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RESEARCH FOR HIGHER EDUCATION DEVELOPMENT

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Abstract
The Higher Education sector is composed of all universities; colleges of education and technology and other institutes of post secondary education. It also includes all research institutes, experimental campuses and schools operating under the direct control of, or administered by, or associated with, the higher education establishments. This paper examines the quality of research in developing human resources to facilitate the development of the nation. It discusses the challenges and the role of research and higher education in support of teacher education programmes. It discusses the recent developments of national teacher education programs and related policy processes in international context. It analyses the state-of-art in the interface between teacher education, higher education and teacher policy development. It addresses the issues related to research and education as well as their contribution to teacher education policy development processes. It identifies the key issues and developmental challenges as well as the means and mechanisms to overcome them. It explains how higher education can contribute through research and capacity building to teacher education policy development process in Nigeria. It recommends the future collaboration between the key international institutions and academics.

Keywords: *Higher Institution, Research, Human Resources Policy Development and Implementation*

Introduction

Education is the most important factor of any developed society and instrument of change especially in this fast changing world. The evidence of developed society could be found in thoughts of the founding philosophy and how developed are the teacher education aspects in providing quality teachers for other aspects of education sector to meet the yearning and aspiration of that society. In education sector, teacher education is an aspect of tertiary institutions that is empowered to provide quality education to effect much needed change in our society . In providing such change, research into this aspect of tertiary education should be geared towards national development, since education has become a weapon through which one can rise to prominence, and as well as development any country's citizens. It means then, that the educational practice in any country including Nigeria should depend on sound philosophy and guiding curriculum. The awareness and the demand for philosophy of education upon which Nigeria government fashions the curriculum have made the society to plan for accelerated educational development as well as the expansion of educational opportunities in recent times. The awareness and demand of the philosophy and curriculum by the stakeholders in education (including researchers in higher education for national development) will go a long way to help develop our citizens. Research in higher education for development is the major basis of this paper. However, the authors limit the discussions on Higher Education and the quality of research in developing human resources to facilitate the development of the nation. The challenges and the roles of research and higher education as well as the recent developments of national teacher education programmes and related policy processes in international context are also considered. Inclusive are the state-of-art in the interface between teacher education, higher education and teacher policy development. The issues related to research and education as well as their contributions to teacher education policy development processes is also treated. The key issues and developmental challenges in teacher education as well as the means and mechanisms to overcome them; how higher education can contribute through research and capacity building to teacher education policy development process in Nigeria and the future

collaboration between the key international institutions and academics also form its basis.

Higher Education

Higher Education is any of the various types of education given in postsecondary institutions of learning and usually affording, at the end of a course of study, a named degree, diploma, or certificate of higher studies (FME, 2009). Higher educational institutions include not only universities and colleges, but also various professional schools that provide preparation in such fields as law, theology, medicine, business, music, and art. Higher education also includes teacher-training schools, junior colleges, and institutes of technology (FRN, 2004). The basic entrance requirement for most higher-educational institutions is the completion of secondary education, and the usual entrance age is about 18 years in advanced countries (College University, 2010). Higher education in Nigeria according to Federal Republic Nigeria (FRN) is synonymous with tertiary education. It is the education given to Nigerian citizen after secondary education in universities, colleges of education, polytechnics, monotechnics including those institutions offering correspondence courses (FRN, 2004). In the National Policy on Education (NPE), it is stated that 'the teaching and research functions of higher educational institutions have an important role to play in national development particularly in the development of high-level manpower' (FRN, 2004). Furthermore, universities are one of the best means for developing national consciousness.

In Nigeria, higher education aims at:

- the acquisition, development and inculcation of the proper value orientation for the survival of the individual and society;
- the development of the intellectual capabilities of individuals to understand and appreciate their environments;
- the acquisition of both physical and intellectual skills which will enable individuals to develop into useful members of the community; and
- the acquisition of an objective view of the local and external environments (FRN, 2004)

Any of the formal programmes that have been established for the preparation of teachers at the elementary and secondary school levels is called teacher education. Teacher education is today classified into two stages, viz; pre-service and in-service (FME, 2009). Preservice teacher education includes all the stages of education and training that precede the teacher's entry to paid employment in a school. In-service training is the education and training that the teacher receives after the beginning of his career. The NPE represents the document on which the operations of sound educational practice in Nigeria rest. Teacher Education plays the critical roles of infusing in the individual knowledge; skills, competences and these have spillover effects on the development of the society (Onyenwe (2009). For education to effectively do this, quality teachers must be utilized as they are crucial in the social-economic transformation of the nation. The rationale for the investment in education stems from the fact that the development of human capital which only teacher education can provide is the key determinant of the socioeconomic growth of the nation, one then wonders which other parameter Nigeria needs to achieve this other than unfettered access to quality education and at the same time funding the researches in higher education. Confirming this Onyenwe (2009) adds that the quality and strength of staff are indices of successes and failure of any organization and in education in particular, the quality of teachers is crucial to effectiveness and efficiency. As a matter of fact the quality of education can be determined from the quality of teacher education programme as it is the products of this system (teachers) that interpret and implement policies. It is based on these obvious facts that the philosophy of teacher education in Nigeria is anchored on five value objectives. FRN (2004:39) specifies the objectives of teacher education as follows:

- produce highly motivated, conscientious, and efficient classroom teachers for all levels of our educational system;
- encourage further the spirit of enquiry and creativity in teachers;
- help teacher to fit into social life of the community and the society at large and enhance their commitment to national goals;

- provide teachers with the intellectual and professional background adequate for their assignment and make them adaptable to changing situations;
- enhance teachers' commitment to the teaching profession.

These objectives underlie the calibre of teachers Nigeria wants to drive its education system given to crucial role of teachers in education-led development. The questions are how many researchers have been funded to check the levels of achievement the stated objectives? And to ensure that the desired quality is produced the FRN (2004:40) states that

- Teacher education shall continue to take cognizance of changes in methodology and the curriculum.
- Teachers shall be regularly exposed to innovations in their profession
- In-service training shall be developed as an integral part of teacher education and shall take care of all inadequacies.

The above clearly shows that apart from ensuring that pre-service teacher education programmes produce quality, conscientious and committed teachers, effort will be put in place to ensure that they are kept abreast with innovations in teaching and developments in their subject area.

Even at that, the Federal Government does not rest in its oars as it is not oblivious of the charlatans that parade as teachers in the country's education system as it goes ahead in FRN (2004:39) clearly states that:

- Since no education system may rise above the quality of its teachers, teachers education shall continue to be given major emphasis in all educational planning and development.
- The minimum qualification for entry into the teaching profession shall be the Nigeria Certificate in Education (NCE)

The above decisions stems from the fact that national development is predicated on the quality and strength of teachers that operate the education system. Consequently, the curriculum of teacher education was designed to reflect these needs and expectation of effective and efficient teachers for the Nigerian

education system and hence the four major components which are:

- General Studies (GS); the Use of English, Humanities, science, introduction to computer citizenship, population education etc.
- Foundation studies namely; philosophy, psychology, curriculum, sociology, history of education, administration, educational technology.
- Studies related to the students' intended field in teaching.
- Teaching Practice (Ogbondah, 2007)

An analysis of the above shows that the GS courses are aimed at integrating emergent societal issues in to the curriculum in order to broaden the teacher-trainees knowledge in other relevant areas outside their discipline in order to make them more knowledgeable to teach more effectively, imbue them with confidence so that they will be un-intimidated as they interact with different calibers of people in the society. The foundation courses are core education courses and are made up of the theories and practices of education including microteaching and teaching practice. The objectives are to adequately equip the teacher-trainees with the rudiments of teaching skills, class control and management as well as interpersonal skills. Finally, each teacher-trainee is expected to have an area of specialization and this constitutes his/her teaching subject. However, the depth and breadth of coverage of the programme depends on the type of teacher education programme. Presently, the country has the following types of teacher education or professional training provided they continuously meet the required minimum standards this according to (FRN,2004) includes:

- Colleges of Education;
- Faculties of Education in the Universities;
- Institutes of Education;
- National Teachers Institute;
- Schools of Education in the Polytechnics;
- National Institute for Nigerian Languages;
- National Mathematical Centre

In order to ensure quality in teacher education preparation, there is increased need to prepare teachers (pre-service and in-service) to be proficient in order to function effectively in this modern

society (NCCE, 2002). In order to transform government policy to workable ones, the appropriate commission created for such is the National Commission for Colleges of Education (NCCE). Sub-degree teacher preparation in Nigeria is overseen by the body (NCCE, 2002). NCCE as the general umbrella for teacher preparation sets the minimum standards for the award of NCE teachers for teaching at Primary and Junior Secondary Schools in Nigeria. National Board for Technical Education (NABTEB) and NCCE oversee the teacher preparation for NCE programme being run in the polytechnics. The National University Commission regulates all that go on in the university education system. The researches into this area of higher education to verify the challenges of infrastructures, adequate personnel and academics ratio vis-à-vis students are minimal. The other challenges are in the areas of accreditation of courses and the whole system of teacher preparation. The list of some areas where the authors feel the challenges can be overcome as suggested in this paper are: There should be researches into the rate of teachers produced to cater for teacher education at lower and higher education. There should be studies validating the truth about infrastructures and personnel in schools at all level of educational sector. If there are reports on the inadequacy of infrastructures and personnel, the ways to mend the inadequacies should be devised. Why are higher institutions understaffed? This area too needs collaborative research and all listed areas can be achieved if higher Institutions are funded to do the research. In order to develop and meet international standards there is need to research in Higher Institution for development. The next section describes the quality of research in developing human resources to facilitate development of the nation.

Quality of research in developing human resources to facilitate the development of the nation

Most research and development projects are examples of a project, or one-shot, production system i.e. on family health, HIV, economic growth, appreciating human life and governance (Babalola, 2011). Here, as opposed to the ongoing activity found in batch or continuous systems, resources are brought together for a period of time, focused on a particular task, such as the development of a new product, and then disbanded and reassigned. The management of such projects requires a special

type of organization to administer project resources in an effective manner and maintain clear accountability for the progress of the project. Babalola (2011) notes that research and development received the lowest attention with an allocation of 1.2 % of the total loan received in 1990 from World Bank support for Nigerian higher education. In attempt to have or conduct quality research to develop human resources to facilitate the development of the nation, the higher education requires serious funding. Unfortunately, social benefits of university research have been entirely ignored by the proponents of the rate of return. The present time is a world of knowledge economy, a society where a strong system for research and generation of knowledge is of increasing importance. The well-developed teacher education system is necessary to generate new knowledge and also to engage in scholarly scientific and commerce with other nations. Knowledge can be generated and stored through private means as in commercial investments. The basic research and fundamental knowledge construction require an environment where new findings are widely shared and are available for testing and refinement within an open forum as provided by a university environment.

Nevertheless, open research can be located in national laboratories, government agencies, and private sector research institutes, but universities are the best location for such open research. This is suggested because of interpersonal research practice and the way of topic selection, partnering (national and international) through interdisciplinary engagements, peer review system, presentation (in seminars and classroom teaching) as well as publication of scholarly findings.   In order to achieve quality research in developing human resources, there is need to design teacher education programme to produce highly motivated, conscientious and efficient personnel to handle the higher education aspect of teacher education to achieve such development. There is need to encourage quality research by training teachers to achieve further spirits of enquiry and creativity. To provide personnel at teacher education level with intellectual and professional background adequate for their assignment and make them adaptable to ever changing situations. It is when these are put in place, the facilitation of development of human and knowledge economy can be ensured.

Challenges and the role of research and higher education

The concept and goals of higher education, as perceived by the Government of Federal Republic of Nigeria and the people are provided in the National Policy on Education. Higher Education is defined to embrace all forms of education given to the individual after secondary education or its equivalent from the 6year primary school to the end of the three-year junior secondary school at the formal level. In the non-formal, it includes basic functional literacy and post-literacy programmes planned for children, youths and adults out of school (FRN, 2004). After identifying its ultimate goal to be the eradication of illiteracy within shortest possible time the approaches to its implementation are described (FME, 2009). Achieving quality of basic education according to Federal Government is the responsibility of all and sundry from the Federal Government to the Non-Governmental Organizations and the media down to individuals.

According to the National Policy on Education, access to early childhood and pre-primary education institutions is fairly open though their quality varies unduly. With enthusiasm, certain indicators, of more of promising note, to increase literacy growth are reported. While spelling out overall strategies, some major constraints according to (FME, 2003) are, however, recognized such as:

- poor teacher preparation;
- irregular in-service training and retraining of teaching and non-teaching personnel;
- inadequacy of relevant material guides;
- lack of reliable education date for planning;
- poor funding; and
- inadequate community mobilization and advocacy for basic education
- non-implementation of research reports

There is recognition of the fact that environmental, cultural, occupation and physical peculiarities of certain communities impede their full participation in formal primary education. Equally observed is the inaccessibility of many communities to Adult and Non-Formal Education facilities in spite of the National Non-Literacy campaign of 1982-1992 the recent developments of national teacher education programmes and related policy processes in international context.

Meek, Teicheler, Kearney (2009) notes that over the past decade, new dynamics have emerged in each of the key domains of higher education, research and innovation (HERI), which are the integrated base for the Forum's activities. These include: (i) demand; (ii) diversification of provision; (iii) changing lifelong learning needs; and (iv) growing Communication and Information Technology (CIT) usage and enhanced networking and social engagement, both with the economic sector and with the community at large. In scientific research, the tension between basic and applied research is the core issue, thus linking to the "think global, act local" challenge. This necessitates more flexibly organized research systems, and pragmatic approaches which promote "Big Science" while also nurturing science which serves society in the widest sense. In the innovation field, the dynamic comprises both "research for innovation" and "research on innovation". Partnerships amongst governments, the economic sector and research universities are growing exponentially, so that new knowledge becomes linked to development goals. But innovation often occurs outside academic environments, as a result of inventive thinking and creative experimentation. Indeed, research system experts must understand the critical factors involved in order to advance this process.

The initial impulse for the Forum was the need to understand HERI systems, and potential for system development, in low-income countries; this is not to say though that middle- and high-income countries cannot benefit from the type of research that the Forum generates. While levels of income and affluence may differ, many of the challenges facing HERI are similar in nature (Meek, et al 2009).

As mentioned earlier, the need of low-income countries for higher education and research should no longer be questioned. The question is how to realise our ambitions in these fields. Several issues need to be addressed, such as:

- How to balance investments across various levels of the education system.
- How to balance investments in increased access versus those in improved quality.
- How to differentiate higher education institutions:

- The role of research in universities as opposed to research institutes.
- The optimisation of scarce resources.
- How to invest in basic conditions for research, as opposed to high-profile projects.
- How to balance commissioned research with more open, academic research.
- How to ensure the utilization of research findings and to stimulate innovation.

The balancing of "access" and quality in higher education is a near-universal challenge. In Sweden, one of the countries able to provide solid funding for HERI, the debate on diversification and how to balance quality and coverage has been fierce for decades (Meek, Teicheler, Kearney, 2009). Some wish for a further concentration of research resources to only five universities, while others maintain that research funds should be extended, from the current sixteen, to all thirty-eight institutions for higher learning in the country (Meek, Teicheler, Kearney (2009). The rationales are not only driven by concern for high quality, research-based education, and research recruitment, but also by concern for quality in professional learning, where close relations with social services and industry are highly valued.

While Swedish higher education remains a public service, and is seen as a public good for society-at-large, other countries debate higher education funding as a means of adjusting to market needs and interests. Competition and market-driven supply of education then become engines, seen by many as drivers of quality; others see marketing as a waste of resources, and prefer that all resources be invested in quality enhancement. Private funding is sometimes argued as a necessary complement to limited public funds; Nordic countries, including Sweden, maintain that private funding would undermine the public revenue system and that costs for common goods such as education, research and health care, are to be shared via taxes. The actual outcome and impact of such different strategies is less well understood, and an important area for research.

Other oft-debated issues, also calling for policies and

debated issue in which experiential analysis is needed is the relation of higher education to nation-building and citizenship. The multitude of cross-border educational offerings ignores such ambitions and emphasizes the creation of individual, marketable skills. The notion of the "World-Class University", originally intended to describe a level of quality, tends to disassociate education from its cultural and political context.

UNESCO (2005) notes in the Bologna Process, which aims to create a European Higher Education Area by 2010, and similar efforts at comparability seek to facilitate academic mobility and cross-border education; in other settings this mobility is decried as "brain drain", with its attendant negative connotations. Taken together, these debates and views illustrate the need for research to underpin evidence-based information-sharing and analyses – for which the Forum is well-suited.

Some challenges facing teacher education presently in Nigeria include (but not limited to)

Inadequate personnel to handle some newly introduced courses in the primary and secondary education levels, inadequate professors to handle newly introduced courses at Master and PhD levels, inadequate funding of research works for development, inadequate funding to cater for practical works that will provide adequate training for teacher education, inadequate orientation at teacher preparation on the need for adequate preparation of the pre-service and in-service teachers to value the essence of teacher education.

State-of-art in the interface between teacher education, higher education and teacher policy development

Teacher education is subsumed in higher education as could be found in NPE (FRN, 2004). Numerous studies have found in recent years that significant areas must be addressed if teacher education is to meet the goals identified in the NPE (FME, 2009). These areas include pre-service Teacher (PSTE) recruitment, admissions and graduation requirements which are found to be inadequate. Few incentives exist to attract top talents into teacher education. FME notes that PSTE course in NCE and university undergraduate programmes tend to be insufficient for the demands of a knowledge economy. The following areas were identified to be inadequate for achievement of teacher education objectives.

- Content knowledge in teaching subject in STM is poor
- Teaching/learning materials inadequate
- No skill development in the application of ICT and modern media teaching
- Short period for practical teaching
- No classroom observation prior to Teaching Practice
- Teacher training institutions are with inadequate infrastructure
- Lecture rooms overcrowded
- Insufficient students supports in the areas of scholarship, medical, housing and counselling services
- Lecturers recruitments in the COEs are not rigorous enough
- Lecturers are often inadequately prepared to teach in the areas to which they are assigned
- There is lack of opportunities for continuous professional development for lecturers
- In-Service Teacher Education (ISTE) curriculum and programmes are not addressing the needs of teachers.
- ISTE for basic education teachers consists primarily of programmes to provide for upgrading or certification through distance and sandwich courses
- Funding, monitoring and evaluation in teacher education remain inadequate. Few programmes exist for the professional development of post basic teachers (FME, 2009).

In order to help solve the problems of teacher education in Nigeria, researching in higher education will go a long way to device solution thereby development of right personnel for teacher education job.

Having highlighted the conditions for teacher education in higher education, the need to mention conditions for the success is important. The efforts are underway to improve teacher education policy practice in Nigeria (Okpala, 2011). This new initiative according to (FME, 2009), National Teachers Education Policy (NTEP) takes a forward looking view of emphasising Teacher Education and Teacher Development, instead of the narrower concept of teacher training. Teacher development sees teacher education as a continuum that closely integrates career-long

personal and professional development of the teacher with pre-career education and professional preparation.

However, the NTEP aims to complement efforts in this direction by ensuring that key aspects of quality teacher education are implemented. These include:

- Recruitment of capable candidates
- The training of teachers both in subjects mastery and subject-based methodologies
- The training of teachers in strategies for collaboration, reflection and enforcement of ICT practice and action research
- Literacy in teacher preparation programmes.
- Authentic assessment of teacher learning
- Linking pre-service and in-service teacher education curricular and programmes
- The provision of increased opportunities for teacher training and support of teachers in an ongoing basis, especially at the local or school level.
- Recognition of prior learning or experience in professional development programmes and advancement decisions.
- The creation of opportunities for continuous teacher promotion and recognition.
- The continuous interactive session across board (national and international).
- Encouragement of continuous teacher participation in relevant professional bodies/associations
- Introduction of reward system for hardworking
- improved conditions of service (FME, 2009:4)

It should be noted that teacher education policy will be useful and beneficial if the financing mechanisms exist to ensure the right implementation. This paper calls and suggests more funding for research in higher education for national development.

Research and teacher education policy development processes

NPE is the umbrella policy formulation in Nigeria. FRN (2004) recognising the pivotal role of quality teacher in the provision of quality education at all levels, it means that efforts must be geared towards achieving quality expected by implementing the

policy statement about teacher education. The policy further explains that 'teacher education shall continue to be emphasised in all educational planning and development'. Since no education may rise above the quality of its teachers, policy development and implementation to achieve such statements are important. The collaborative effort of FME and ENHANSE/USAID resulted in the NTEP. It is the product of a series of systematic and participatory policy development processes involving:

- Stakeholders' deliberations on challenges facing teacher education in Nigeria
- Field and desk study of these challenges
- Draft policy ideas shared with the FME, the three COMPASS/USAID States of Nassarawa, Kano and Lagos, international development partners
- The development (based on the above policy ideas) of a Framework for National Strategy on Teacher Quality and Development by the FME
- An early draft examined a teacher education task team at a stakeholders' meeting on 25 July 2007
- A draft policy examined by the reference committee on teacher education of the Joint Consultative Committee on Education (JCCE) on 1st and 2nd August 2007
- Consideration of a revised draft by the National council on Education, which recommend further consultations with stakeholders
- Stakeholders consultations on 26-27 March 2008
- A revised draft represented to JCCE Reference Committee in April 2008
- A revised draft represented to JCCE Plenary Meeting in November, 2008 (FME, 2009:1).

One important highlight of NTEP is the systematic and participatory process of its development. It is believed that this process would enhance government/stakeholder ownership. T he next section describes developmental challenges and mechanisms to overcome the challenges in teacher education programme

Developmental challenges in Teacher Education and mechanisms to overcome them

Experts from low- and middle-income countries active in the UNESCO (2004) Forum for Higher Education, Research and Knowledge point out that the threat, or actual experience, of losing talent and potential (for research, economic wealth and social well-being) might turn out to be a creative starting point for reconsidering and redressing the situation in the home country. Awareness might grow of deterrent societal and financial conditions for research and academic life in the host country (UNESCO (2004). For example, efforts have been made:

- To secure appropriate remuneration which allows scholars to concentrate on research rather than on "moonlighting" in order to make their living
- To establish rewards for research activities and participatory decision-making processes.
- To reduce "red-tape" bureaucracy.
- To strengthen academic freedom as well as freedom of movement and collaboration.
- To address gender parity and encourage respect of young scholars (NCCE, 2008).

These activities could increase the attractiveness of countries that, historically, have been less welcoming for scholars than most economically advanced countries. Consensus emerged that many low- and middle-income countries could do much more to make conditions attractive for their own research talent.

Current issues facing the research function and its environment according to (UNESCO, 2004) include equity; quality; relevance; ownership; and international networking. An ever-growing number of nations of varying size have now given priority to developing their knowledge base through higher education, research and innovation, and to commit the necessary resources to this goal. Success stories are becoming more common in all regions, and they are characterized by specific indicators:

- Innovative policies in higher education and research and in Science, Technology and Innovation (STI).
- A will to improve and profile the necessary infrastructure, including universities.
- Efforts to train and retain and attract highly-skilled human capital (HC).

- Increased levels of investment in research and higher education.

One clear example of this movement is the significant rise in the number of Singapore's Research Scientists and Engineers (RSEs), from 4,329 in 1990 to 11,596 in 2004 (Mouton, 2007: 89). Another is the establishment of formal bodies, such as the Royal Moroccan Academy of Science and Kuwait's Private Universities Council (PUC), to assure an infrastructure for monitoring research and knowledge systems and to help organize national expertise in this field (UNESCO (2004).

The mandate of the UNESCO Forum is to chart these important processes and help promote their replication and adaptation worldwide, in order to render the global knowledge society a more level playing field. Some problems of research environments and scholars' living conditions are similar across low-income countries and might not be taken into sufficient consideration. Professional isolation was named as such an example by an African expert:

> "*Scientific knowledge advances through dialogue and exchange of views. This will not happen if the local scientific community is not large … This means that the scientist will not be able to subject his or her ideas, hypotheses or research results to informal peer review through regular contacts with his or her colleagues. The result is that the capacity of the individual to do research withers away … In fact, escape from isolation is one of the contributory factors to brain drain*" (Massaquoi, 2008: 62).

Experts addressing these issues in the UNESCO Forum called for detailed analyzes in individual countries in order to identify areas of improvement. In one country, the salaries of scientists might be quite low in comparison to salaries in other sectors; in another case, lack of incentives might be more crucial than the level of salaries as such. In some countries, talented women might be severely disadvantaged; in other countries, freedom of creative thought might be missing.

In some countries, improvement could be realized within the universities and research centres without major environmental change. Finally, self-critical analysis might show that poor

management practices and lacking respect for academic creativity discourage high-quality research.

In order to overcome challenges facing teacher education in Nigeria, effort should be made to attract competent people to the teacher education profession with adequate incentives. Admission and graduation requirements are important, this should be reviewed to meet international standard. This would invariably raise a generation of Nigerians who can compete globally. In more concrete terms, this entails broadening and deepening the scope of teacher education curriculum to ensure:

- Lifelong learning skills
- A broad general education
- A sound foundation in specific subject disciplines
- A broad spectrum foundation in education and pedagogy
- A solid grasp of subject-field methodology
- Practical competence in managing teaching and learning (FME, 2009)

Developing the essential pedagogical behaviour skills, values and attitudes required of today's teacher love for learning, a caring disposition, versatility and creativity are necessary to realise the vision of NTEP

Higher education research and benefits of capacity building to teacher education in Nigeria

Higher education can contribute through research and capacity building to teacher education policy development process in Nigeria. Research has shown that students who attend institutions of higher education obtain a wide range of personal, financial, and other lifelong benefits; likewise, taxpayers and society as a whole derive a multitude of direct and indirect benefits when citizens have access to postsecondary education (UNESCO, 2004). Accordingly, uneven rates of participation in higher education across different segments of U.S. society should be a matter of urgent interest not only to the individuals directly affected, but also as a matter of public policy at the federal, state, and local levels.

This paper cites detailed evidence of both the private and public benefits of higher education at international level. It also sheds light on the distribution of these benefits by examining both

the progress and the persistent disparities in participation in postsecondary education.

Benefits to individuals include:

- There is a correlation between higher levels of education and higher earnings for all racial/ethnic groups and for both men and women.
- The income gap between high school graduates and college graduates has increased significantly over time.
- The earnings benefit to the average college graduate is high enough for graduates to recoup both the cost of full tuition and fees and earnings forgone during the college years in a relatively short period of time.
- Any college experience produces a measurable benefit when compared with no postsecondary education, but the benefits of completing a bachelor's degree or higher is significantly greater.
- As is the case for the individuals who participate, the benefits of higher education for society as a whole are both monetary and nonmonetary.

Societal benefits include:

- Higher levels of education correspond to lower levels of unemployment and poverty, so in addition to contributing more to tax revenues than others do, adults with higher levels of education are less likely to depend on social safety-net programs, generating decreased demand on public budgets.
- College graduates have lower smoking rates, more positive perceptions of personal health, and lower incarceration rates than individuals who have not graduated from college.
- Higher levels of education are correlated with higher levels of civic participation, including volunteer work, voting, and blood donation.
- Given the extent of higher education's benefits to society, gaps in access to college are matters of great significance to the country as a whole. This report shows that despite the progress we have made in improving educational opportunities, participation in higher education differs significantly by family income, parent education level, and other demographic characteristics (UNESCO (2004).

Observed patterns of postsecondary participation include:

- Among students with top test scores, virtually all students in the top half of the family income distribution enroll in postsecondary education, but only about 80 percent of those in the lowest fifth of the income distribution continue their education after high school.
- Income differences tend to have a smaller impact on college enrollment rates of high school graduates with high test scores than on those with lower test scores.
- Participation in higher education also varies among racial/ethnic groups. Whites and Asians of traditional college age are more likely than their black and Hispanic peers to enroll in higher education institutions.
- Furthermore, while the gap between blacks and whites has declined, the gap between white and Hispanic high school graduates has grown in the last decade.
- Gaps between individuals who participate and succeed in higher education and those who don't have a major impact on the next generation. The young children of college graduates display higher levels of school readiness indicators than children of non college graduates. After they graduate from high school, students whose parents attended college are significantly more likely than those with similar incomes whose parents do not have a college education to go to college themselves (Kellogg, 2009).

The story told by this report is that higher education does pay. It yields a high rate of return for students from all racial/ethnic groups, for men and for women, for those from all family backgrounds. It also delivers a high rate of return for society. We all benefit from both the public and the private investments in higher education.

- Private/Market Benefits – individual's earnings and income
- Private/Non-Market Benefits – individual's or family's quality of life other than income
- Social Benefit Externalities – benefits to all of society, spillover to others, including future generations

Higher earnings and better economic managers, entrepreneurs and innovators

- Substantial contribution to growth in GDP per capita

- Rates of return average 12-30% depending on country and context, including Africa
- A one year increase in Africa's stock of HE would raise output growth 0.63%/year boosting incomes about 3% after five years and by 12% eventually – significant boost to income growth (Bloom, Canning and Chan, 2005)
- But, development is more than increasing human capacity for S&T, incomes and GDP.
- Higher education also strengthens core values for responsible citizenship by improving health, the environment, governance, and education, and reducing poverty, inequality, and crime. higher education has a critical role to play in achieving these goals.
- McMahon's work summarizes higher education impact on these goals

Controlling for income, families of people with higher education have...

- Better health outcomes for the individual, children and spouse
- Increased longevity and reduced mortality
- Improved child education and cognitive development outcomes
- Reduced fertility and family size especially with women with higher education
- Increased consumption efficiency and savings rates (McMahon, 2009)

The total value of these benefits is higher than the "private/market" benefits – 22% higher. These benefits often are overlooked, but are critical for development.

Benefits and Rates of Return –
Private and Non-Market Benefits

- Controlling for income, people with higher education...
- Strengthen democratization and political institutional development
- Strengthen human rights and civic institutions
- Increase political stability
- Increase life expectancy
- Reduce inequality

- Lower crime
- Improve air and water quality
- Disseminate Research and Development faster (Bloom, Canning and Chan 2005)

These benefits are often almost as large (89% as high) as the increased income benefits and contribute substantially to reaching overall goals in development.

The benefits discussed so far are mostly related to the teaching/learning part of higher education's mission. Research, engagement and experiential learning comprise two-way streets - faculty and students gain "real world" experience and become better teachers, graduates and mentors and society gains from results of research and application of new knowledge. By implication, investing in higher education and research may reduce unemployment and possible increase entrepreneurs with clear orientation dignity of been educated.

Since higher education produces the entrepreneurs, the creative thinkers, the business leaders that generate economic growth and turn poor countries into prosperous ones. Tertiary education exercises a direct influence on national productivity which largely determines living standards and a country's ability to compete in the globalization process (World Bank 2009). Therefore, we are to be serious about wanting to eliminate dependency on foreign assistance; we are to be serious about wanting to solve poverty; we are to be serious about wanting to eliminate chronic hunger; we are to be serious about wanting sustainable economic development; we are to be serious about wanting Africans to solve African problems; then we should take action and invest in higher education particularly in teacher education, so that the lessons learned from other countries are very clear.

Future collaboration between the key international institutions and academics

The current Forum on Higher Education, Research and Knowledge has further potential as an arena for researchers to presenting original studies and research on HERI systems. UNESCO with its legitimacy and convening power is an important hub for such discussions and debates, both within the UN family of special agencies, and in relation to Member States. The

development of a descriptive template will make it possible for its users to share and compare data. In the aggregate, such information can constitute a basis for assessing trends over time, as well as for making comparative assessments based on individual country studies. Another possible activity for the Forum would be to build a virtual reference library of available studies, to include comparative studies and assessments. Such information may be useful not only for UNESCO staff members in their advisory and normative role, but also for researchers in UNESCO Member States.

UNESCO, within the UN family, has the mandate for generic issues related to knowledge systems. In the current thrust towards "Delivering as One" also known as the "One UN" strategy, there is an obvious need to align the efforts of enhancing national research systems, linked to various specialized agencies, into a coordinated and comprehensive strategy. Several existing initiatives touch upon the need to understand HERI systems in greater depth. Within the World Health Organization (WHO), a policy on "research for health" is being developed for presentation at the World Health Assembly in May 2009. Linked to the Food and Agriculture Organization (FAO), the Consultative Group on International Agricultural Research (CGIAR) consortia address the need for stronger National Agricultural Research Systems (NARS). The UN's Research Institute for Social Development (UNRISD) calls for stronger systems for research on social development in low-income countries. More specialized research groups harbour similar ambitions, all to do with the inclusion of low-income countries in global research efforts.

Bloom, Canning and Chan (2005) view and for the sake of optimal impact in its work, maintain that UNESCO should shift the balance, from research along specific issues and programmes to strengthening its core capacity for informed, evidence-based advice on HERI systems. In its advice to Member States and external funding agencies ("donors"), UNESCO should stress the need for investing in a basis for research, including research universities, as a prerequisite for targeted funds for "excellence" or specific research areas. The recent decision to create an inter-sectoral platform is a step in this direction, provided that it is adequately funded from the Regular Programme. However,

further down the road, a formal merger of the current Division of Higher Education, the Social and

Human Sciences (SHS) and the Natural Sciences (SC) Sectors would create a more powerful thrust towards UNESCO's role for advocacy and advice on advanced knowledge systems. If UNESCO is to shoulder the challenge of its mandate, of providing advice on the organization and funding of research, from a "One UN" perspective the Organization will have to rethink the current fragmentation.

From the outset, the Forum has succeeded in generating active interest, participation and support on an inter-sectoral basis, and this has greatly contributed to its success. Nevertheless, inter-sectoral activities themselves tend to suffer from sector-driven borders, funding practicalities and competition. If UNESCO is to be credible in its ambitions of driving HERI policy throughout the UN system and of becoming a Clearing House for other initiatives (such as the

Berit Olsson and Thandika Mkandawire new International Council for Science engagement to strengthen research in Africa, the Global University Network for Innovation, and indeed the OECD's own broad engagement in these fields), it will have to put substantive commitment behind the cohesion of its internal efforts.

Above all, effective engagement by UNESCO in advising Member States on HERI systems will require the continuation of the Forum, as a repository of information and analysis and as a link to the system-oriented global research community. Given the Forum's proven potential, UNESCO's clear commitment to this important initiative in its planning and budgetary strategies is a critical factor. In this regard UNESCO's EFA Global Monitoring Report, with its autonomous status, presents a useful model for recording data and analyzing emerging trends. Moreover, the Forum has the potential to attract broader and continued external funding. Development cooperation agencies are likely to pay increased attention to knowledge systems, and for future reference they will certainly need the type of insights generated by the Forum.

The Forum has proven potential to attract researchers active in analyzing systems for HERI. It thus offers a vital link between UNESCO, its Member States, and the research community which is crucial for understanding shaping and

assessing the advanced knowledge systems essential for sustainable development in all member countries. Also, as the case of NTEP, effort should be made to implement the policy as basis for development in teacher education.

Conclusion

This paper x-rays the quality of research in developing human resources to facilitate the development of the nation. It discusses the challenges and the role of research and higher education in support of teacher education programmes. It discusses the recent developments of national teacher education programs and related policy processes in international context. It analyses the state-of-art in the interface between teacher education, higher education and teacher policy development. It addresses the issues related to research and education as well as their contribution to teacher education policy development processes. It identifies the key issues and developmental challenges as well as the means and mechanisms to overcome them. It explains how higher education can contribute through research and capacity building to teacher education policy development process in Nigeria. It suggests the future collaboration between the key international institutions and academics. The paper reveals that teacher education programme integrates the need for creativity in teacher education and consequently equips teachers training institutions with strategies to implement it.

Recommendations

From the foregone, the following areas are recommended for future research for higher education development:

- ICT integration into Teacher Education (PSTE and ISTE);
- Promotion of bilingual education in the mother tongue and English language;
- Funding of research into different aspects of teacher education;
- Monitoring and Evaluation of existing teacher education models and practices;
- Dissemination and Diffusion approaches on teacher education issues;
- Impact studies of teacher development programmes on quality;

- Community and private sector involvement in teacher education;
- Vocational/Technical/STM Education for the Nigerian child in teacher education programme should be improved upon.

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