**Chemical Engineering Education in Botswana**

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**Highlights**

* Education and Higher Education in Botswana
* Chemical Engineering Education in Southern Africa.
* Botswana International University of Science and Technology. Chemical Engineering Department in Botswana.
* Challenges and successes

**1. Higher Education in Botswana**

Botswana is newly formed country, gaining its independence in 1966. Previously, the former state organizational form was Bechuanaland Protectorate under British rule, established in 1885 in the arid Kalahari Desert. Since it was a very poor territory (the diamonds were not discovered) there was practically no interest for development. Until 1982, Botswana did not have its own, autonomous HE institution. In 1964 the common University of Botswana, Lesotho and Swaziland (UBLS) was established and operated until 1974, with its headquarters in Lesotho. Then, the University of Botswana and Swaziland (UBS) functioned in Swaziland between 1975 and 1976. In 1982, the University of Botswana (UB), the first autonomous institution of HE in the country, was established and was totally focused on the “education of educators”. At the time of liberation, there were only 677 qualified primary school teachers. And that was all teachers’ body in Botswana. It is touching how UB was established through public donations: each family donated as much as it could from their household: a cow, a goat … Only in 1991, the next professional technical university was established, the present Botswana University of Agriculture and Natural Resources and, long time after, in 2005 (but practically operating from 2012), Botswana International University of Science and Technology [1].

**2. Chemical Engineering Education in Southern Africa.**

Southern Africa is the southernmost region of Africa, comprising Botswana, Lesotho, Namibia, South Africa and Swaziland. There are 9 Bachelor’s Degree programs of Chemical Engineering/ Chemistry and Chemical Engineering/ Physical Metallurgy in South Africa only, plus one program in Namibia and one in Botswana. It is somehow unnatural that these countries with such luxury of minerals to remain exporters of small value added materials.

**3. Botswana International University of Science and Technology. Chemical Engineering Department in Botswana.**

The conception of the Botswana International University of Science and Technology (BIUST) can be traced to the national strategic shift that came with the Revised National Policy on Education (RNPE) of 1994. Unlike the country’s first Education Policy of 1977 dubbed ‘Education for Kagisano’ whose thrust was ‘access and equity’, the RNPE shifted focus to ‘quality’ and emphasized an education system geared at the world of work [2].

RNPE recognised Science and Technology as the driving engines in transforming the country from a pre-dominantly agro-based economy to an industrial economy, hence the subsequent establishment of a National Science and Technology Policy in 1998.

The first program of Chemical Engineering in Botswana was a logic consequence of the Botswana Economic Development Plan and was established in 2015 [3]. To build it from scratch was a real struggle.

**4. Challenges and successes**

Although it was a struggle to build the results are promising: next year 20 Batswana students graduate in this field. The curriculum had to be adapted at what Botswana needs most. There are plans of research and real research projects which are supposed to bring real benefit for the country.

**References**

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3. BEng Program of Chemical Engineering, <http://intranet.biust.ac.bw/Site/view.cfm?siteID=2002234>