theory.

The assumption is that transformational learning involves becoming more reflective and critical, being more open to the perspectives of others and being less defensive and more accepting of new ideas. Other authorities have discussed the theory based on their own perception and understanding with the view to expanding the frontier of its assumption with their own ideas. For example Imel (1998) believed that since the transformational learning theory has a good background for adult education, it can be used especially in adult education programmes. However, to successfully apply this theory in adult education, the roles of teachers and students in creating a transformational learning environment have to be addressed.

Mezirow (1994) described the transformational learning theory as being "constructivist, an orientation which holds that the way learners interpret and reinterpret their experience is central to making meaning and hence learning." According to him, the theory involves two kinds of learning namely, instrumental learning and communicative learning. Instrumental learning focuses on "learning through task-oriented problem solving and determination of cause-and-effect relationships." It helps learners achieve their short-term objectives such as improving their work performance (Mezirow, 1997). While communicative learning involves how others communicate their feelings, needs and desires with another person. It helps learners become critical, autonomous and responsible thinkers (Mezirow, 1997).

Mezirow (1997) stated that the goal of transformational learning is to change the "frame of reference". A frame of reference according to him is the collective of the assumptions through which we interpret and understand the world we live in. A frame of reference includes two elements namely habits of mind and a point of view. Habits of mind are always affected and shaped by assumptions which build on cultural, social, educational and political codes while, a specific point of view is originated from habits of mind (Mezirow, 1997). When people begin to critically reflect and examine their predetermined assumptions and beliefs, they would become more open, inclusive, reflective and willing to change (Choy, 2010). However, not every experience can cause transformation. Effective learning does not follow from a positive experience but for effective reflection. Thus, critical reflection is central to transformational learning (Mezirow, 1997).

Boyd ((as cited in Imel, 1998) expanded Mezirow's theory in his research report which paid attention to the individuals' ability to work with themselves and take care of problems that they have been going through within themselves. Following this, he postulated that, through problem solving approach, human beings are able to develop a refined personality. While Mezirow (1997) was more involved with the self-reflection, Boyd was focused more on discernment within the theory. Discernment means using images and symbols in order to create a personal image of what they are like.

It was stated by Boyd (1998) that discernment is composed of three different steps, which are receptivity, recognition, and grieving. First, a person must be willing to have an open mind and think about things and by so doing, become receptive. Second, he/she must recognise things that need to change or things that are going on around. Last, and perhaps the most important step according to Boyd, is grieving. Grieving is when the individual takes a new way of doing things or tries to integrate new ideas into their lives.

Following Boyd' (1998), perceptive transformation is, therefore, a "fundamental change in one's personality which involves the resolution of a personal dilemma and the expansion of consciousness resulting in greater personality integration." Boyd's theory has as such moved beyond the ego and emphasis on reason with logic to a definition of transformational learning.

Transformative Learning Best Practices

There are numerous ways in which adult learners can be taught. For effectiveness and efficiency, Taylor (1998) suggested several ways of applying transformational learning in practice. He postulated that, the ideal learning conditions can promote a sense of safety, openness, and trust with effective instructional methods that support a learner-centered approach which promote student autonomy, participation and collaboration. The theory explained the importance of human activities which encourage the exploration of alternative personal perspectives, problem-posing, and critical reflection.

The proposition by Taylor (1998) further explained that, for the teachers to work and communicate with students, he/she must be trusting, empathetic, caring, authentic, sincere, and also demonstrate a high degree of integrity. He also postulated that it is important to provide feed-back and self-assessment to the students when using transformational learning theory. He also noted that such functional communication will eventually translate to quality learning.

In the same token, Imel (1998) stated several roles that the students and teachers have to play for transformational learning to take place. First, the teacher should foster a learning environment of trust and care, in which the learners and teachers have a sensitive relationship with each other. Secondly the students should share the responsibility for establishing a learning atmosphere in which transformative learning can occur.

Mezirow (1994) also reiterates the roles of the educators in transformation learning to include helping the learner focus on and examine the assumptions that underline beliefs, feelings and actions. For example, the adult educator should do an exercise in class that allows learners to spend time exploring their beliefs on the topic of discussion while educators can use the "think-pair-share" exercise to discuss in small groups feelings, beliefs and actions regarding the topic. In this process, the adult learners should carry out the following activities:

(1) **Assess the consequence of assumptions.** For instance, the adult educators can have conversations in class to know the students' assumptions about a topic. Then group the students who have similar assumptions together, discuss a single event and compare how different their perceptions are.

(ii) **Identify and explore alternative sets of assumptions.** Through discussion, group- sharing and debate, teachers can help the learners in opening their minds to different beliefs and feelings underlying different assumptions and

(iii) **Test the validity of assumptions through effective participation in reflective dialogue.** The teachers should encourage dialogue to reflect and review what has happened and check if their original assumptions are correct in these events.

Boyd and Myers (as cited in Imel, 1998) encouraged adult educators to develop and practise two characteristics to promote best practice in transformational learning. According to them, the first is seasoned guidance. This is the ability to serve as an experienced mentor reflecting on personal thoughts with the intent to assist others in the transformational process. The second is valued compassionate criticism. This is assisting students to question their own reality in ways that would promote transformation of their world view. Cranton (1994) emphasised the importance of the teacher as a role model who is willing to demonstrate his own willingness to learn and change. Taylor (1998) saw the role of the teacher to help students connect the rational and affective aspects of their experience in the process of critical reflection.

Taylor (1998) believed that too much emphasis is placed on the teacher at the expense of the student. He emphasised that learners share the responsibility for constructing and creating both the environment and the process of transformational learning. Daloz (1986) recognised that growth can be a risky and frightening journey into the unknown, as students are challenged to let go of old conceptualisations of self and the world. He challenged teachers to structure their teaching to fostering personal development of students rather than developing specific competencies.

Challenges for Instructors in Transformative Learning

There are challenges for instructors in transformative learning. The first is ethical challenge. As discussed, transformational learning has powerful potential for enhancing and accelerating learners' self-actualisation process. There are important considerations for instructors handling such programmes. Baumgartner (2001) observed that instructors are advised to consider ethical questions which may arise in the planning and delivery of transformational learning. The basic question is "What right do instructors have to encourage transformational learning?" He also discussed the dynamics and the balance of power in the classroom, emphasising the necessity of a trusting and caring relationship between learners and instructor. Learners who see the instructor as an authority figure may have difficulty or reluctance to challenge conventional values, beliefs and interpretations of facts. Baumgartner (2001) further recommended that a formal code of ethics should be designed and implemented. Similarly, she

stated that adult educators should be encouraged to estal h a learning forum in which they can create mutual support and exploration of the dynamics of transformational learning. She also reminded instructors that transformational learning frequently elicits emotional responses from both the student and the instructor.

The second is professional challenge in the area of transference and counter-transference among learners and instructors. This is a phenomenon characterised by unconscious redirection of feelings from one person to another. Transference and counter- transference are two phenomena that are common in helping relationships and in educational settings. Freud (1905) introduced the concept of transference and expanded further on it (1953, 1912/1988). He however, confined the application of these phenomena to the fields of counselling and psychotherapy. It is only in a few cases that the concept has been employed in an educational context. Such application can be found in Lacan's theory of transference in writing instruction (Brooke, 1987; Jay, 1987; Murphy, 1989; Schleifer, 1987). The forgoing reveals how transference has clear relevance to understanding the instructor-learner relationship as a kind of helping relationship. For adult educators, the greatest utility probably comes from a broad approach as exemplified by Beliak and Faithom (1981), who defined transference as a "transferal...of sentiments, drives and conflicts experienced in the past to current situations and people." These transferals can manifest as positive or negative transference: "Positive transferential reactions include feelings of liking, solicitude, and loving toward the helper. Conversely, negative reactions can involve distrust, disliking, or even hate" (Watkins, 1983). When the person being helped exhibits these kinds of transferals, it is called transference but when the helping professional does so. it is called counter-transference (Corsini and Wedding, 1989). It is the management of this issue that forms the fulcrum of transformative learning.

The third challenge is confidentiality: This has to do with the issue of trust between the learner and the instructor. The belief of the learner revolves round the fact that the instructor will respect his person, his views and others while at the same time keeps his views and available information about the learners to self. This is to forestall the situation whereby the learners will not be subjected to any ridicule.

The fourth challenge is conflict amongst learners. This has to do with disagreement that could ensue amongst the learners on issues relating to teaching and learning. It relates to how these kinds of issues are resolved among the students without rancor by the instructor.

The fifth challenge is burnout and intensity beyond the learner's ability to cope. As an adult learner, there is tendency for burnout and low level of intensity to cope with curriculum content and various aspects of topics to be treated during periodic lessons regarding time and assignments. The challenge here lies in the ability of the instructor to have the capability to handle the stress that could emanate amongst the learners due to this problem.

Other likely challenges are issues of sexual attraction, cognitive dissonance, repressed memories emerging into consciousness and creating stress, appropriate supervision with minimal interference in the process, code of ethics for the classroom environment, precipitating transformational learning in a learner who is not prepared or does not fully understand its possible consequences, providing adequate transformational learning to students who are eager and receptive to personal change and evolution. There is also a challenge on whether an instructor is qualified to decide which among a learner's beliefs should be exposed to transformation and the fine line between education and therapeutic intervention which poses a question on whether an instructor should function as therapist to the students.

Costing the Transformative Process

Quality and efficiency are inseparable from the availability and judicious utilisation of funds. Every anticipated change is geared towards improved quality of its products or services and every change has financial implications. The cost of acquiring certificate through open learning may not be free (Wikipedia, 2013). Someone somewhere would have paid for it. In planning a transformation learning process, it is important that the cost of each process is determined as well as the sources of funding. Every educational change requires funding. This explains why some educational changes are less successful because of lack of fund for adequate implementation. This is because the cost was not included in the planning process. To determine the cost that may be expended at each process, monetary value has to be attached to each stage as well as the source of fund.

In allocating cost, proper market survey should be carried out to ensure the actual monetary value. Also, certain percentages should be allotted over the current market prices to take care of inflation that may occur during implementation. This breakdown could help in determining timelines for proper implementation

Conclusion

The Nigerian government has embraced open learning by establishing a National Open University in the country. But it is also important to note that the beauty of open learning has not been fully exploited. This is because there are still barriers which inhibit prospective learners from getting the best from the system. These barriers include admission criteria, semester system and inability to enroll for a course of interest. For example, with the principle of openness, a candidate in the National Open University of Nigeria should be able to take 'ENG 316 - Business Communication' as a course instead of enrolling for the programme Business Education in which that course is embedded. By this process employees who have possessed a certificate in an academic or professional discipline will be able to improve themselves in the areas of new innovations.

Similarly, the assessment procedure has not shifted from the type done in the face-to-face system. A student should be able to request to write his/her examination after completing the required number of weeks in studying the course materials.

The e-leaning platform needs to be reviewed and improved upon in order to allow for cooperative learning among students, between students and their tutors as well as encourage enrolment of foreign students. It will equally allow for the participation of foreign tutors. This would require increase in the bandwidth for internet connectivity. Similarly, transformative learning will lead to sharing of ideas across country borders for the development of the national economy. It will also give international recognition to the certificates earned through this process.

Conclusively, if the transformative learning agenda is well articulated and integrated into the education system, there will be improvement in learning outcomes with turnout of good products who will make positive impact on the national economy.

References

Baumgartner, L. M. (2001). An Update on Transformational Learning Theory. In: S. B. Merriam (Ed.). *The New Update on Adult Learning Theory,* (pp. 15-24).

Butcher, N. (2011). *A Basic Guide to Open Educational Resources (OERs).* Vancouver, British Columbia.

Choy, S. (2010). Transformational Learning in the Workplace. *Journal of Transformative Education,* 7(1).65-84.

Corsin. R.J & Wedding, D. (1989). *Current Psychotherapies.*

Hakkarainen, K., Palonen, T., Paavola, S. & Lehtinen, E. (2004). Communities of networked expertise: Professional and educational perspectives. Advances in Learning and Instruction Series. Amsterdam: Elsevier.

Heeden, T. (2003). The Reverse Jigsaw. A Process of Cooperative Learning and Discussion. *Teaching sociology',* 31(3).

Imel, S. (1998). Transformative learning in adulthood. (Report No. EDO-CE-98-200). Columbus, OH: Adult, Career, and Vocational Education. (ERIC Document Reproduction Service No. Ed423426)

Jegede, O. (2010). *50 Years of University Education in Nigeria: Evolution, Achievements and Future Directions.* Okojie, J. Oloyede, I. & P. Obanya. (Eds). University of Ilorin & National Universities Commission.

Johnson. D. W. & Johnson, R. T. (1989). *Co-operative and Competition: Theory and Research.* Edina, M. N. Interaction Book Company.

Joint Admission and Matriculation Board - JAMB (2009). Retrieved from www.jamb.org.

Lewis, R. (2006). What is Open Learning? Open learning. *The Journal Of Open Distance and E-Learning,No\.* 1(2) DOI: 10.1080/0268051860010202.

Merriam, S. B., Caffarella, R. S. & Baumgartner, L. M. (2007). *Learning in Adulthood: A Comprehensive Guide.* 3rd edition. San Francisco: Jossey-Bass, Inc. ISBN: 0787975885.

Mezirow, J. (1994). Understanding Transformation Theory. *Adult Education Quarterly,* 44(4), 222-232.

Mezirow, J.(1997). *Transformative Learning: Theory to Practice. New Directions for Adult and Continuing Education.*no.74, summer 1997. Jossey-Bass Publishers.

National Universities Commission - NUC (2005). "Curbing over-enrolment in Nigerian Universities." Monday Memo, September 12, Vol. 4 (37).

Palinscar, A. S. & Brown, A. L. (1984). Reciprocal Teaching of Comprehension-fostering and Comprehension-monitoring Activities. *Cognition and Instruction,* 1(2).

Qayoumi, M. H. & Polese, K. (2013). "The open learning ecosystem: Transforming education through the virtual stem university." White paper, Office of the President, California State University.

Rumble, G. (1992). *The Management of Distance Learning Systems.* Paris: UNESCO. International Institute of Educational Planning (IIEP).

Slavin, R. E. (1990). *Co-operative Learning.* New Jersey: Prentice-Hall.

Senteni, A. (2005). Innovative Learning & Knowledge Communities for the integration of ICTs in Enhancing Education,

WITFOR 2005 White Book- Education Commission (Projects & Research), Gaborone(Botswana).

Senteni, A. (2005). A comprehensive analysis of some initiatives for the integration of ICTs in education in Mauritius, WITFOR 2005 White Book- Education (Best Practices Case Study), Gaborone(Botswana).

Senteni, A., Taurisson, A. (2005). Innovative Learning & Knowledge Communities, UNESCO-IFIP publication.

Senteni, A. (2004). From e-Leaming to Technology-Enhanced Education, Educational Ecologies for Sustainable Development, World Computer Congress (IFIP-WCC), Toulouse, France.

Sullivan, E. (1996). *Transformative Learning: Educational Vision for the 2T Century.* Toronto, Canada: University of Toronto Press Inc.

Taurisson, A. (2007). Action, acte et activite, revelateurs du sujet, et d'un espace fondateur pour une pedagogie. " Actualite de la Recherche en Education et en Formation" Strasbourg, France.

Taylor, E. W. (1998). The theory and practice of transformative learning: A critical review. (Contract No. RR93002001). Columbus, OH: Center on Education and Training for Employment. (ERIC Document Reproduction Service No. Ed423422).

Tsay, M. & Brandy, M. (2010). A Case Study of Co-operative Learning and Communication Pedagogy: Does Working in Teams Make a Difference? *Journal of the Scholarship of Teaching and Learning,* 10(2), 78-79.

UNESCO (2013). Education university quality and mobility. Retrieved from unesco.org/education/en/ev.php-URL.

University of Guelph (2013). Open learning programme handbook. Retrieved from http://www.open.uoguelph.ca /current/undergrad-portal/open-leaning-handbook/about.aspx

Wikipedia (2009). Open learning. Retrieved from http://en.wikipedia.org/wiki/Open leaning

Wikipedia (2013). Open education. Retrieved from http://en.wikipedia.org/wiki/Open_educational_resources

Wikipedia (2013). Transformation Processes (media systems). Retrieved from http://en.wikipedia.org/wiki/Transformation_processes_ %28media_systems%29

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