

## **A Nexus between Higher Education, Security Challenges and Sustainable Development in Nigeria**

Christina T. Audu, Ajibola A. Lukman, Muhammed Nyah N.

*Department of Integrated Science, Department of Educational Foundations & Department of ECCE, C.O.E., P.M.B. 1021, Zing, Taraba State.*

---

**Abstract:** *This paper examines the missing link between higher education, security challenges and sustainable development in Nigeria. It could be said that the higher education could be intertwined and integrated in the issues surrounding security challenges and the plight of sustainable development in Nigeria. The paper avers that higher education is central to shaping attitudes and social interaction and both are critical to addressing insecurity challenges and sustainable development. It could be affirmed that government alone cannot provide sustainable development. The paper emphasizes developed economies where higher education is an engine for development in which individuals, religious groups, communities, and businesses ought to partake in providing education that leverages development. To this end, the paper submits that higher education could be a functional tool in curbing insecurity challenges and ensuring sustainable development in Nigeria provided the curriculum is properly implemented and monitored towards blending and interfacing local wisdom with global knowledge, values and skills, which will develop the student to become a citizen of Nigeria as well as a citizen of the global village.*

**Keywords:** *Higher Education, Contemporary Challenges, Nigeria Education, Sustainable Development.*

---

### **I. Introduction**

The history of Nigeria runs parallel to the history of Nigerian education, because of the realization by the early nationalists that the country could not develop without a proper grounding in a national education system that can guarantee the production of the desired high quality workforce without which national development is impossible. Odele (2006) opined that education is the major agency for both personal and national socio-economic development. Investments in human capital development plays a critical role in long-term productivity growth at both micro and macro levels.

The state of education in Nigeria continues to dominate our national discourse at all levels. The implication of the declining education quality at all levels has far-reaching implications on our moral, civic, cultural, and economic sustainability. It is therefore, imperative for education at various levels to prepare future leaders and develop the high level technical capacities needed for economic growth and development (Osokoya, 2008). The utmost importance attached to education in Nigeria was clearly underscored in the National Policy on Education (FRN, 2004). The Federal Republic of Nigeria, in this policy adopted education as an instrument “par excellence” for effecting national development.

Higher education or continuing education plays a necessary and an increasingly important role in human, social, and economic development (Escrigas, 2008). The role of Higher Education Institutes (HEIs) in development is not only vital, but it is also complex, fluid and dynamic. HEIs exhibit numerous capabilities and scope, and can affect processes of development both directly and indirectly through teaching, research and service. Furthermore, HEIs operate within different contexts in which they can play different roles towards societal development. In this context, higher education institutes include a wide variety of universities, vocational and technical colleges, amongst other formal, non-formal, and informal institutions.

However, security challenges operate a revolving-door policy these days. As soon as one goes away, another turns up. Since Nigeria has returned to democratic system of government, the security situation in the country deteriorated drastically. Arguably, considerable progress has been achieved in the areas of freedom of speech and liberty, but series of resource based conflict (e.g., Niger Delta militant, ethno-religious crisis, Jos crisis and communal conflicts) persisted. The climax of these security threats is the insurgence of a group called Boko Haram sect in the Northern Nigeria. Thus, a considerable effort to end the violence and build a sustainable peace to steer the economy to sustainability seems far from realization. The basic question is why development has continued to elude Nigeria in spite of numerous amounts of human and material resources?

It is important to note that the concept of development is used openly as well as in mainstream literature and development projects. Development is not confined to macroeconomic forces of growth, but also focuses on the improvement of the individual and collective human condition, increasing choices and participation, equality, standard of living and well-being, the environment and sustainability, and on another level, development as a human and ways of being.

Obanya (2002) and UNESCO (2005) affirmed that development is not a stage to be attained or a goal to aim for. Rather, it is a constant process of improvement in which education, research, and service play prominent roles in creating positive change in the self, the people around us, our communities, and the institutions and structures that support us. At this juncture, development and higher education in this context aimed at empowerment and raising the quality of life where people can continue to develop their knowledge and skills. It is about learning to know, learning to do, learning to be, and learning to live together (Faure, 1972). Learning, research and service at HEIs are often at the forefront of knowledge generation and dissemination and are thus important contributors to forces of social change.

From its earliest days, the higher education in Nigeria had a clear mandate to contribute to national development by being attentive to Nigerian problems. The relationship between higher education and solving national problems was very clear. According to Olaitan (2007),

“The immediate problem that confronts Nigeria today is that of relating her educational system to her own environment. No education outside Nigeria can help accomplish this; it must be done by higher institution located within Nigeria and not tied to the apron strings of a foreign institution”.

### **Conceptual Clarification: Higher Education- Nigerian Perspective**

In Nigeria, the benefits of education for development and social change have long been contemplated while the contemporary study of the role of higher education in developing countries emerged alongside post-colonial discourses and modernisation theories on how best to modernise societies. In most parts of the developing world, education in general was seen as playing an indispensable role in national economic development and cultivating the necessary civic values for societal and political participation. The object of analysis usually concentrated on the way in which governments could utilise national higher education system to train people in the skills necessary for economic growth (Chapman, 2002).

Since 1980s, higher education was gradually considered less important in the quest for economic growth and social change. This decline was due to three trends. First, HEIs failed to produce the results that were expected of them in Nigeria as a developing world. Second, many HEIs were not concerned with local, regional, or national issues and problems. The content and style of education was often divorced from the reality that surrounded them and sometimes exacerbated inequalities. Lastly, due to a highly economic view of development and the resulting methods of measuring the impact of HEIs, tertiary education was considered to have a “low rate of return” and funding and attention were allocated to primary and secondary education (Chapman, 2002). This low point in the focus on the role of higher education in development facilitated the degradation of HEIs in many parts of the developing world like Nigeria.

More recently, the social and economic role of HEIs in national development has regained prominence in the development agenda. Additionally, the analysis of this connection has expanded to incorporate new elements. For instance, the UN views higher education as integral to all aspects of development such as environmental awareness and sustainability, post-conflict resolution, poverty alleviation, cultivating values such as human rights, health care issues, and cultural preservation or change.

In the light of the above, the Nigerian government contends that HEIs cultivate certain values and understanding of issues that facilitate both economic and social development. Furthermore, the scope of the effects of HEIs is being reconsidered. Society and HEIs are widely discussed as being mutually constitutive, that society and HEIs co-evolve (Zaglul & Juma, 2006). HEIs therefore, are considered to be the progenitors of social change through the generation and dissemination of knowledge and new ideas especially in the context of globalisation (Taylor, 2008).

### **Contemporary Security Challenges and Sustainable Development**

The concept of security is not alien and has been central even in the primitive societies. The need for security necessitated the social contract in which people willingly surrendered their rights to an organ (government) who oversees the survival of all. For decades, issues relating to security tend to occupy the centre stage in the development discourse. With the end of the cold war, there have been attempts to shift conceptualization of security from a state-centric perspective to a broader view that places premium on individuals, in which human security that embodies elements of national security, human rights and national development remain major barometer for explaining the concept. At the heart of this debate there have been attempts to deepen and widen the concept of security from the level of the states to societies and individuals, and from military to non-military issues (Krahmann, 2003).

Security is considered as any mechanism deliberately fashioned to alleviate the most serious and immediate threats that prevent people from pursuing their cherished values. In Nigeria, the achievement of desired level of internal security particularly from 2007 -2013 was elusive. Perhaps a critical look at table 1 below helps in the concise understanding of security threats in Nigeria from 2007-2011.

**Table 1: Contemporary security threats to Nigeria from 2007-2011 and zone they emanated**

S/N	SECURITY THREAT	YEAR	POLITICAL ZONE
1.	Niger Delta	1999-2007	South-South
2.	Jos Crisis	1999-till date	North-Central
3.	Kidnapping, ritual killing and armed robbery	2007-2010	South-East
4.	Boko Haram Insurgency	2009-till date	North-East, North-Central and North-West

Source: Nwagboso's field survey, 2011

From the above table, some scholars seem to place emphasis on absence of threat to acquire values or tendencies that would undermine national cohesion and peace as criteria for determining what security connotes (David, 2006). Security is the condition or feeling of safety from harm or danger, the defence, protection and the absence of threats to acquire values (Igbuzor, 2011). Security in an objective sense, measures the absence of threats to acquire values, in subjective sense, the absence of fear that such values will be attacked (Wolfers, 1962).

In spite of its conceptual complexities, the understanding of the term shows that security is vital for national cohesion, peace and sustainable development. Thus, security has to do with freedom from danger or with threats to a nation's ability to protect and develop itself, promote its cherished values and legitimate interests and enhance the well being of its people. For instance, Nigeria has been facing internal insecurity which is said to be the absence of those tendencies which could undermine internal cohesion and the cooperate existence of the nation and its ability to maintain its vital institutions for the promotion of its core values and socio-political and economic objectives, as well as meet the legitimate aspirations of the people.

Hence, internal security implies freedom from danger to life and prosperity (Oche, 2001). It could also mean the search to avoid, prevent, reduce, or resolve violent conflict- whether the threat originates from other states, non-state actors, or structural socio-economic conditions (Stan, 2004). It is apparent from the foregoing that national security is a desideratum, *sine qua non* for economic growth and development of any country (Oladeji & Folorunso 2007). Security seems to be critical in the life of any nation as it attracts and propels development.

Ake (2010) argues that the ideology of development itself became a problem for development because of the conflict between its manifest and latent functions. At the time when development seems to be conceived as the outcome of economic growth, many theorists as Rostow (1952), Harrod and Domar (1957) among others proposed models of development, generally identifying structural changes, savings and investments as the source of economic development and growth (Otto & Ukpere, 2012). The assumption was that economic growth would generate fund for investment and infrastructural development that would guarantee better living condition of people. Thus, at the tail end of 1970s it appears that economic growth in most developing and underdeveloped societies especially in the Latin America and Africa do not provide corresponding social goods. Evidently, economic growth could not sufficiently address the spate of unemployment, poverty, disease, hunger, illiteracy and ever increasing crimes and wars. Thus, post development thought has called for a return to the stress on people as both the measures and determinants of development (Rapley, 2007).

This seems to have necessitated the new thinking and redefinition of development from economic growth centred perspective to human centred approach. Development is now seen as a transformation of the society, a move from the old ways of thinking, and old form of social and economic organization to new ones (Afeikhena, 2004). As Chandler (2007) rightly observed that development has been redefined, taking the emphasis away from traditional economic indicators of GDP and trade and broadening out the concept to take in psychological and material factors related to the measurement of human well-being.

Specifically, Rodney (1972), Nnoli (1981), Ake (2010) have argued that development is multifaceted and indeed centered on man. For Nnoli (1981) development could be seen as a dialectical phenomenon in which the individual and the society interact with their physical, biological and inter human environments transforming them for own betterment and that of humanity at large and being transformed in the process. This view or conception of development according to Okolie (2009) improves man's potentials and capacities and subsequently eliminates and/or reduces poverty, penury, inequality, unemployment and generally enhances the condition for human existence and self-reproduction. Development therefore, could be construed as the process of empowering people to maximise their potentials and the ability to exploit nature to meet daily human needs. It can also be seen as a process by which quality of human lives and capacity to surmount daily needs are considerably improved.

Since the end of the Cold War, security and development concerns have been increasingly interlinked (Chandler, 2007). In fact, no sustainable development can be achieved in the atmosphere of conflicts, crisis and

war and Nigeria is not an exception. Understandably, security and development are two different concepts but tend to affect each other, making both concepts inseparable. This relationship has recently triggered debates on security – development nexus (Chandler, 2007; Stan, 2004).

### **Theoretical Framework**

This study is predicated on the theory of Human Development Paradigm (HDP) which emphasized the view that each human being is born with a potential and has the right to develop it. The HDP also proposes that the concept of development should be analyzed as the process of broadening the scope of people's freedom so they can develop their potentials and, thus, be able to make choices (UNESCO, 2005). It could be said that the theory of Human Development Paradigm (HDP) and Personal and Social Development (PSD) are interconnected because they both appreciate commitment to the empowerment and self realisation of individuals and their participatory role in development.

It is on this basis, this study elaborates on how tertiary education, through numerous programmes, teaching, research and service can serve as a base for community change. Taylor and Fransman (2004) argue that participatory educational approaches benefit development objectives. Stating further that a critical systemic discourse achieved in part by establishing the bridge between theory and practice through a process of critical reflection and action, is a challenge for higher education, but by providing space and an enabling environment in which teaching and research become integral and valued through participatory processes, and perceiving participation itself as a desirable outcome in order to challenge established power relations, higher institutions have the real potential to become the key actors in promoting not only transformative learning at an individual level, but also wider social, institutional and discursive change.

In this sense, the one-size-fits-all approach to higher education is not effective. Higher institutions need to be more adaptive and responsive to their local communities and students, and provide practical educational programmes aimed at human, social and economic development. According to Zaglul and Juma (2006); Sherrard (2007), higher institution success in its development objectives depends mostly on institutional design, management and curriculum reform. As such, higher education for development needs to be open and transparent as to what it teaches and how it should be shaped by local requirements or desires and malleable to surrounding pressures, and should be a transformative service to the people it teaches and represents.

Considering the central focus of HDP theory, higher education should be a proactive organisation in the development of individual capacities as well as a locus for regional or national human, social and economic development. Bawden (2008) opined that identification of the role that an institution has in development is crucial in enhancing its performance as an agent for development, and one that many higher institutions are curiously reluctant to promote. Development-oriented institutions and programmes intentionally play a *proactive* role. Not only do they acknowledge the academic and social dedication to the intellectual growth and capacity development of their students, but also link this to local and national development goals through its mission, educational content, research and service. This may seem self-evident, but many higher institutions in Nigeria are not driven by such objectives.

### **Synergy between Sustainable Development and Higher Education**

Sustainability Education (SE), Education for Sustainability (EfS), and Education for Sustainable Development (ESD) are interchangeable terms describing the practice of teaching for sustainability. ESD as a term identified education as an essential tool for achieving sustainable development and highlighted areas of action for education (Huckle and Sterling, 2006). Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable development is about a global responsibility and solidarity between generations, between women and men and between different cultures and countries. It is about safeguarding and efficient use of existing natural resources. Investment in management of human, social and physiological resources is also crucial parts of sustainable development.

Education is critical for promoting sustainable development and improving the capacity of the people to address environment and development issues. Both formal and non-formal educations are indispensable to changing people's attitudes so that they have the capacity to assess and address their sustainable development concerns. It is also critical for achieving environmental and ethical awareness, values and attitudes, skills and behaviour consistent with sustainable development and for effective public participation in decision making. Olaitan (2007) identified four pillars of the higher education curriculum that central to sustainable development as entrepreneurship, environmental and social consciousness, ethical values, and scientific and technical knowledge.

There are many types of institutions and many different ways in which higher institution can play a role in development. While some conduct important research at an international level in technology and sciences, which can have beneficial impacts for the poor and for national economic growth, others operate at a more

community level focused directly on learning and participation for sustainable livelihoods and poverty alleviation through continued education and training or institutes while others can be universities that specialise in specific areas of research and instruction. At this juncture, it could be affirmed that higher education can aim at promoting development on different levels (e.g. national, local or individual) as well as different types of development (e.g. economic, social, political, environmental, agricultural or rural, sustainable human, or individual development) amongst other possibilities.

One fact remains that higher institution should have innovative programmes designed specifically to promote or encourage individual transformations, increase participation in processes of development and social change, to create economic growth, and to improve livelihoods. The purpose is to empower the student whilst simultaneously impacting local communities through implementation of service, action and community-based research and involvement in development projects. These programmes link the higher institutions to communities and provide participatory methods of learning that not only represent effective ways of learning, but also help direct research and implement university service projects (Taylor & Fransman 2004).

It is therefore imperative for a higher institution of learning to include creativity, critical enquiry and entrepreneurship as important aspects of education for which alternative and experiential learning should play a central role (Taylor & Fransman 2004). There is a very clear call for a more general education to “learn how to learn” and use knowledge effectively in various situations. International education is an important aspect in learning about the world and how to function in it, promoting global citizenship (Llanes-Ortiz, 2007). Thus, internationalisation of higher education is perceived as an inevitable consequence of open policies.

Taylor and Fransman (2004) argue that while some higher institutions have a clear role in building the capacity of individuals and organisations to undertake key development initiatives and to practice participation, they are often restricted by internal and external constraints. Perceptions of higher institutions as experiencing hierarchical power systems, structural rigidities, traditional elitism, and research which is disassociated from local realities imply that a paradigm shift in the learning and research approaches of higher education is greatly needed.

Having said that, the synergy between higher education and national development could be viewed in many ways either in the qualities or issues in the provision of education or teaching, research and its application, and engagement in civil society that should be considered when examining the role that a higher institution or its graduates can play in development. Higher institutions have a concerted effort in building learner towards maintaining peace and sustaining development in Nigeria in many ways such as;

- Maintaining academic values (the respect and quest for truth)
- Incorporating indigenous and alternative knowledge and ways of being. Such as the concept of the “Multiversity” (Tandon, 2008).
- Getting the right people, the right education, to help fulfil individual potentials.
- Relevance of education, research and service to students and local communities and around the world.
- Innovation and exploring new forms of teaching, new avenues of research and possible methods or tools for development and social change.
- Promoting access, empowerment of women, indigenous and marginalised and poorer people.

The above-mentioned points are necessary for social cohesion, national unity and sustainable development in the third world countries.

### **Recommendations**

- a. This paper recommends a functional higher education which trains the individual for a better appreciation of his own cultural traditions whilst at the same time equipping him with the ability to absorb new ideas, new information and new data for resolving the constantly changing problems of his environment. This will promote understanding of cultural diversity and multi-ethnicity that permeates Nigeria as a nation.
- b. A higher education that trains the individual to relate to and interact meaningfully with other individuals in the society and to appreciate the importance of effective organization for human progress. This gives meaning to indivisibility of our social entity as a nation.
- c. A functional higher education should develop the creative ability of individuals especially in the cultural and technological realms. This is the required skill for 21<sup>st</sup> century environment.
- d. A functional higher education must foster in the individual those values which make for good citizenship (such as; honesty, selflessness, tolerance, dedication, hard work and personal integrity) all of which provide the rich soil from which good leadership is spawned. This calls for attitudinal change among citizens and subsequently addresses corruption syndrome in our land.
- e. A functional higher education ought to promote the culture of productivity by enabling individual to discover the creative genius in him and apply it to the improvement of the existing skill and technique of performing specific tasks thereby increasing the efficiency of his personal societal efforts. By so doing, every Nigerian graduate will contribute in large quantity to the development of our nation.

## II. Conclusion

From the foregoing, it is obvious that higher education is increasingly recognised as playing a central role in human, social and economic development. Moreover, in contemporary 'knowledge societies' and in the face of pressures and changes from globalisation, this role is increasingly important, yet ever more complex. It could be said that higher institutions serve as agents in development in multiple ways depending on their capabilities, objectives and the contexts in which they operate. Therefore, higher institutions have an institutional commitment to development in one way or another as part of its missions in teaching, research and service. In turn, the educational programmes and curricula, action research and university outreach projects reflect this commitment and incorporate methods designed to improve the impact of the institution and its graduates on larger processes of development and social change.

Finally, the paper argued that educational approaches that foster the appropriate skills and values in students are needed so that graduates become productive and interactive members of society. For example, according to Taylor and Fransman (2004), participatory approaches can strengthen students' capacity to act as agents of change. There are many educational or pedagogical approaches, each with specific goals in mind, such as teaching in a way that incorporates conflict resolution, changing societal power relations, amongst many other possibilities (Taylor, 2008).

## References

- [1]. Afeikhena, J. (2004), *Governance and the Development Crisis in Agbaje A. B., Diamond L., Onwudiwe E., Nigeria's Struggle for Democracy and Governance*. Ibadan: Ibadan University Press.
- [2]. Ake, C. (2010), *Democracy and Development in Africa*. Ibadan: SpectrumBooks Limited
- [3]. Bawden, R. (2008), "The Educative Purpose of Higher Education for Human and Social Development in the Context of Globalisation" GUNI (eds.) *Higher Education in the World 3* Basingstoke: Palgrave Macmillan.
- [4]. Chandler, D. (2007), *The Security-Development Nexus and the Rise of Anti-Foreign Policy in Journal of International Relations and Development Vol. 10, 362–386*
- [5]. Chapman, D. and Austin, A. (eds.) (2002), *Higher Education in the Developing World: Changing Contexts and Institutional Responses*. Westport, Connecticut: Greenwood Press.
- [6]. Davies, J. C. (2006), "Towards a Theory of Revolution". *American Sociological Review*,(27), 5 - 19
- [7]. Escrigas, C. (2008), "Forward" in GUNI *Higher Education in the World 3*. Palgrave. Macmillan: London.
- [8]. Faure, E. (ed.) (1972), *Learning to Be: The World of Education Today and Tomorrow*. Report by the International Commission on the Development of Education, UNESCO, Paris.
- [9]. Federal Republic of Nigeria (2004), *National Policy on Education (4th ed)* Yaba, Lagos: NERDC Press.
- [10]. Harrod, R.F. and Domar, E. (1957), *Essays on the Theory of Economic Growth*. Oxford: University Press London.
- [11]. Huckle, J. and Sterling, S.R. (2006), *Education for Sustainability*. Earthscan. p. 139.
- [12]. Igbuzor, O. (2011), *Peace and Security Education: A Critical Factor for Sustainable Peace and National Development*. *International Journal of Peace and Development Studies Vol. 2 No. 1*.
- [13]. Oche, O. (2001), "Democratization and the Management of African Security" in Akindele, R. and Ate, B. (eds) *Nigerian Journal of International Affairs*, vol.13, No.1, Lagos, NIIA.
- [14]. Krahnmann, E. (2003), *Conceptualizing Security Governance*. *Journal of the Nordic International Studies Association Vol. 38 No. 1*.
- [15]. Llanes-Ortiz, P. (2007), "Peripheries and Centres: Research Universities in Developing Countries" *Higher Education Management and Policy Vol. 19, No. 2*
- [16]. Nnoli, O. (1981), *Path to Nigerian Development*. Darkar: CODESRIA Obanya, P. (2002), *Development-Oriented Higher Education Institute of Education at Olabisi Onabanjo University, Nigeria Open Lecture Series*.
- [17]. Odele, O.S. (2006). Parents' and teachers' perception of selection as a factor of quality in the curriculum process in Nigeria. *International Education Journal*, 6(1) 96–103.
- [18]. Okolie, A.M. (2009), "Capitalist Development Strategies and Poverty Alleviation in Africa". *Nigerian Journal of Public Administration and Local Government*, Vol. XIV, Nos. 1 and 2, pp. 54-68.
- [19]. Oladeji, S. I. and Folorunso, B. A. (2007), *The Imperative of National Security and Stability for Development Process in Contemporary Nigeria*. *African Economic and Business review Vol. 5 No. 2*.
- [20]. Olaitan, T. O. (2007), "Shaping Human Development: Which Way Next?" *Third World Quarterly*, Vol. 20, No. 4. Aug. pp. 743-751.
- [21]. Osokoya, A. (2008), "Improving Tertiary Education in Sub-Saharan Africa: Things that Work" *Africa Region Human Development Working Paper Series*, Ghana: World Bank Publication.

- [22]. Otto, G. and Ukpere, W. (2012), National Security and Development in Nigeria. African Journal of Business Management. Vol. 6 No. 23.
- [23]. Rapley, F. (2007), The Role of Universities in the Transformation of Societies: An International Research Project', paper presented at the CHER 15<sup>th</sup> Annual Conference, 5–7 September 2007, Vienna, Austria
- [24]. Rodney, W. (1972), How Europe Underdeveloped Africa. London: Bogle Louverture Publication.
- [25]. Rostow, W. (1952), The Process of Economic Growth. New York; Norton and Co. Inc.
- [26]. Stan, F. (2004), The Security-Development Nexus: Conflict, Peace and Development in the 21st Century. New York: IPA Report
- [27]. Tandon, R. (2008), "Civil Engagement in Higher Education and Its Role in Human and Social Development" GUNI Higher Education in the World 3. Basingstoke Palgrave Macmillan.
- [28]. Taylor, P. and Fransman .J. (2004), "Learning and teaching participation: exploring the role of Tertiary Education Institutions as agents of development and social change" IDS Working Paper 219, March.
- [29]. Taylor, P. (2008), "Higher Education Curricula for Human and Social Development" In GUNI (ed.) Higher Education in the World 3 Basingstoke: Palgrave Macmillan. pp. 89-99
- [30]. UNESCO (2005), "Education for Human Development" Brasília: UNESCO, Ayrton Senna Institute.
- [31]. Wolfers, A. (1962), "National security as an ambiguous symbol" in Wolfers .A. Discord and Collaboration. Essay on International Politics. Baltimore: John Hopkins University Press
- [32]. Zaglul, J. and Sherrard, D. (2006), "Higher Education in Economic Transformation" Int. J. Technology and Globalisation, Vol. 2, Nos. 3/4
- [33]. Zaglul, J. and Calestous, J. (2007), "Universities as agents of Prosperity" on line articles Available at [http://www.bdafrica.com/index.php?option=com\\_content&task=view&id=4047&Itemid=584](http://www.bdafrica.com/index.php?option=com_content&task=view&id=4047&Itemid=584)  
<http://www.unesco.org/education/educprog/brochure/002.html>  
<http://www.unesco.org/iau/>