

The Contribution of Higher Education to National Education Systems: Current Challenges in Africa

Overview Paper

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Introduction

The focus of the UNESCO Forum on Higher Education, Research and Knowledge is to develop and deepen understanding of systems and structures in higher education as well as of systems for the production of knowledge. Since 2001 the Forum at a global level as well as through five regional committees in different parts of the world has engaged in a number of activities intended to promote and stimulate research and debate on higher education and knowledge production systems. The Regional Scientific Committee for Africa arranged one such activity in the form of a research seminar that was held in Accra, Ghana from 22 – 24 March 2007 on the above theme. In an attempt to illuminate whether and how higher education and knowledge production systems were impacting on or being influenced by other education sectors in those systems, the Seminar focused on analyses of existing and potential linkages and interactions between higher education and other national education systems. The Seminar also aimed at investigating the level of awareness, knowledge and action within higher education systems and institutions (HEIs) of the Millenium Development Goals (MDGs) and the Education For All (EFA) targets. Finally the Seminar sought to ascertain whether and to what extent the three core functions of higher education (teaching, research and community service) had been influenced by the interaction of higher education with other sectors of education in different countries and regions on the continent.

In order to illuminate the nature and extent of the responsiveness of higher education to development goals and objectives and to enhance understanding of changes in higher education and research systems as a result of such responsiveness, the Regional Scientific Committee for Africa invited papers on the interface and contribution of higher education to teacher education, non-formal education, technical and vocational education, open and distance learning and continuing education, and to research in education. Papers and discussions also reflected on cross-cutting themes of ICT, gender equity, building a democratic culture, and the relationship between research/knowledge production and social development

This paper is an overview of some of the key issues which are addressed in the papers in this publication and which were also the subject of lively discussions at the Research Seminar.

Contextualizing the Challenge

Most education and training policy frameworks in developed and developing countries acknowledge that basic education is a right and that it plays a crucial role in promoting social and economic development, especially in relation to the achievement of the Millenium Development Goals (MDGs) and the Education For All (EFA) targets. In poor countries especially, government and donor commitment to and investments in basic education are premised on huge expectations about its role and contribution to economic growth and poverty reduction.

On the other hand, higher education, which had been highly regarded as an indispensable agency for development in Africa in the immediate post-independence years, had by the late 1980s come to be accorded much less policy and funding priority by various international multilateral agencies, donor organisations and many African governments. This approach was premised on, as is well known, arguments relating to the ostensibly greater returns on investment in basic education than in higher education. The result was the grave neglect of higher education institutions on the continent with a resultant deterioration of infrastructure; decline in teaching capacity and quality in the face of increasing enrolments; decline in research activities, productivity and capacity; escalating brain drain of academics and researchers, etc. This debilitating environment combined with the effects of political repression, civil war, wide-spread poverty and disease added up to a situation where higher education institutions were not only incapable of discharging their own core functions effectively but were not in a position to contribute meaningfully to the development of other education sectors in a way that would address larger issues of social and economic upliftment, especially in relation to the achievement of the MDGs and EFA targets.

Globalisation discourses about the knowledge society, the crucial role of higher education within the knowledge economy and the recognition of the need for highly skilled graduates to utilize and apply knowledge in order to advance economic competitiveness and social development has led to a reversal of policy positions and approaches towards the role of and investments in higher education in developing countries. There is now a clear and expressed expectation in many policy frameworks that higher education can and must play a driving role in addressing the challenges of poverty and disease, of economic growth and social development, and of democratization, peace and security. These expectations have taken on greater resonance in the context of the pressures and deadlines to achieve the MDGs and EFA targets, especially in Africa. Several continental and international initiatives are already in place or are being planned for the revitalization of African higher education so as to rebuild its capacities and develop new strengths to enable it to play a leading role in the social and economic regeneration and development of the continent

The new policy approach to higher education both in international organisations as well as within national systems is increasingly premised on postulating neither higher education nor basic education as separate priority choices for social and economic development and associated funding and donor support. Instead, there are huge expectations that higher education can and must contribute to:

- Poverty alleviation and addressing the ravages of disease
- Increasing participation at all education levels
- The ongoing development of primary and secondary education, technical and vocational education, non-formal adult literacy and continuing education
- Increasing research and knowledge-based strategies for development
- The achievement of MDGs and EFA targets in the face of impending deadlines

In addition, there is the strongly held view that higher education should respond in and through all three core function areas of teaching, research and community engagement –through the development of new curricula and qualifications to address new education and training needs, through developing appropriate research themes to address new knowledge needs, and through forging new partnerships and joint ventures with industry, SMEs, government departments, community organisations and other relevant stakeholders. The implication of this view is that higher education would not be seen only as ‘bringing gifts from on high’ to ‘lower’ education sectors but would itself be transformed in and through its interactions with and contributions to other education sectors.

Main Orientations of the Selected Seminar Papers

Several papers highlighted the acute shortage of qualified teachers as one of the biggest challenges facing the realisation of the EFA goals by 2015. 80 countries were identified as needing to enlarge their teaching force, with Sub-Saharan Africa (SSA), the Arab states, and South and West Asia identified as having the most acute shortages. It is estimated that up to 4 million additional teachers are needed for SSA if Universal Primary Education is to be achieved.

The involvement of HEIs in the EFA campaign was deemed to be minimal or non-existent, although it was pointed out that many HEIs saw teacher training, teaching resources and quality as important areas for intervention. On the whole, however, teacher educators were inadequately trained and supported as higher education and technical vocational education did not often provide pedagogical training. There was also a disjuncture between teacher training and the realities of school as new demands for education from both global and technical perspectives were not being met, and there was insufficient evaluation of training and its impact on classroom practice. It was observed that even where upgrading of courses existed, it tended to focus on the needs of individual teachers but not on the whole school and the new roles of schools. Importantly, large class sizes and lack of teaching and learning materials also impeded achievement of EFA. While the structure of governance and decision-making in education varied from region to region, generally there were limited opportunities for teachers and for the general public to contribute to policy and education debates.

It was frequently observed that for the achievement of EFA targets and the MDGs, there is an urgent need for structures and systems to enable governments to:

- Plan systematically for teacher supply and demand
- Recruit and train teachers in a diversity of ways
- Ensure effective deployment of teachers
- Motivate teachers to stay in the profession
- Ensure that teachers contribute to effective teaching and learning

There is also a need for

- National and/or regional policies for teacher education, teacher recruitment and deployment, and professional and career development
- Capacity development to contribute to the debate
- Capacity development to manage the system
- Addressing teacher training needs in respect of curricular content and diversity of delivery systems
- Better and focused engagement of HEIs with communities through community service

The papers and discussions on teacher education brought out common problems and challenges across SSA. They included supply issues in respect of the low numbers of teachers, particularly in science, mathematics and technology; their inadequate qualifications and training; teacher morale issues; high attrition rates as a result of out-migration or movement to other sectors and the impact of the HIV/AIDS pandemic, which often left schools without teachers. A related problem was to be seen in student choices of programmes which reflected their negative perceptions of the attractiveness of teaching as a career choice and the relative social value of the teaching profession as signaled by public remuneration levels for teachers and their purchasing power parity, compared with other professions. Students also had inadequate preparation, particularly in science and mathematics which tended to be taught in abstract terms and in poorly

equipped facilities. Thus, many more students enrolled in the humanities or the ‘soft’ sciences and not enough in the natural sciences which are viewed in many systems as having the potential for poverty reduction through its applications to industry and to agriculture and food production.

The paper on Non-Formal Education recognized staff expertise in higher education and the enormous potential of HEIs to promote non-formal education through their community service function- to impart knowledge, skills and attitudes that people can use to develop themselves and improve their quality of life, to help reduce poverty and aid the achievement of the MDGs.

The potential for HEIs to impact positively on teacher training, a higher uptake of science, technology and mathematics by students, better linkages and engagement with communities through community service was seen to consist in a consideration of some of the following measures:

- Developing targeted interventions to improve teacher competence.
- Improving teaching and learning using locally available resources.
- Expanding science, mathematics and technology teaching at secondary level as a key leverage point for poverty reduction strategies.
- Recognizing and adequately compensating staff time and effort in community service

To carry out the above effectively, it was proposed that HEIs have to:

- Forge partnerships with government, industry and local communities.
- Redress gender gaps and create opportunities for women.
- Develop alternative models for training teachers and delivery methods ‘beyond the four walls of HEIs’.
- Develop student internship programmes that offered opportunities for reflection and practice
- Develop greater and better use of ICTs
- Develop promotion criteria for community service and support staff to do it better

Alice Saiti’s paper assessed the impact of university interventions in improving the teaching of science and mathematics in community day secondary schools in Malawi where the shortage of qualified teachers is a major problem. The majority of science teachers have only a primary school teaching qualification and an academic qualification equivalent to the O-Level. It is against this background that the Faculty of Education at Mzuzu University undertook an intervention, the Secondary School Teacher Improvement Programme (SSTIP), to provide the teachers with content and training in pedagogy in a bid to improve their performance. The Intervention Process included a needs assessment to determine the areas in which the teachers required the most help, and the development of a tailor-made curriculum for the programme that included science and mathematics content at a level slightly higher than the level that the teachers themselves taught, methodology courses, an emphasis on cooperative learning, and the use of continuous assessment to evaluate a large number of capabilities, skills and areas of the content. The conclusions from the study suggested that universities have expertise that could be used to improve science and mathematics teacher performance, even where the teachers cannot be accepted into conventional classes. In cases where teachers’ content knowledge of the subjects is poor and the method of teaching very traditionally authoritarian, a short spell of exposure to a higher level of thinking with hands-on experience of progressive teaching methods can have a dramatic effect. By improving the knowledge and pedagogic skills of a few very weak teachers in many schools, pupils in a wide area benefit from teachers with a broader understanding of their subject and improved ability to inspire learners.

Writing from Zambia, **Dorothy Cynthia Nampota** exposes similar weaknesses in the teaching of science, mathematics and technology (SMT) in community day secondary schools which enroll the majority of students, and points to challenges in achieving the desirable quantity and quality of such teachers in Zambia, using selection and graduation statistics for SMT education students. However, the community day schools only offered general science before 1999 but not physical science (physics and chemistry) and biology. To bring such schools to the level of conventional secondary schools requires many SMT teachers. However, relatively few students opted for science and mathematics courses in their choices for the selection process, while the majority of the few that were enrolled chose to major in the ‘softer’ sciences of Home Economics and Geography rather than in the natural sciences. Some of those enrolled in SMT had been ‘re-directed’ to science programmes, which affected their level of commitment to their studies, and also led to difficulties in their taking some courses in the programme. Nampota proposed a number of ‘solutions’ towards minimizing the challenges faced in training these teachers, for example, relaxing admission rules so that Education Science (ESC) and Mathematics students could be admitted even below the cut-off point to minimize re-direction of students into the programme. In return such students should be offered bridging courses to make up their lack of core knowledge and skills; making the university SMT curricula more responsive to learners’ and societal needs so as to make it less difficult and friendlier to the students; providing more scholarships for ESC students and publicising these in the schools before students made their choices. Further, she proposed that the University of Malawi could consider offering a University Certificate in Education (UCE) course to students who graduated with a Bachelor of Science (SC), the majority of whom had not found jobs: and training unqualified teachers currently teaching science and mathematics subjects in schools, most of whom possessed a primary school teacher training certificate.

In a paper titled “**Teacher Education beyond the University’s Four Walls,**” **Anamuah-Mensah and Erinsho** stress that if Africa is to meet the challenge in the supply of adequate teachers who are required to provide quality education for all children, it must emphasize a shift in the conventional approaches to teacher training and move the university out of its four walls to reach larger audiences. They view the policy of Open and Distance Education (ODE) as offering more attractive options for teachers to receive higher education and/or upgrading their professional status. Using comparative data from a number of African countries and their case study of the University of Education Winneba, they argue that ODE is an out-of-the-box approach that not only avoids the pitfalls of conventional learning but also avoids the opportunity cost of taking people out of their normal employment for training. Its advantages are that it leads to the massification and democratization of higher education by offering access to many more people; it is cost effective as many more individuals are reached at a time; the development of effective and interactive delivery models that make up for face-to-face classroom interaction with tutors; improved educational standards through the use of high quality materials: and the high level of institutional involvement in the preparation of learning materials and in the provision of student support systems. An added advantage is its gender equalizing potential as it allows more women to enroll in programmes.

Sukati’s paper uses a case study of the University of Swaziland to assess staff involvement in community service. It notes that non-formal education, defined as referring to organized learning outside the formal education framework which does not usually lead to national qualifications, is very important for most sub-Saharan African countries which have high illiteracy and poverty rates, high unemployment, shortages of practical skills and high HIV/AIDS prevalence rates. It is viewed as important in solving development problems as it imparts necessary knowledge, skills and attitudes that people can use to develop themselves and improve their quality of life, and could help to reduce poverty, and aid the achievement of the MDGs. However, the paper

contends that the community service function of universities has not been sufficiently realized. While universities point to their three core functions of teaching, research and community service, they do not appear to have developed criteria for assessing and promoting staff on their community service activities, despite undoubted staff expertise and enormous potential for promoting non-formal education through their community service function. The conclusions and recommendations from the study are that the University needed to revise its promotion guidelines to give more points to community service in order to elevate it to the status of teaching and research; create a proper structure for implementing community service at the university, allocate time to staff to undertake community service; and support staff members who are engaged in community service.

The paper by Phuthi and Maphosa titled **Transforming Higher Education for Effective Technical and Vocational Skills Delivery in Zimbabwe** is an illuminating account of the problems and challenges facing many African countries in the field of technical and vocational education (TVE) and the common difficulties of weak or non-existent links between higher education and TVE. Although the focus of the paper is TVE in Zimbabwe, the authors' account points to common and frequently experienced problems associated with TVE in many African countries, for example:

- Less attention is given to TVE in respect of policy attention, funding and monitoring than is accorded to basic or higher education.
- The requirements of technical development require TVE qualifications to be also at degree level and not be restricted only to certificates and diplomas. However, there are acute quality challenges linked to such a qualifications creep.
- Lack of interest among pupils in TVE subjects offered at secondary school level in favour of more “academic” subjects.
- Lack of interest in TVE among industry role-players who prefer to train their own staff and the general lack of systematic and sustained co-operation between higher education and industry.
- Inadequate financing for TVE to be offered effectively in respect of the required facilities, equipment, research and development, etc.
- The poor quality of staff teaching in the TVE sector and the challenges of providing appropriate training for TVE staff.
- Weak, ad hoc or lack of systematic links between the higher education and TVE sectors in respect of higher education institutions playing a role in the revision of TVE curricula, providing external examiners for TVE, affording opportunities for staff development for TVE staff, etc.
- The need for more courses to be offered by higher education institutions, especially polytechnics, on entrepreneurship, adult education and continuing education.
- The lack of links between higher education institutions and SMMEs.
- The loss of staff from TVE institutions to industry and to emigration in a sector that already has a huge scarcity of skilled human resources.

The paper by Sikwibele focuses on the crucial developmental role of higher education in producing and disseminating research in a range of social and economic priority areas, in producing qualified professionals and in facilitating technological and other types of innovations required for development. The paper is a case study of higher education in Zambia and its contribution to the national education system but the issues flagged in the Zambian context have resonance for most African higher education systems. The key findings point to the importance of:

- Tracking the research agendas and activities of higher education institutions in order to understand and evaluate the strategic linkages between higher education and other sectors, and the impact of higher education research on other education levels through an analysis of how research findings have been utilised.
- Increased investment in higher education research and more programmes and activities to strengthen research capacity and improve quality.
- A policy framework that recognises the role and importance of research and development for policy-making, planning, decision-making, system evaluation and reform by the Ministry of Education; that fosters close links between government research units and researchers at higher education institutions and other research organisations to ensure that research is undertaken in priority areas and disseminated to key stakeholders and partners.
- The function of higher education in training teachers (pre and in-service) and education managers and the significance of such training in meeting EFA targets.
- The function of higher education in conducting research, developing programmes and courses, and running training programmes in respect of HIV Aids, curricular transformation, language policy and literacy issues, girl child education, etc.
- Improving research facilities (computer laboratories, digital libraries, etc.) and strengthening national, regional and international research networks and linkages.
- Research dissemination that is widespread and accessible to all stakeholders.
- The mutual openness of policy-makers and higher education institutions and their staff to each other in order to enhance collaboration and exchange of ideas. On development priorities.

The paper by Rakotozafy Harison analyses the education system in Madagascar and, as in the case of many of the other authors, exposes a range of problems and challenges that are experienced in many African countries :

- The connection between failings in education and development lags observable in many developing country education systems.
- The search for alternative models of education out of a concern for the frequently experienced lack of fit between education systems and contextual realities. Such alternative models have to target both those who are within formal education systems as well as those outside of them. This highlights the importance of policies, frameworks, and implementation attention to non-formal education.
- Ongoing connections between the local education systems and those of former colonial powers, in this case, France. This sometimes explains the lack of research interest in alternative education models, especially if domestic research themes continue to be shaped by the research interests of the former colonial power rather than by pressing African problems.
- The challenge of translating academic and research findings in education into actions that will make a difference.

- The possibilities for adapting alternative education models and strategies that have been tested and used in other African countries. In this regard, the support of organizations like UNESCO is critical.
- The challenges of legitimating and mainstreaming research on alternative education models and non-formal education into traditional university concerns, and of obtaining the necessary institutional recognition for academics who focus on this kind of research and development.

Conclusion

The papers presented at the Seminar and the many discussions that took place in Accra are a useful beginning for deeper reflection and further research on existing as well as aspirational linkages between higher education and other education sectors. The contextual challenges outlined in many of the presentations were often similar. All African countries are faced with development challenges of daunting magnitude –challenges that require the optimal functioning of all the different education sectors in a country. The papers outlined some interesting and innovative examples of mutually beneficial interactions between higher education and other education sectors. But the discussions were also important for highlighting the absence of engagement and the lack of systematic institutional planning and action to address development priorities as encapsulated in the MDGs and EFA targets. The discussions pointed to the huge potential within HEIs for initiating or enhancing research and development projects that would be both beneficial for the advancement of very concrete development goals as well as being a catalyst for higher education curriculum reform as well as new partnerships between HEIs and a range of non-traditional social partners. It was acknowledged by all that a great deal more needs to be done in relation to:

- Encouraging and incentivising higher education to engage in more targeted linkages not only at the level of individual academics and researchers but at institutional level and in all core function areas. This required actions ranging from the creation of a more enabling policy environment to developing a new mind-set and imagination about HE and its development responsibilities and opportunities. It also required innovative models, structures and strategies at all levels for facilitating, monitoring and sustaining linkages.
- Increasing research on this theme in order to deepen our understandings of the nature and extent of the linkages, to identify and disseminate good practices in forging linkages, to produce a more nuanced understanding of the potential contribution of different types of higher education institutions, for example, universities, polytechnics, technical colleges, etc.
- Ensuring that higher education institutions were adequately financed to enable them to function efficiently and effectively themselves so as to be able to discharge their responsibilities towards the development of other education sectors.
- Strengthening ties between policymakers and research and academic communities in order to ensure research attention to development priorities as well as the use of research to inform social policy. In this regard, the importance of structured fora where researchers, policymakers and other stakeholders could interact was flagged. The dissemination of research findings in an accessible way to stakeholders in other education sectors was also identified as key.

The Seminar papers and discussions reiterated the enormous role and responsibility of Higher Education as well as the exciting opportunities that lay before it to contribute to development priorities in the form of the MDGs and the EFA targets-through providing strategic leadership, through coordinating national initiatives, through the activities of its trained professionals, through gathering and analyzing data and information for policy development, planning and monitoring a range of development initiatives, and through forging new relationships with society. There were some cautions as to how much one could reasonably expect from higher education, given the challenges of its own primary responsibilities, and some concerns about how to increase social responsiveness without instrumentalising Higher Education in distorting and ultimately unproductive ways. However, there was strong recognition that it was a time of opportunity for higher education to create for itself a different, more socially embedded identity and organizational presence in national, regional and continental development agendas.

AccraFinal Overview

Accra Final Report