

# Teaching and Research Innovation in Nigerian Universities

A SPECIAL  
HIGHER EDUCATION  
EDITION

*Edited by*  
**G.O.S. Ekhaguere**

PUBLICATIONS OF THE ICMCS

5

## **PUBLICATIONS OF THE ICMCS**

*Editor: Professor G.O.S. Ekhaguere*

© 2012: International Centre for Mathematical & Computer Sciences (ICMCS),

PHYSICAL ADDRESS: 8th Floor, Glass House,  
Federal Ministry of Transportation Building Complex,  
Tafawa Balewa Square, Lagos, Nigeria

WEBSITE: [www.icmcs.org](http://www.icmcs.org)

E-MAIL: [icmcsmail@icmcs.org](mailto:icmcsmail@icmcs.org)

**All rights reserved**

The material in this book is copyrighted. No part of this book may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or inclusion in any information storage and retrieval system, without the prior written permission of the ICMCS.

**ISBN-978-37246-4-9**

## Contents

<i>Preface</i> .....	iii
<i>Welcome Address</i> .....	v
J. A. OKOJIE: <i>Opening Address</i> .....	viii
O. V. EKECHUKWU: <i>Fostering Research Innovation in Nigerian Universities: the NUC's Action Plan and Core Activities</i> .....	1
EME T. OWOAJE: <i>Research Capacity Building and Research Management in Nigerian Universities: Some Lessons from the University of Ibadan</i> .....	17
C. J. DIJI: <i>Constraints and Prospects of Research Capacity Building for Engineering undergraduates in Nigerian Universities</i> .....	29
A. ONUKA & O. K. TOWOLAWI: <i>Networking Higher Educational Research For Effective Teaching In A Developing Country</i> .....	51
R. O. AKINOLA: <i>Research Innovation in Nigeria: An Octave Algorithm for Computing a Student's CGPA</i> .....	67
A. O. FALODE & C. G. UDOMBOSO: <i>Students' Grading and Evaluation: A Critical Review</i> .....	77
BOLA UDEGBE: <i>Fostering Internationalization at Home in Nigerian Universities</i> .....	91
S. A. BABARINDE: <i>Accountability in Pedagogy and Assessment of Teaching in Higher Education</i> .....	101
R. O. AKINOLA, L. S. O. LIVERPOOL & M. J. MARUT: <i>Deploying Educational ICTs for Learning and Teaching at Nigerian HEIs</i> .....	125
M. DAUDA: <i>Enhancing Student Learning Through Innovative Teaching</i> .....	145
A. S. AHMED, R. B. BAKO, F. O. ANAFI, E. G. SHIDE, B. J. VAN WIE, B. ABDUL & B. ABDULLAHI: <i>Application of Hands-on Pedagogical Device in Engineering Education in Nigeria</i> .....	149
A. A. BABATUNDE: <i>Ways of Improving Learning and Teaching in Engineering Subjects</i> .....	161

C. G. UDOMBOSO, A. O. FALODE & ANGELA U. CHUKWU: <i>Effect of Attendance on Performance in Postgraduate Courses in Science and Engineering</i> . . . . .	169
A. OLATUMILE: <i>Web-based Tools and Effective Delivery of Distance Learning for Tertiary Education in Nigeria</i> . . . . .	179
C. K. AYO, C. AJIEH & I. EWELOYA: <i>Enhancing Graduate Employability in Nigeria: A Review of the Computer Science Curriculum</i> . . . . .	207
O. OLUWAFEMI, O. O. KOLADE & S. OLUWAKEMI: <i>Student Performance Prediction in Nigeria Tertiary Institution Using Data Mining Technique</i> . . . . .	219
C. O. OMOREGIE: <i>Lifelong Learning Framework for Developing Employable Skills in Undergraduates</i> . . . . .	239
AYOTOLA AREMU, I. A. SALAMI & A. A. ISHOLA: <i>Effect of Demonstration Strategy on the Acquisition of Activity-based Lesson Planning Skills of Pre-Service Primary Mathematics Teachers in Nigeria</i> . . . . .	257

UNIVERSITY OF IBADAN LIBRARY

## Lifelong Learning Framework for Developing Employable Skills in Undergraduates

C. O. OMOREGIE

*Department of Arts Education,*

*Adekunle Ajasin University, Akungba Akoko, Nigeria*

*(chrisomoregie@yahoo.com)*

### ABSTRACT

The growing number of unemployed people especially graduates of tertiary institutions who daily search for jobs that are scarce either lack requisite skills or there is no vacancy in the workplace. Despite this problem of graduates' unemployment, Nigerian higher institutions cannot yet admit all applicants on yearly basis. This means that there is still a great need for higher education in Nigeria. Hence, it has become imperative for undergraduates to acquire some employable skills side by side with their education. More so, Governments and private sectors continue to advertise for vacancies requiring skills that are not readily acquired in the formal school curriculum. Studies have been done on youth employment through vocational training, empowerment programmes, and entrepreneurship course at universities, but there is little or non on lifelong framework for employable skills

available for undergraduates before graduation. This paper therefore identified employable skills from employers' perspectives and constructs a framework for developing employable skills in undergraduates, since every employer of labour looks for specific set of skills from jobseekers that match the skills necessary to perform a particular job. These skills include; communication skills; analytical/research skills; adaptability/managing skills; computer literacy; interpersonal abilities; and problem solving skills. The shocking reality is that employers especially at the private sector prefer those who have these skills even to holders of paper qualifications. By constructing a lifelong framework for undergraduates and every intending employee, this study has built a bridge between those who no longer believe in higher education and those who are simply satisfied with having a certificate.

*Key words:* Lifelong learning, Partagogy, Social capital, Employable skills.

## 1 Introduction

Where new technologies have been introduced, demand for high skilled workers, particularly high skilled Information and Communication Technology (ICT) workers, has increased. At the same time demand for lower skilled workers has declined<sup>1</sup>. In a rapidly changing technology based world, initial education is insufficient to fit an individual for a lifetime's work especially in nations with inadequate skilled work force. *Today the proportion of people continuing their education after the phase of compulsory schooling has grown enormously and this had changed the core curriculum in content and purpose*<sup>2</sup>. The changes in curriculum content and purpose have created two innovations:

First, a high proportion of today's University students are doing vocational courses.

Second, the distinctions between vocational curricula and between the last years of Secondary School, the Colleges, the University for Industry and the real Uni-

versities are increasingly blurred. A good example of this is the courses that various IT companies run to train people for employment as users, operators or installers of their hardware or software. There is no question that those who complete these programmes are very employable. In the USA, they earn more than people with a B.Sc in computing<sup>3</sup>.

The gap between the school curriculum and the society it is supposed to serve is more pronounced in African countries, where sometimes, learners learn what the society may not need. This was unlike the traditional form of education where the society set the goals, determined the mode, and its expectation of a cultured person was the yardstick for the outcome of education<sup>4</sup>. In traditional African pedagogy, education was meaningful only within the learner's life experiences.

A common sense view of learning is something everyone does all of the time even if such a person does not realize they are doing it. It is seen as a fundamental human process. There are diverse views as to whether it is a process or an outcome. Peter Jarvis gives the following meanings to learning:

- Any more or less permanent change in behaviour as a result of experience;
- A relatively permanent change in behaviour which occurs as a result of practice;
- The process whereby knowledge is created through the transformation of experience;
- The process of transforming experience into knowledge, skills and attitudes;
- Memorizing information<sup>5</sup>.

In lifelong learning, all learning takes place within a social context<sup>6</sup> and involves learners interacting with others as individuals and groups within organisations and communities.

John Dewey's thought on lifelong education supports progressive, functional and pragmatic education rather than that of the liberal school expounded by Kant.

## 2 Learning in the context of application

Within the context of participatory and collaborative learning guiding social pedagogy, Levinger proposes the creation of a new learning science referred to as Partagogy. Partagogy is a process 'that helps individuals to develop the skills and knowledge they need to access available participation opportunities and create new ones over the course of their lifespan'<sup>7</sup>. Knowledge should not only be produced and acquired but also recreated especially in different conditions of life roles. One can identify at least five life roles for learners, namely: career, entrepreneurship, civic, personal and learner<sup>8</sup>. Beryl Levinger is quite pragmatic about knowledge production. She sees it as a means to enable people to earn a living. Hence, to produce new knowledge on a global scale, learners need to be flexible, adaptable, collaborative and problem solving<sup>9</sup>. This means that learning ought to create a balance between the specificity of vocational education and the universality of academics.

The participation opportunities with which partagogy concerns itself are related to four core domains of human behaviour and national development: family life; livelihood; civic affairs; and environmental stewardship. It has been argued that the distinction between pedagogy and andragogy is not helpful to our task of understanding more about human capacity development. Neither term conveys specifics with regard to the content to be acquired by learners. The terms pave way for establishing a false dichotomy with respect to how



individuals become more competent by overstating differences between older and younger learners<sup>10</sup>. In this sense, partagogy is preferred to pedagogy and andragogy because it is a science of learning opportunities. It views human capacity development as a twofold process which involves augmenting the degree to which an individual accesses extant participation opportunities; and contributes to the creation of new opportunities<sup>11</sup>.

Partagogy provides opportunities to continually search for better ways of understanding the learner's need system irrespective of age, defenses against change, identifications, projections and total personality so as to achieve desirable end of education namely: personal fulfillment and societal good. In order to meet the individual's need, partagogy offers an educational methodology that is germane to the learning needs, interest, and capacities of a sustainable society through its citizens' participation. Hence, partagogy has both a methodological foundation and a content basis contrasted with the earlier views and differences of pedagogy and andragogy. Such method and content are neutral to the knowledge, skills and behaviours they seek to develop in either a child or an adult learner.

With pedagogy, teachers become interested observer and accessible resource for their learners to relate with one another. Andre Sc captures what he does with students by using partagogy, "I pretty much refuse to be a teacher instead I claim to be a host and an actor, taking on roles such as employer or client, which is perhaps easier as I teach a heavily -practical oriented course"<sup>12</sup>.

Partagogy focuses on creating the conditions that facilitate the transfer of knowledge to new settings. Knowledge transfer is not automatic; rather it is associated with learning through observation, rule making, and definition as well as exposure to varied kinds of problems in authentic settings. The degree to which knowledge transfer occurs is a reflection of the degree to which planning for transfer takes place. Research shows that very often students do not carry

over facts and principles they acquire in one context into other contexts. They fail to use in Science class or at the supermarket the Mathematics they learned in class. They fail to apply the writing skills they mastered in English on a history essay. Knowledge tends to get glued to the narrow circumstances of initial acquisition<sup>13</sup>. It is suggested that teachers who make learning thinking-centered, arrange for rich on-going assessment, support learning with powerful representations, pay heed to developmental factors. Despite this suggestion, it has been shown that transfer can be difficult to obtain, because of varied situations which learners can be confronted with which may not make transfer spontaneous. Transfer of knowledge depends on the design of situations where students are placed. The conditions for transfer of knowledge include:

- (i) Conditions related to the characteristics of learners (subject variables). Transfer of knowledge requires much time for planning, classifying and analysing a problem before offering an answer;
- (ii) Conditions related to the features of the tasks (task variables). This variable implies that the nearer the task the easier the transfer;
- (iii) Conditions related to the nature of the instruction (instruction variables). In order to achieve cognitive transfer in learning, it is necessary to teach explicitly and intentionally for transfer<sup>14</sup>.

As against these conditions Yogesh Malhotra opines that knowledge transfer involves neither computers nor documents but rather interactions between people. This means that the subject, task and instruction variables can only be effective when they improve opportunities for interactions between people<sup>15</sup>. Hence, meetings are by far the most important channels for transferring knowledge between people.

### 3 Learning society

The notion of the learning society is one in which individuals are to be encouraged, persuaded, and cajoled into taking part in learning, in order to enhance their human, cultural, social capital as the route to future employability, economic growth, mobility, and cohesion. Whilst governments must expect to expand their investment in education and training-especially in response to the needs of business and the economy- it is the responsibility of individuals to develop their own abilities and careers on the basis of self-generated learning and by means of modern and effective ICT networks and distance learning<sup>6</sup>. According to Fieldhouse, *lifelong learning can be seen as a totality of the encompassment and unification of all stages of life and the various forms of education therein. It therefore represents a shift in paradigm of provider-driven education towards individualised learning; which is part of the wider late twentieth century processes of individualisation*<sup>7</sup>. *Through lifelong learning, the individual is placed at the centre of attention and as such puts emphasis on the development of the individual competencies of the learner.*

The incidence of unemployment in African countries has also precipitated curriculum development for self-employment for the increasing number of unemployed graduates. This is even relevant as the various systems of education introduced by the Nigerian governments have failed to make graduates employers of labour instead of job seekers. Like 'free' education, employment for all has become a political axiom used by politicians to cajole the electorate and blame poverty on the preceding governments. Yet, it is believed that ICT offers boundless opportunities for employment anywhere in the world.

Internet-based technologies make information available, facilitate on-line dialogue between individuals, allow the formation of virtual communities of interest and make learning resources available. This has changed educational policies and practices in developed countries. Although web-learning popu-

larised and expanded the possibility of the concept of the learning society, it is neither a new reality nor an original concept from the web. Throughout history, all human societies have developed a variety of ways to manage, organise, and enable learning among their members within and outside educational institutions. All these efforts are forms of out- of school programmes which are elements of the learning society.

Learning in the learning society includes an assortment of instrumental, communicative and emancipatory rationalities<sup>18</sup>. In this regard since human societies have always engaged in these activities, they have been learning societies. For example one of the features of indigenous African educational system was skill acquisition. Every individual acquired at least a skill. It is only when individuals are functional and productive through acquisition of vocational skills and when they find dignity in labour that they can become economically and socially efficient<sup>19</sup>.

While developing economies still depend on the primary industries such as agriculture and mining, these industries have virtually disappeared in the developed countries in terms of their rate of employment. Manufacturing industries employ less than one person in five. The booming industry in developed economies is the service sector industries including such field as telecommunication, sales, insurance, travel and tourism. This sector needs different types of skill, and is more focused upon working with others and communicating effectively. The views of a managing director of a hi-tech electronics company are suggestive of changing skills for service industry. "He thought that the trainees he sent to study engineering at a local college of further education learned many things they did not need. to know, or could look up in five minutes in a book. Meanwhile, the knowledge that they did need such as how to communicate effectively in German as well as English because many of his customers were in Germany were totally absent from the course'<sup>20</sup>. This suggests that Science

courses in colleges should include languages.

A new consensus in lifelong learning is emerging which wants all workers to anticipate unprecedented career transitions and has informed the growing importance of continuing education and training in an ever increasing pace of post industrial society. As learning makes increasing demands on time and money, there is need to find ways for as much learning as possible to occur on the job as in all other aspects of a learner's life<sup>21</sup>. There is a shift in recent years from viewing educational institutions as the principal places in which learning occurs towards the recognition of the power and importance of the workplace as a site for learning. The realm of employment has become an increasingly central stimulus for the focus of learning to meet a wider range of vocational purposes. Workplaces can become environments for the development of a wide range of learning goals and where programmes in educational institutions can be integrated with workplace experience. There are differences between educational institution and workplace learning. These differences include: physical proximity, relevance of study to the need of the workplace, certification, degree of formality, learners' participation, goals of learning, contexts, and the level of competence.

#### **4 Channels of lifelong learning**

Four channels of learning webs which could contain all the resources needed for real learning are identified by Illich. They are: things – machines, places and events; people who serve as models for skills and values; peers who challenge and understand; an elder who exposes the learner to criticism'. Few educators and managers would dismiss the advantage of the workplace as a learning resource because it has the advantages of increased chance of skill transfer into the working environment and improved retention when new knowledge and skills are put into immediate use. Illich 'learning webs' was immediately

supported by UNESCO publications by Lengrand and Faure<sup>22</sup>.

From the viewpoint of Lengrand, it can be argued that education is not about having but about 'being' and that it should be synonymous with culture and an asset to be gained. From this standpoint of self-realization, the true subject matter of education is to assist learners in 'becoming' at each different stage and in varying circumstances of their lives. Building on this humanist approach, but more influential due to its broad international dissemination, in learning to 'be' the conceptualisation of the learning society was built upon the notions of lifelong and life wide learning, and upon the assumption that a significant renewal of educational systems was both necessary and desirable: if learning involves all of one's life in the sense of both time-span and diversity, and all of the society, including its societal and economic as well as its educational resources, then we must go even further than the necessary overhaul of 'educational system' until we reach the stage for a learning society<sup>23</sup>.

Emerging industries require more specialised training in areas such as human resource management, computer operation, industry specific and generic computer software packages (such as computer aided design (CAD), word processing and spreadsheets), computer programming, project management, report writing, marketing, team building, language and culture, time management and quality assurance. These types of courses are already available in vocational education and training (VET) institutions, or can be developed by providers who have experience in working with enterprises to customise training for specific needs.

Innovative companies in emerging industries have diverse training needs that formal schools cannot provide without collaboration with vocational education and training providers. Since innovative companies are expected to operate at the leading edge of their technological fields, the further training they require is highly specialized and unique. Although vocational education and

training is already well placed in developed economies, there are opportunities for it to advance the currency of training in developing countries by identifying special requirements and develop programmes to deliver specialised training, expertise and knowledge to industries. Workplace learning can be promoted through in-service training, that is, training received by workers within the industry or on-the-job which is directly related to the task the employee is expected to perform in the workplace.

With the expected innovations that are required in the workplace, there is the need for a close relationship which should exist between schools and industries. There is however a current gap created by the need of the industries to meet educational provisions in schools. This has led to unemployment and low manpower development in most developing countries like Nigeria. While skill shortages of new entrants to the labour force as well as those already in the workforce are being provided by industrial training programmes most industries do not have the funds to purchase the hardware and software required for instructional or communication purposes. This is further compounded by the variance of schools curriculum with the world of work; and the rising cost of schooling in developing countries. Despite the growing educational institutions in Nigeria, the demands for skills are growing in the quest for better performance, productivity and efficiency in industries. At present in Nigeria, tertiary institutions turn out graduates that are not employed by industries either because there are not enough vacancies or they are not employable. In other words, they do not possess entrepreneurial capacity for self employment. There is therefore the need for a more mutual relationship between schools and industries. Illich's deschooling suggests that "there is no reason why skill centres should not surpass the workplace itself, with the employer and his work-force supplying instructions as well as jobs to those who choose to use their educational credits in this way"<sup>24</sup>. How can this submission be applied in solving the

problem created by the gap between schools and industries in Nigeria?

## 5 Social capital

Social capital has been defined by authors like Coleman, Putnam, Fukuyama as:

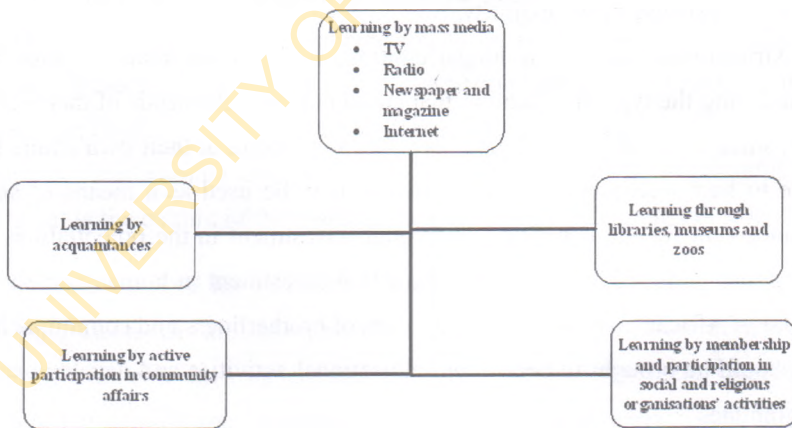
- A variety of different entities, with two elements in common: they all consist of some aspect of social structure and they facilitate certain actions of actors—whether personal or corporate actors—within that structure<sup>25</sup>.
- Features of social organisations, such as networks, norms and trust that facilitate coordination and cooperation for mutual benefits<sup>26</sup>.
- An instantiated informal norm that promotes cooperation between two or more individuals. Not just any set of instantiated norms constitutes social capital: they must lead to cooperation in groups and therefore are related to traditional virtues like honesty, the keeping of commitments, reliable performance of duties, reciprocity and the like<sup>27</sup>.

The main thrust of these definitions is the element of cooperation that social capital promotes among people as against individual and selfish aspirations. From this point of convergence, social capital performs some functions in the organisation and conduct of programmes that promote adulthood as well as practices that involve citizens' development in various aspects of local communities. Since adulthood is about freedom, maturity and citizenship, adults grapple with the problems and opportunities in their personal lives, they are simultaneously challenged to contribute to the development of their communities and society. Adult education (lifelong learning) becomes imperative, not only for the effective functioning of individuals at the workplace and in their own communities, but also for the renewal of society itself<sup>28</sup>.



Human capital and social capital are the two educational models that claim to address social exclusion, social justice and widening participation. Human capital is interpreted as skills, knowledge and work attitudes that are competitive. In poor countries, human capital as the primary model for education is premised on individualism, competitiveness in the labour market, and personal gain. This model creates a society that encourages survival of the fittest in a market economy. As a universalist approach, it does not challenge the societal and political structures that have created inequalities in the first place. Yet, education can do more than this. It can empower and create momentum for change<sup>29</sup>. Hence, social capital provides the basis for human capital, so that education can induce desirable change in the society.

## 6 The framework for employable skills



The above framework is a personal model of learning which is at little or no cost. It is using the ordinary day to day relationship and facilities available to everyone to keep learning and become employable. One cannot deny the necessity of having a governmental structure and a conducive learning environment for individual initiative but then human capital development at an individual

level is the most important factor in sustainable livelihood.

## 7 Conclusion

The history of education in Africa demonstrates the fact that education is a preparation for the civil service and paid employment that associates technical and vocational education with inferior status. This is why most African governments continually inject technical and vocational and entrepreneurial education into their secondary and tertiary educational system. The economic realities in these countries point to the purpose of education as an instrument that can be used to develop individuals talents to create, invent and invest in the nation's resources. Then education will be a preparation for life, producing citizens who will create wealth for the nation rather than plunder the nation's wealth. Education can no longer be mere credential that offers great rewards for a selected few at the expense of the majority.

African countries can no longer continue to blame colonial education for bequeathing the type of education that could not meet the needs of their countries, since most African countries have been in charge of their own affairs for close to half a century. Education should now be used as a means of self-enhancement for the benefit of all through investment in the potentialities of the people. Education should become a true investment in human and social capital of African communities. The values of brotherliness and communal living should be brought to bear in our educational activities and developmental programmes.

In the context of African communalism, education should not be a preparation for sharing national wealth at the expense of the vast majority of the people who do not have access to costly private institutions of learning springing up daily in African countries. These institutions from nursery schools to tertiary education are either owned or patronised by the political class who have looted

the public treasury and deliberately starved public schools of fund. Yet the educational system that produced this political class only had public schools which were based on merit allowing children of the rich and the poor to interact and grow together. That kind of interaction is far from being realisable in the present day Nigeria.

One of the potentials of the concept of learning society is that it provides a framework of what education should be in the future and permits a connection between learning and the idea of a future society. The idea of a learning society cannot be separated from the idea of a good society where there is an ethical commitment to social justice by all those who govern. To promote good governance, they should be committed to developing critical, creative, informed, caring and democratically engaged citizens through working together with social movements and grassroots organisations. This is what Daniel Schugurensky calls "pedagogy of engagement" when he suggests that "people do acquire significant civic and political knowledge, skills values and attitudes through the very process of participation in deliberation and decision making about issues that concern them"<sup>30</sup>. Learning takes place in the context of actual communities. For learning and development programmes to be meaningful and sustainable the culture of the communities need to be taken into consideration.

There is the need for everyone to become ready to participating in lifelong learning. Those who are not internally motivated need to be given incentives in form of favourable environment and trial training to motivate them. There may even be the need for special training to stimulate workers' and citizens' interest in learning. This could be done by following their interest and stating the benefits they may gain from learning. This study has shown that factors such as high degree of self-efficacy and actualization, goal orientation and changes in career are responsible for participating in lifelong learning. Lifelong learning can be inhibited by personal life circumstances like change in marital status,

death of a loved one, multiple role demand and lack of money, energy, health or emotional strength. Despite these factors that can inhibit learning, it still takes place and it imposes moral obligation on all who participate in it.

#### Notes and References

- 1 OECD Science, Technology and Industry Scoreboard: Towards Knowledge-based Economy, Paris: 2001.p. 3.
- 2 J. Daniel: The contribution of lifelong learning to an equitable and inclusive society: A closing keynote. address in Universities Association for continuing Education 3 Isl March 1999 [www.open.ac.uk/vcs-speeches](http://www.open.ac.uk/vcs-speeches).
- 3 J. Daniel.
- 4 P. Obanya: *African Education in the EFA Decade*, Ibadan: Mosuro publishers 2007, p. 20.
- 5 P. Jarvis An international Dictionary of Adult and Continuing Education, p. 196.
- 6 P. Jarvis: *Adult Learning in the Social Context*, London, Croom Helm London; Routledge. 1987, p. 60.
- 7 B. Levinger (2003): *Critical Transitions: Human Capacity Development Across the Lifespan: Critical Issues, 1994–2003*. Education Development Centre Inc. USAID [www.edc.org](http://www.edc.org)
- 8 R. Killen and W Spady 1999. Using the SAQA critical outcomes to inform curriculum planning in higher education in South Africa, *South African Journal of Higher Education* 13(2), 204.
- 9 J. Wessels (2002): Globalisation and International Compatibility – a challenge to learning within the context of application, *SAJHE7/STHO* 16(1), p. 193.
- 10 B. Levinger (2003): *Critical Transitions: Human Capacity Development Across the Lifespan: Critical Issues, 1994–2003*. Education Development Centre Inc. USAID [www.edc.org](http://www.edc.org)
- 11 J Wessels (2002): p. 193.
- 12 Andre Sc. (2005): *Classroom Styles PixelPlexus*.
- 13 [www.netra.exploratoriiim.edu/IFI/resources/teachingforunderstandiig.html](http://www.netra.exploratoriiim.edu/IFI/resources/teachingforunderstandiig.html).
- 14 R. Haskell (2000): *Transfer of Learning: Cognition & Instruction* p. 56.

- 15 Y. Malhotra (2002): Knowledge Transfer, www.yogeshmalhotra.com.
- 16 Cologne Charter – Aims and Ambitions for lifelong learning, adapted by the G8 at their economic Summit held in Cologne, 1999 18-20 June.
- 17 Fieldhouse, R. (1989): Lifelong Learning: in P. Federighi (ed) *Glossary of Adult Learning in Europe*, Hamburg: UNESCO.
- 18 Habermas (1971): *Knowledge and Human Interest*, Boston: Beacon. p34
- 19 Fafunwa, 1972.
- 20 Harkin, J. (2001): *Teaching Young Adults. A Handbook for Teachers in Post Compulsory Education*, London: Routledge.
- 21 Vaill, P. (1996): *Learning as a way of being, strategies for survival in a world of permanent white water*, San Francisco; Jossey Bass.
- 22 Lengrand (1970).
- 23 Faure (1972).
- 24 I. Illich (1970): p. 21.
- 25 Coleman (1988): Social Capital in the Creation of Human Capital, *American Journal of Sociology* 94, supplement, pp. 95–120.
- 26 R. Putnam (1993): *Making Democracy Work: Civic Traditions in Modern Italy*, Princeton, MJ: Princeton University Press.
- 27 F Fukuyama (1997): *Trust: The Social Virtues and the Creation of Prosperity*, New York: Free Press.
- 28 Nnazor (2005): Adult Education in Nigeria: The consequence of neglect and Agenda for action, *International Education Journals* 6(4), vwww.iej.cjb.net Retrieved 5 Aug. 2006.
- 29 Bacchus (1997) *Education for Development and Social Justice in the World in Social Justice and Third World Education*, TJ Scrase, ed New York: Garland Publishers.
- 30 D. Schogurensky (2003): Learning Societies and the question of democracy: pedagogy of engagement. *Canadian Association for the Study of Adult Education*, online proceedings, p. 10.