enterprise of peer review and quality improvement, accreditation will have been seriously impaired. However, this disruption is perceived, accreditation will continue to be central to quality review, but in a significantly different way.   ∎

The Importance of Polytechnics for Africa's Development

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In the United Kingdom, polytechnics had been in existence since the nineteenth century, but they gained prominence in the 1960s. Their main objective was to provide skilled technical and engineering manpower to promote industrialization. They differed from universities in several ways: they required somewhat lower entry qualifications; they offered mainly subdegree programs that were less rigorous academically and more practically and vocationally oriented; they had close links with industry; and the limited research they undertook was very applied in nature. This division between the polytechnics and universities came to be known as the "binary divide" in higher education. Later, UK polytechnics started running degree programs but their degrees were awarded by a separate, independent body, since they had no degree-granting power.

In 1992, the United Kingdom decided to convert all its polytechnics to degree-awarding universities. One reason for this move was to provide greater opportunities to socially disadvantaged students to access universities; another was that the United Kingdom was moving toward a service-oriented economy and needed more graduates. Thus ended the binary divide, although many have argued that the divide between the pre– and post–1992 universities never really disappeared.

Replication in Africa

In Africa, most of the former British colonies, as they achieved independence in the 1950s and 1960s, adopted a binary higher education system similar to what then prevailed in United Kingdom, and both polytechnics and universities were created.

In South Africa, which developed the most advanced higher education system in Africa with generous funding under the apartheid regime, the polytechnics were known originally as colleges of advanced technical education, until 1979 when they were renamed technikons. In 1993, perhaps following what was happening in the United Kingdom, South Africa decided to allow all its technikons to provide degree programs and confer degrees, but they retained their practical orientation and demarked themselves from the universities. They became known, regionally and internationally, as exemplary institutions for quality technical training.

A major change occurred in 2004 when South Africa decided to convert all its technikons into universities, the first country in Africa to do so. Some became universities of technology; others were merged with existing universities. Many academics and higher education policy analysts, in South Africa and elsewhere, regarded that move to be erroneous, believing that the technikons were playing an important role in the industrial development of the country.

Other African countries followed suit. In 2007, Ghana proposed a law to convert its ten polytechnics into technical universities by September 2016, a law that was hotly debated in the country, with several leading Ghanaian academics voicing their concern at the proposal. But in August 2016, the government went ahead and six of the ten polytechnics were converted into universities. Kenya also decided to upgrade several of its polytechnics and technical institutes to university colleges. Nigeria, which has the largest tertiary education sector in Africa, is moving along the same polytechnic conversion path. Even the Commonwealth Association of Polytechnics in Africa (CAPA) has now changed its name to the Commonwealth Association of Technical Universities and Polytechnics in Africa. What is of concern is that, in most countries, no new institutions have been, or are being created, to replace the upgraded polytechnics, leading to a serious skills gap in human resources.

Importance of Polytechnics

The importance of the polytechnics can be gauged by considering the engineering profession. It is usually accepted that for the effective operation of the engineering industry, there is need for a far greater number of technicians than professional engineers, the desirable ratio engineers:technicians being of the order of 1:5.

Precise data on the employment situation in engineering in African countries are not available, but estimates seem to indicate that, in a wide range of engineering disciplines, that ratio in Africa is of the order of 1:1 or 1:1.5. There is even a risk that the ratio will worsen, as the countries upgrade their polytechnics to university status. This indicates the acute shortage of engineering technicians and it has led,

in many countries, to graduate engineers being underemployed and having to work as technicians.

While Africa unquestionably needs an increased pool of excellent professional engineers, it equally needs an even greater number of practically trained, versatile technicians, not only to support the professional engineers, but equally to service and initiate small- and medium-scale industries, in order to create employment, improve the quality of life, and make fuller use of local resources. A major constraint, however, is the status of technicians. They are regarded as inferior to engineers, which is one of the reasons for the tendency to upgrade polytechnics and technical colleges to university status.

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Polytechnics Conversion Policy

The dilemma facing sub-Saharan Africa is that, on the one hand, it has the lowest tertiary education enrollment (currently around 9 percent) compared to any other world region. It is therefore under enormous pressure to increase its enrollment, and it is doing so by either increasing its university intake or creating new universities, usually by upgrading its existing polytechnics. On the other hand, however, almost all African countries are facing the serious challenge of graduate unemployment, although precise statistical data of its magnitude in different countries is lacking. There is no evidence that graduates from universities would have better employment opportunities than those of polytechnics—on the contrary, the real need in Africa at present is for trained manpower at the technical and middle management level, which polytechnics are in a better position to provide. The justification for converting polytechnics to universities is therefore questionable.

One country that is currently reviewing its policy on polytechnics is Mauritius. At the beginning of the twenty-first century, Mauritius had two public universities and two polytechnics. In 2010, in order to implement the government policy of "one graduate per family," the two polytechnics were merged to create a new university. An open university was also set up and construction was started for establishing three additional public university campuses in different regions of the country. In 2015, however, a newly elected government reversed the latter decision and decided that the three university campuses would be used for cre-

ating polytechnics, not universities. The two main reasons that guided that decision were the increasing unemployment of graduates and the dire shortage of middle management and technical skills in the country that was hampering the development of the small and medium enterprises sector.

A Way Forward

Although tertiary enrollment in Africa needs to be significantly increased, that increase should not be in the university sector alone. Differentiation of the tertiary education sector is vital for Africa's development. Universities will continue to play a vital role in Africa's development, but the equally important role of polytechnics must be recognized. It is time, therefore, for African governments to seriously reconsider their policy of upgrading their polytechnics to universities, or to create appropriate institutions to replace the converted polytechnics, as in the case of Mauritius.

African countries should also undertake a thorough assessment of their skills needs in their various priority development sectors before embarking on any major review of their tertiary education sector policy. Hardly any African country has carried out such an exercise, and it is not an easy task. Under its Partnership for Skills in Applied Sciences, Engineering and Technology (PASET) project, the World Bank, in partnership with the Korea Development Institute, is assisting several African countries in undertaking such an assessment. ∎

The Humanities and Social Sciences in the Age of STEM: The Struggle of Japanese as a Linguistic Minority

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Disputes about the Humanities and Social Sciences in Japan

In 2015, the Japanese government and universities were involved in serious disputes about the relevance of humanities and social sciences. The national universities, which