



Education For Today

Journal of Faculty of Education
University of Calabar

www.educationfortoday.com

Volume 3, No. 2 June 2003 ISSN 1596-0773

Information Technology, Globalization and the Future of Teachers' Education in Nigeria - Inyang-abia	-	1
Information Technology and Learning Organisation - Ani	---	3
Physical Environment and Sports Organisation in Schools - Charles	---	21
Reducing Stress - Induced Health Problems of Adolescents - Okorodudu and Okorodudu	---	29
Agility and Speed Performance of Elite Basketballers and Handballers - Awopetu	---	39
Improving School Climate for Achievement - Isangedighi	---	45
Hiv/Aids: Awareness, Attitude and Behaviour Change - Ubi	---	55
Some Determinants of Adolescents' Attitudes to Hiv/Aids Prevention - Asuquo, Inaja And Asuquo	---	63
A Panacea Towards the Reduction of Commercial Sex Activities and Hiv/Aids Infection - Ogunjimi	---	73
Counselling the Nigerian Youths in the Era of Globalization - Okorodudu	-	81
Drug Abuse and Strategies for Intervention - Awafung	---	91
Counselling Youths on Effective Study Habits - Oko	---	99
Youth Counselling: A Panacea for Curbing Drug Addiction - Eneh	---	109
Education and Violence among the Youths - Ubom	---	117
Mode of Entry into Marriage and Marital Satisfaction - George	---	127
Intercorrelations of Sexuality Variables - Ihejiamazu	---	137
Anxiety and Students' Academic Performance - Asia	---	145
Application of Maslow's Need Hierarchy Theory - Njama-abang	---	153
Women, Nationality and Democracy - Osa-aria	---	163
Book Review - Assibong	---	171

INFORMATION TECHNOLOGY, GLOBALIZATION AND THE FUTURE OF TEACHER EDUCATION IN NIGERIA: LESSONS FROM A GLOBAL STUDY OF LITERACY LEVEL AND MEDIA AVAILABILITY.

MOSES E. INYANG-ABIA
INSTITUTE OF EDUCATION
UNIVERSITY OF CALABAR
CALABAR

ABSTRACT

A global study involving 62 (31 African and 31 non-African) countries has revealed that indices of information technology and globalization such as literacy level and communication media are starkly lacking in Nigeria and other African countries. This trend affects rapid socio-economic development and integration into the global economic order therefore leaving us marginalized. Teacher education curriculum needs to be urgently reviewed to integrate greater focus on information technology requirements including, more importantly, computer-literacy and information management strategies. Greater attention to distance education, literacy improvement schemes and technology education, among others, has also been proposed.

Key words: Information technology, globalization, teacher education, literacy level, and media availability.

INTRODUCTION AND BACKGROUND

To McLuhan (1964) racial, geopolitical, economic. Linguistic and religious among other boundaries were gradually disintegrating owing to the daunting grip, the lightning speed and the penetration effects of communication technology. That was perhaps one reason why he predicted that the world was rapidly shrinking from all directions with speeded-up information movement so much that humans were essentially living in a *global village*. Information technology has therefore, by the eve of the present millennium, confirmed and actualized doubtlessly, McLuhan's concept of the *global village*. The increasing acceptance and use of the Internet

teleconferencing, web site exploration and the electronic mail among others have gradually made McLuhan's dream a reality. That is to say the *dotcom* technology has *villagized the globe* and the medium has therefore confirmed the message (McLuhan and Fiore, 1970) of information technology. To the extent that individuals and organizations can *dotcom* to that extent can they be accepted as being powerful because *he who controls information monopolizes power*. Moreover information technology, globalization and the future seem to hang on a delicate balance involving knowledge, income level and longevity. These are the key components of the Human Development Index (HDI) according to IUCN, UNEP and WWF (1991). Knowledge is operationalized here to mean educational attainment measured by literacy rate and mean years of schooling. Educational attainment implies not only knowledge but also skills and morals which when combined, have the capacity to facilitate maximum realization of human potentials and ability to take advantage of relevant opportunities. Income level is measured by adjusted per capita Gross Domestic Product (GDP) while longevity as associated with good health and adequate nutrition is a measure of life expectancy at birth. It is valued for its capacity to increase an individual's opportunity to pursue goals and develop abilities. Literacy level and the media therefore constitute major variables in the information technology and globalization equation. Yet the associated possibilities cannot be maximized if teacher education curriculum is deficient or defective in this age of globalization.

THEORETICAL BACKGROUND

The theoretical framework for this paper focuses on Rodney's theory of progressive underdevelopment and Hechscher-Ohlin factor endowment theory of international trade. These two theories are considered relevant to the paper because of the historical past of Africa and the on-going globalization processes that are factor-loaded.

According to Rodney (1972), development is universal because the conditions leading to economic expansion are universal. But when Europe capitalized on the advantage of their newer technologies about the 15th century there was increased expansionism. Consequently they took undue advantage of civilization, specialization, division of labour, latest technologies and inequality of distribution of resources and endowments to scramble for political and economic control. Colonialism therefore expanded and progressively impoverished and underdeveloped Africa, using all possible instruments of subjugation: Social, trade, economic, political and educational facilities. This situation successfully subjected the African countries to abject penury from where rescue becomes difficult.

This theory is relevant to this paper because the current globalization process concentrates the instruments the globalization on the developed economies to the disadvantage of the developing countries of the world.

teleconferencing, web site exploration and the electronic mail among others have gradually made McLuhan's dream a reality. That is to say the *dotcom technology has villagized the globe* and the medium has therefore confirmed the message (McLuhan and Fiore, 1970) of information technology. To the extent that individuals and organizations can *dotcom* to that extent can they be accepted as being powerful because *he who controls information monopolizes power*. Moreover information technology, globalization and the future seem to hang on a delicate balance involving knowledge, income level and longevity. These are the key components of the Human Development Index (HDI) according to IUCN, UNEP and WWF (1991). Knowledge is operationalized here to mean educational attainment measured by literacy rate and mean years of schooling. Educational attainment implies not only knowledge but also skills and morals which when combined, have the capacity to facilitate maximum realization of human potentials and ability to take advantage of relevant opportunities. Income level is measured by adjusted per capita Gross Domestic Product (GDP) while longevity as associated with good health and adequate nutrition is a measure of life expectancy at birth. It is valued for its capacity to increase an individual's opportunity to pursue goals and develop abilities. Literacy level and the media therefore constitute major variables in the information technology and globalization equation. Yet the associated possibilities cannot be maximized if teacher education curriculum is deficient or defective in this age of globalization.

THEORETICAL BACKGROUND

The theoretical framework for this paper focuses on Rodney's theory of progressive underdevelopment and Heckscher-Ohlin factor endowment theory of international trade. These two theories are considered relevant to the paper because of the historical past of Africa and the on-going globalization processes that are factor-loaded.

According to Rodney (1972), development is universal because the conditions leading to economic expansion are universal. But when Europe capitalized on the advantage of their newer technologies about the 15th century there was increased expansionism. Consequently they took undue advantage of civilization, specialization, division of labour, latest technologies and inequality of distribution of resources and endowments to scramble for political and economic control. Colonialism therefore expanded and progressively impoverished and underdeveloped Africa, using all possible instruments of subjugation: Social, trade, economic, political and educational facilities. This situation successfully subjected the African countries to abject penury from where rescue becomes difficult.

This theory is relevant to this paper because the current globalization process concentrates the instruments the globalization on the developed economies to the disadvantage of the developing countries of the world.

The extent to which some of the globalization instruments concentrate among the developing economies is part of what this paper intends to find out.

The factor endowment theory of international trade is otherwise referred to as the Hechscher-Ohlin (H-O) theory. As reviewed by Essang (2001), it argues that differences in factor basis for gainful international trade, which in most cases serve as substitute for international mobility assumes, among other variables, absence of trade restrictions and other impediments to free bilateral trade. This is so because producing regions focus on "export commodities that are intensive in use of its relatively abundant factor" while importing "commodities which are intensive in the use of its relatively scarce factors" (Essang 2001: 19).

The factor endowment theory of international trade is relevant to this because globalism as a philosophy is made possible by international trade, communications technology and computerization of human activities. All these are facilitated by information technology where the radio, television and newspaper and their respective principles are key factors with literacy basis. The concentration of these variables drive globalization. The question focuses on how teacher education in Nigeria can capitalize on the demands of globalization to facilitate, among Nigerians, the acquisition of those variables that drive globalization.

THE PROBLEM

McLuhan's original concept of *global village* has, over the years, metamorphosed into *globalization* as an economic weapon and *globalism* has become a philosophy of neo-colonialism. It is in this direction that Madunagu (2000) sees globalization as new imperialism, boundless hegemony and imperialism without frontiers. On the contrary, this presentation rather sees globalization as a growing trend for integration into the global economy. This position is shared by Shogban (1999) and even Madunagu (1999 a & b) in his earlier writings. This concept sees globalization as a rapid sociopolitical, geopolitical and economic expansion. Through the multinationals and developments in science and technology the principles and practices of capitalism have rapidly expanded to all parts of the world. The phenomenal developments in science and technology associated with the computer, telecommunication and transportation have combined to transmit at lightning speed, globalization and globalism. That is to say globalization is media-encapsulated, technology-driven and literacy-dependent. The objectives, merits, demerits and challenges of globalization are not hard to find. To lower cost of goods and services, broaden choices, move capital, widen markets and empower individuals for better control of their destiny (Shogbon, 1999) are some of the objectives and merits of globalization. According to Lacayo (1999) another advantage of globalization is the promotion of freer trade capable of creating jobs and reducing prices. According to him the phenomenon of free trade has been

important reason for the 1990s boom. Mc Elvane (2000) argues that globalization is designed to build global infrastructure that are capable of linking people together into global communities where knowledge, experience, talents, ideas, inspirations, among others, can be shared for the edification of one another. Where such a situation is facilitated, most solutions to human challenges can be easily incubated, developed, practicalized and perfected with greater ease. Faster expansion of world trade, astronomical development of international investment among the less developed economies, and rapid improvement in living standards among the people in the less developed economies, international co-operation and optimal utilization of available resources for more sustainable development are other important advantages. All these can outweigh such disadvantages as economic dislocation, negative industrialization impact and uneven distribution of financial power. Shagbon (1999) argues that those disadvantages may only arise as a result of failure of marginalized countries to integrate into the global economy because of inadequate infrastructure, lack of skills and deficient information technology.

Globalization process has not gained worldwide acceptance. This is evident among others from the 1999 incidence at Seattle where the 135-member World Trade Organization (WTO) Summit was turned into the *Battle of Seattle* by anti WTO-protesters. They saw globalization as "capitulation to the worst excesses of capitalism, a cover for eliminating hard-won protection for environment and workers' rights" (Lacayo 1999:30). However the major challenges of globalization are those related to industrialization rather than worldwide acceptance. Problems of mass awareness, environmental degradation, diseases, migration, technologized crime, terrorism are due more to rapid industrialization rather than to globalization *per se*. Unbiased availability and functional application of information technology can mitigate the apparent problems.

Culture shock arising from rapid technological change, the ideas that globalization generates political instability and that international competition produces negative effects on living standards of the developed economies can also be debunked through mass enlightenment using available information technology. Well-structured dynamic curriculum can be a good response to other challenges of globalization such as poor education, aging work force and inflexible labour market. All these emphasize that globalization cannot just be wished away. It has come to stay. According to Claude Smaja at the World Economic Forum (WEF) in Geneva as reported by Shongbon (1999), globalization cannot go away because we do not like some of its worrisome implications or the so-called destabilizing impacts. The question is therefore what to do to maximize the benefits of globalization for Nigerian citizens and the total environment. It is against this backdrop that this paper is designed to investigate information technology as an index of globalization in relation to teacher education curriculum in Nigeria. Specifically the paper

will answer the following questions:

- a) What is the current status of literacy and communication media (TV, radio, telephone and newspaper) availability as information technology and globalization indices in selected African and non-African countries?
- b) Is there any significant difference between the African and non-African countries in the status of literacy and media availability as information technology and globalization indices?
- c) What curricular, socio-cultural and instructional lessons from the findings are applicable to the future of teacher education in Nigeria?

METHODOLOGY

This study adopted the library survey strategy based on the *World almanac and book of facts (1998) ISBN 0-88687-820-9*. The section on *Nations of the world* as shown on pages 737-848 provided the major data source. The data were collected through a simple 3-item proforma consisting of country, literacy rate and media availability as listed out for each country of the world. Media availability presupposes their use and reflects information technology level as an important aspect of globalization. Media availability and use are also imperative for functional meaningful education, let alone teacher education curriculum.

The sample: Sixty-two (31 African and 31 non-African) countries were randomly sampled to reflect the various continents of the world, bearing in mind their economic developmental levels. The sample distribution shows 31 countries from Africa, three from North America, eight each from South America and Asia, two from Australasia and ten from Europe.

Statistical Framework

Simple percentages, means, standard deviations and independent t-test were necessary for the data analysis. The p-value was fixed at 0.05 level of significance.

FINDINGS AND DISCUSSION:

Each study question as earlier presented provided the guidelines for discussion of the findings.

- a) *What is the current status of literacy rate and communication media (TV, radio, telephone and newspaper) availability as information technology and globalization indices in the selected countries?*

The data for responding to this question were derived from the source earlier specified. They were presented as Table 1 and discussed below. It is

important to emphasize that literacy rate is a reflection of capacity to benefit from information technology while the communication media constitute its carriers.

Available data indicate that Zimbabwe and South Africa have the highest African mean literacy rate of 85% and 82% respectively. Niger has the lowest African literacy rate of 14%. Nigeria has only 57% that is about the African average. Nearly 50% of the 31 randomly sampled African countries have literacy rate below the African average of 56.48%. The non-African average is 90%, which not a single African country has achieved. The mean African literacy rate is observed to be less than the global average which is 70% (*The World almanac and book of facts*, 1998).

As related to communication media, the conveyor of information technology, focus was on level of availability and functionality of the television, radio and telephone per capita and newspaper circulation expressed per thousand. Available data indicate that Mali has one of the least exposure: one television set is available for 769 persons and one telephone for 573. In Chad and Zaire the situation is also very poor where one television set is available for 714 and 667 respectively.

The telephone availability is 1:1,219 and 1:1,209 for Zaire and Chad respectively. All these are against the African average of 1:165, 1:10, 1:300 and 22 per thousand for the TV, Radio, Telephone and newspaper circulation respectively as shown on Table 2.

Compared with the non-African countries the mean media availability ratio was observed to be 1:7, 1:3, 1:12 and 194 per thousand for the TV, radio, telephone and newspaper circulation respectively as shown on Table 2.

All these imply that the present low status of literacy leaves most African countries marginalized because literacy rate is an important index of information technology and globalization process. Consequently, most African countries including Nigeria lack integration into the global economy, suffer major economic dislocation and lack financial power.

(b) *Is there any significant difference between the African and the non-African countries in the status of literacy and communication media availability as information technology and globalization indices?*

Independent t-test was run in the relevant variables based on data on table 1. The results expressed on table are discussed below.

From Table 3 it can be deduced that significant differences exist between the sampled African and non-African countries in terms of literacy rate and the status of communication media availability. This difference is in favour of the non-African countries. The findings re-emphasize that information technology is in a very low status in African countries. For example, Table 2 shows that one television, one radio and one telephone are available for 165, 10, 300 Africans respectively as against one each for 7, 3, and 12 non-

TABLE 1

LITERACY RATE AND COMMUNICATION MEDIA FOR SELECTED AFRICAN AND NON-AFRICAN COUNTRIES

S/N	African Countries	Average Literacy Rates %	T.V Radio 1:	Radio Radio 1:	Telephone Radio 1	Newspaper per 1000
1.	Algeria	62	13	4	24	46
2.	Angola	40	152	33	180	11
3.	Benin	37	182	11	182	2
4.	Cameroon	63	42	7	224	NA
5.	Cape Verde	72	313	7	18	NA
6.	Central African Republic	60	204	14	428	NA
7.	Chad	48	714	4	1,209	NA
8.	Congo Republic	75	143	9	124	NA
9.	Cote d' Ivore	40	17	7	123	NA
10.	Democratic Republic of Congo (Zaire)	77	667	10	1,219	3
11.	Egypt	51	9	3	22	64
12.	Equatorial Guinea	79	104	2	159	NA
13.	Ethiopia	36	233	55	401	NA
14.	Gabon	63	26	7	41	NA
15.	Ghana	64	11	4	285	18
16.	Guinea-Bissau	55	NA	25	114	NA
17.	Kenya	78	91	1	111	NA
18.	Liberia	38	53	4	625	14
19.	Libya	76	10	4	17	13
20.	Mali	31	769	23	573	NA
21.	Mauritania	38	40	7	246	NA
22.	Niger	14	204	16	677	NA
23.	Nigeria	57	26	5	275	18
24.	Rwanda	61	NA	15	530	NA
25.	South Africa	82	10	3	11	33
26.	Sudan	46	13	4	376	23
27.	Tanzania	68	476	38	328	NA
28.	The Gambia	39	NA	6	58	NA
29.	Togo	52	133	5	191	NA
30.	Uganda	62	91	9	440	NA
31.	Zimbabwe	85	37	12	71	18

	Non-African Countries					
1.	Argentina	96	5	2	6	138
2.	Australia	100	2	0.8	2	258
3.	Bahamas	96	4	1	3	129
4.	Boliva	83	9	2	21	69
5.	Brazil	83	5	3	13	45
6.	Bulgaria	98	3	2	14	209
7.	Canada	97	2	1	2	189
8.	Chile	95	5	3	8	100
9.	China	82	6	6	30	23
10.	Colombia	91	9	6	10	64
11.	Finland	100	2	1	2	473
12.	France	99	2	1	2	237
13.	Germany	100	2	1	2	317
14.	India	52	25	12	78	21
15.	Iran	72	16	4	13	18
16.	Iraq	58	13	5	30	27
17.	Israel	95	4	2	3	281
18.	Italy	97	2	1	2	105
19.	Japan	100	1	1	2	576
20.	Mexico	90	6	4	10	113
21.	New Zealand	100	2	1	2	297
22.	Norway	100	2	1	2	607
23.	Pakistan	38	53	11	61	21
24.	Peru	89	10	4	21	86
25.	Portugal	90	3	4	3	41
26.	Switzerland	100	2	1	2	409
27.	Taiwan	94	3	2	2	NA
28.	United Kingdom	100	2	0.7	2	351
29.	Uruguay	97	4	2	5	237
30.	USA	96	1	5	1	228
31.	Venezuela	91	6	2	9	215

Africans respectively. Newspaper circulation is only 22 for every 1000 Africans but 194 for every 1000 non- Africans. Further analysis indicates that only eight (25. 8%) of the African countries meet the world average literacy rate. The implication is that as much as about 75% of the Africans are subjected themselves to information blackout since they cannot read. Furthermore abject penury, underdevelopment, marginalization, lack of integration, economic dislocation and powerlessness that are antithetical to enlightened globalization but facilitators of imperialism have become engrained in Africa. The liberating power of information technology must therefore be recruited and adapted to redeem the Africans already subjugated by poverty and underdevelopment arising from both print and computer illiteracy, inadequate information availability and poor information management skills.

c) *What are the lessons for teacher education in Nigeria?*

Anya (1999) clearly shows that poverty and underdevelopment are a function of level and quality of education. It is also important to emphasize that the development of any nation cannot be faster than her educational progress. Rapid educational progress depends upon many factors including the quality, competence and commitment level of the teachers, the teacher education curriculum content, available facilities, teacher welfare, along with political will, to mention a few.

Among other lessons for teacher education in Nigerian the following important.

i) *Information Technology* has much to offer to teacher education programmes in Nigeria; the educational technologist must therefore play the frontline role in the identification, recruitment and adaptation of the power and benefits of information technology to the advantage of Nigerian educational system. Information management strategy should be adequately reflected in the content of information technology programmes that should form part of teacher education curricula.

ii) *Computer Literacy* must be made compulsory in teacher education programmes at all levels. Inyang-Abia (1991) predicted that by 2005 computer literacy would be highly desirable in schools. Within the next five years it should be a *basic requirement for teacher recruitment*. This presupposes the need to equip teacher education. Teacher educators themselves must be computer literate. Without computer literacy it may be difficult for Nigeria to join the present match to globalization.

iii) *Education Policies* must be reviewed to make computer literacy part of the national curriculum for the Universal Basic Education. Information technology is based on computer literacy and the communication media.

iv) *Technology Education* must re-emphasize computer

Table 2
Comparative mean communication media availability index
between African and non-African countries. N=62

Media	African Countries	Non-African Countries
TV	1:165	1:7
Radio	1:10	1:3
Telephone	1:300	1:12
Newspaper	22 per 1,000	194 per 1,000

Table 3
Independent t-test analysis of the status of literacy and communication
media availability between the African and non-African, countries. N=62

Variables	Group	N	\bar{x}	S	t-cal	df	t-crit
Literacy Rate	African	31	56.48	17.59	7.953*	60	1.671
	Non Africa	31	89.60	15.19			
TV**	African	28	164.75	223.00	3.734*	57	1.673
	Non-African	31	6.80	9.97			
Radio	African	31	10.12	8.77	4.428*	60	1.671
	Non-African	31	2.80	2.79			
Telephone	African	31	299.40	309.60	5.165*	60	1.671
	Non-African	31	11.74	17.50			
Newspaper**	African	12	21.90	17.93	5.820*	41	1.684
	Non-African	30	193.45	161.57			

engineering and the latest developments in communication media.

- v) *Reduction in Telephone Tariffs* is a basic requirement if the benefits of information technology must be derived. Since the telephone along with the computers constitute the fastest current means of communication then teacher education can benefit immensely in terms of distance education.
- vi) *Distance Education* must be re-emphasized particularly for teacher education. Free telephone lines should be made available for educational uses. Media-based distance education models should be adopted in Nigeria following the Open University standards with little or no modification. This model emphasizes the use of television, radio, telephone and the prints with about 20% face-to-face interaction.
- vii) *Literacy Improvement* schemes should be stepped up through the double-pronged approach of adult and non-formal education and the Universal Basic Education so that those who miss out of the design for the youths can benefit from that for the adult.

SUMMARY AND CONCLUSION

Globalization has come to stay. Through the microchips, television, internet and the telephone it has directly affected life and living in Nigeria. Information technology can enable Nigerians to greatly benefit from the gains of globalization. Whether we like it not, we are living in a world where information technology has arrived to modify our culture. Any country that does not hook up to the demands of globalization risks the chances of marginalization, economic dislocation and lack of financial empowerment. Teacher education has enormous capacity to shape up the mind, skills and attitude of Nigerians to benefit fully from the wind of globalization by refocusing greater attention and capitalizing on the wonderful benefits of information technology, a phenomenon driven by literacy and communication media.

REFERENCE

- Anya, O. A (1999). Environment, poverty and sustainable development. *The Guardian*. Tuesday September 7, 68.
- Essang, S. M. (2001) *International economics*. Lagos: Stirling-Horden Publishers (Nig.) Ltd.

- Inyang-Abia, M. E. (1991). Crystal-gazing the 6-3-3-4 system implication for resources development. *Journal of Nigeria association for educational media and technology* 3 (1), 1-21.
- IUCN/UNEP/WWF (1991) *Caring for the earth: A strategy for sustainable living* Gland:IUCN/UNEP/WWF
- Lacayo, R. (1999) Rage against the machine. *Time*. 154 (24), 28-33.
- Madunagu, E. (1999a). Globalization and its victims. *The Guardian*. Monday, July 26, 49.
- Madunagu, E. (1999b). Ideology and politics of globalism. *The Guardian*, Thursday, October 19, 61.
- Madunagu, E. (2000). The global dictatorship. *The Guardian*. Thursday, October 19, 61
- Mc Elvane, R. (2000). A regulator's guide to building global information community. *The Guardian*. Tuesday, July 11, 43.
- McLuhan M. & Fiore, O. (1970). *Medium is the message*. New York: Bantham Books, Inc.
- McLuhan, M. (1964). *Understanding media: The extension of man*. New York: McGraw Hill.
- Rodney, W. (1972). *How Europe underdeveloped Africa*. London: Bogle-L'Ouverture Publications.
- Shagbon, J. (1999) Globalization and the prospect of small and medium scale enterprises. *The Guardian on Sunday*. June 13, 29.
- World Almanac (1998). *The world almanac and book of facts*. New Jersey: World Almanac Books.