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Technical Education Policies in Colonial and Independent Kenya

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Abstract

Policy evolution on technical education in Kenya can be traced back to the recommendation of the Fraser commission of 1909. The Commission recommended education on a racial basis. Africans were to receive vocational and industrial education. The Phelps-Stokes commission in 1924 formulated plans designed for the education needs of Africans. The commission transferred to Kenya theories on Negro education developed at Hampton and Tuskegee institutes in the United States of America. The theories advanced that Africans' cranial capacity was smaller than that of the Europeans and hence Africans were considered to be non-rational beings. Therefore, they stressed that education best suited for Africans was in manual skills. Following independence, the first education commission (Ominde Commission) established in 1963 addressed the issue of technical and vocational education. The successive education commissions adhered to Ominde's recommendations. The national conference on education and training convened in 2003 emphasized the need for Technical and vocational education. The issue had to be captured by Kenya's education sector support program, the sessional paper no.1 of 2005, the technical education Act of 2013, and sessional paper number 1 of 2019. The education system had, therefore, to emphasize technical and vocational education as envisaged in sustainable development goals and vision 2030. It thus gave Technical and vocational education a legal framework for proper implementation.

Keywords: Development, Legal Framework, Sessional Paper, Technical Education

Objectives

This study is guided by the following objectives:

a) To establish the aim of technical education in colonial Kenya.
b) To determine the rationale for the development of technical education in independent Kenya
c) To evaluate the paradigm shift in the development of technical education following the enactment of sessional paper no. 1 of 2005.

Introduction

Education in Kenya during the colonial period was controlled by European settlers and missionaries (Mackatiani et al., 2016). Education had to serve the interest of the colonialists. The type of education given to Africans was religious, vocational, and rural. Educational policies were influenced by European settlers' wishes. They were interested in having laborers with technical skills who would work on their farms. They also had a racial view that Africans were inferior to other races. This explains why the theory of cranial capacity concerning various races was developed to prove that African cranial capacity was small and could not reason like other races. Hence they were inferior and could not be provided with academic education.

The early education commission namely the Fraser commission, 1919 commission, and Phelps stoke commission had to embrace technical education to satisfy the wishes of White Settlers and Christian Missionaries. However, Africans were opposed to this and had to counter by establishing African independent schools. Africans' educational development was boosted by the Second World War when attention was given to the war by the colonialists. After the Second World War experience of Africans, education was demanded by war veterans. In response, the colonial government had to appoint various education commissioners that reviewed African education. The Beecher and Binns commissions made far-reaching recommendations on the development of technical education.

With the attainment of independence in 1963, racial education had little bearing on the needs of Kenyans. The first post-independence education commission (Ominde commission of 1964) and the successive education commissions had to address the issue of technical education. Recommendations were geared at convincing Africans not to consider technical education as being inferior. The education policies addressed technical education from a human resource angle. Technical education is to provide manpower for national development

Study Design and Methodology

The study used the historical design in reviewing education policies and practices on technical education as found in textbooks, journals, and policy documents. A documentary analysis approach was used to review textbooks, journals, and policy documents.

Results and Discussions

Development of Technical Education during the Colonial Period

According to the encyclopedia Britannica, technical education is concerned with the teaching of applied sciences, special training in technical procedures, and skills required for the practice of trades or professions, especially those involving the use of machinery and scientific equipment. It emphasizes the understanding and practical application of basic principles of mathematics and science than the attainment of proficiency in manual skills. The basic objectives are to prepare graduates for occupations. As a result, technical education attracted attention in Kenya. It was, therefore, institutionalized in schools (Mackatiani et al., 2022; Mackatiani, 2012)

The British government was dissatisfied with the academic school curriculum (Mackatiani et al., 2016). There was a racial legacy that Europeans could not access the same knowledge as Africans. Academic education had led to agitation in India and the colonial government was scared of such agitations in case Africans accessed academic education. Christian missionaries believed in the virtue of working with hands. Technical education ensured the supply of labor to White Settlers and Christian Missionaries. Technical education, therefore, became the cornerstone of education policy. The education commission of 1909 had it in its terms of reference. It recommended an industrial apprenticeship scheme. The East Africa Protectorate commission of education (1919) also echoes technical training. It was observed that if literacy was given, the child's development would be ruined. The 1919 education Commission's recommendation was further reemphasized by the Phelps- stoke commission of 1924 (Mackatiani et al., 2016).

Native industrial training depot had to be established at Kabete in July 1924. The objective was to provide specialized training in various trades, more advanced than industrial training. Primary schools were involved in a lot of technical activities until the 1930s when there was a great depression. Between 1949 and 1963, many carpenters, mansions bricklayers, blacksmiths, and tailors were trained. Similar schools had been established at Sigalagala, Machakos, and Eldoret. In 1949 Willoughby committee on technical education prioritized building the Nairobi technical and commercial institute for all races. It further recommended the establishment of seven post-secondary technical training institutes. With the establishment of these institutes, school leavers would train and be equipped with technical and vocational skills for national development.

The Beecher and Binns commissions made far-reaching recommendations on the development of technical education (Mackatiani, 2022). The Binns report of 1952 endorsed the Beecher commission's recommendations. Practical and academic subjects were to be included in the curriculum started for Africans. In 1961 Kenya polytechnic was opened. It offered courses in civil, technical, and electrical engineering, telecommunication,

commerce, and technical teacher training. Earlier the Beecher report of 1949 tried to revive vocational training in primary education. The commission recommended the creation of intermediate schools which were to maintain a proper appreciation of land as well as manual work. Emphasis was placed on agriculture. The Government accepted and introduced practical training in Agriculture, carpentry, and handicrafts.

Technical Education in the Independent Era

Despite the effort to introduce technical education during the colonial period, it was not all that proper for Africans. Technical education was seen as inferior Education to Africans. Vocational and Technical Education during the colonial period was mainly for the production of laborers with technical skills to work on settlers' farms and mission stations. The Ominde commission of 1964 didn't see the need to include vocational subjects in primary schools. Arts and crafts were offered to enable learners to control and coordinate their muscles. Agriculture had to be included in the secondary school curriculum. To satisfy the nation's Educational and employment aspirations, the Government engaged in plans to diversify the curriculum and expand technical and commercial educational facilities. It emphasized access to quality basic education as entrusted through a sustainable development goal number four (Mackatiani, 2022; Mackatiani & Likoko,2022; Mackatiani et al., 2022; Mackatiani & Mackatiani, 2020; Mackatiani, 2020*;* Imbovah et al., 2018; Mackatiani et al., 2018; Mackatiani, 2017). The academic curriculum had to, therefore, include vocational subjects. The National Council of Churches of Kenya introduced poultry farming and commerce for self-employment in rural areas. National Youth Service made available opportunities for vocational education. Agriculture had to be examined at the 'O' level. In 1966 the World Bank gave loans to assist industrial, home science, and commercial education. Trade and technical schools were updated and expanded (Furley & Watson, 1978). By 1970 there were 15 technical schools. The government proposed the construction of a national industrial and vocational training center in Nairobi. By 1970. Kenya polytechnic had to be expanded to offer a wide range of technical and industrial courses.

The Ndegwa commission was constituted in 1971. In its recommendations, the commission advocated for the teaching of technical, vocational, agricultural, industrial, commercial, and business subjects in secondary schools. The presidential working party on the second university in 1981 proposed an 8-4-4 education system. The Commission popularly known as the Mackay commission noted that the 8-4-4 education system would promote the development of skills for self-employment The Commission recommended the inclusion of practically enabled subjects in the curriculum. Mackatiani et al. (2020) and Mackatiani, Likoko and Mackatiani (2022) note that in Kenya, KICD is a semi-autonomous agency that is responsible for curriculum development. The primary curriculum had therefore to be developed to include technical subjects that were to be

examined. In secondary schools, technical subjects were examined under the group of applied education. Technical subjects were given prominence at the university level. The government had to come up with a policy framework for education, training, and research. This led to the enactment of sessional paper no. 1 of 2005 on education training and research. The Kenya education sector program had been formulated for implementation of what was contained in the legal framework

Sector Review and Development Direction

The national conference on education and training was held at Kenyatta International Conference Centre in 2003. To adopt resolutions of the conference; the ministry of education, science, and technology had to come up with a report on sector review and development direction. The report outlined institutions that undertake technical education as 4 national polytechnics; 20 technical training institutions; 17 institutions of technology; 1 technical teacher training college; 600 youth polytechnics 350 assisted by the government; and 1000 registered private commercial colleges-courses in technical training. KESSP further noted in its background that the following TIVET institutions were under various ministries: 3 industrial training centers; National youth service; Government training institute, Mombasa; and Kenya institute of administration (Office of the President) ; 6 Medical training colleges and 6 Nursing schools (Ministry of Health); Kenya water institutes (Ministry of Water); Kenya institute of highways and building (ministry of roads and public works); Kenya power; Kenya Railways; Forestry Institute (Ministry of Environment); Kenya institute of survey and Mapping (Ministry of Lands); and Kenya institute of business training (Ministry of Trade and Industry). The analysis of the review, therefore, revealed that technical institutions were inadequate to promote technical educational advancement in Kenya.

Kenya education sector support program (KESSP) had to outline the objectives of TIVET as the provision of increased training opportunities for school leavers to enable them to be self-supporting; development of practical skills and attitudes to lead to income-earning activities; provision of technical knowledge, vocational skills, and attitudes necessary for manpower development; and production of skilled artisans, craftsmen, technicians, and technologies for formal and informal sectors. KESSP, therefore, identified the most important role of TIVET in national development. Hence manpower development and production of skilled personnel is very crucial in the field of technical and vocational education. To achieve the objectives of TIVET, a national symposium held in 2003 recommended the establishment of a national training authority for TIVET to established. It also recommended the development of a national skill training strategy. It further recommended the provision of incentives to encourage the industry's participation in enhancing skills training. Centers of excellence for monitoring creativity and innovation

were also to be identified and developed. Besides, a national technology fund to facilitate appropriate technology and skills was to be established.

The report further noted that the management of technical, industrial, vocational, and entrepreneurship is spread over 10 ministries. Hence maintenance of common training standards becomes a problem. However, enrollment in technical institutions has been on the increase. The report of the ministerial committee on the problem facing technical training institute show the following trends in enrollment: in 1998 there were 5040 students; in 2000 there 15155 students; in 2001- there were 17801students and in 2003 there were 79000 students. The aforesaid survey reflects speedy growth in the number of students accessing technical education. However, the report noted the following inconsistencies: Gender disparity; a small percentage of school leavers are being absorbed, poor performance of girls in mathematics and sciences in KCSE doesn't allow them to join engineering courses and high cost of training.

The issues raised in the report were skewed toward the improvement of technical and vocational education in Kenya. Kenya's labor force is expected to increase from 9.5 million in 2001 to 14 million by 2010. Skills development should be enhanced through flexible and demand-driven technical, industrial and vocational, and entrepreneurship programs.

Sessional Paper Number 1 of 2005

G.O.K. (2005, pp. 58-62) identified challenges of technical industrial, vocational, and entrepreneurship training TIVET as: Inadequate facilities and capacities to cater to those who complete primary and secondary education and wish to undertake technical; lack of effective coordination of training and disproportionate duplication in the production of skilled personnel across the entire economy has resulted in the mismanagement of scarce resources; unnecessary duplication of efforts; underutilization of training facilities and irrelevant programs, and wasteful and unnecessary competition.

The sessional paper number 1 of 2005 further realized that: Technical, industrial, and vocational entrepreneurship curriculum was inflexible and not responsive to changing needs of labor markets; teachers were inadequately trained; there were inadequate physical facilities; and facilities were old and outdated. To address the challenges in the sector, the government recommended: Involvement of stakeholders in the development of a skills training strategy; devising appropriate incentives to promote technical, industrial, vocational, and entrepreneurship training; promotion of scholarships for staff and students; providing loans and business; secondary schools with infrastructure equipment and teachers to offer industrial education; placement of skills training institutions under one ministry; and rehabilitation of facilities in technical industrial, vocational, entrepreneurship, and training institutions

Subsequently, there was a need to come up with strategies. Paragraph 4.35 of the

framework, therefore, outlined strategies for improvement of policies on technical and vocational education as: Provision of an alternative path for technical industrial, vocational, entrepreneurship, and training graduates to access higher education and training up to degree level; mobilize resources to rehabilitate technical industrial, and vocational entrepreneurship training institutions at all levels; National polytechnic to be autonomous; provision of loans to technical trainees; encouragement of private investors to participate in technical education; establishment of a mechanism for the accreditation of national polytechnics to offer degrees; Technical institution to maintain the record of academic productivity (publications and royalties); undertaking of labor market survey; reviewing of the 8-4-4 technical curriculum.

Strategies for Implementation of TIVET

Kenya's education sector support program in its background noted that: Graduates from the primary level were 600000; 350000 proceeded to the secondary school level, and 250000 were to be absorbed in technical industrial vocational, and entrepreneurship training.; public and private colleges were inadequate to absorb the number; uncoordinated and no legal framework; ineffective training policies; disparities in training standards; inflexible curricula; mismatch between skills learned and skills demanded expensive training materials; and lack of participation in the private sector in curriculum design and development. The program, therefore, recommended: Establishment of a National training authority to oversee technical activities; provision of incentives to encourage industries' participation in finance skill training; harmonization of the scheme of services for technical teachers; and enhancement of access and equity for people with special needs.

As noted early, Kenya's education sector support program had outlined objectives of technical, industrial, vocational, and entrepreneurship training in Kenya. However, it has not been possible to place all technical institutions under one ministry; utilize secondary schools with facilities and teachers to use technical education curricula; and undertake regular labor market skills surveys and training needs assessments to assist in curricula design. Subsequently, the program had to come up with strategies to address key policy issues. These issues were the involvement of stakeholders in a comprehensive skills training strategy; provision of scholarships and other awards to staff and students; provision of loans and bursaries for students; rehabilitation of facilities; National polytechnics to offer degree courses; regular labor market skills survey and needs assessment, creation of linkages between tertiary and university institutions; and devising mechanisms and apply appropriate incentives to promote private sector investment.

Enactment of Policy on TIVET

With the Enactment of the Policy on TIVET: Kenya polytechnic and Mombasa polytechnic have been awarded university Charters mandating them to offer degrees in technical education; the private sector has been involved in teacher development of teacher education; Bursaries have been established to enable students to pursue technical education; the rehabilitation of facilities in technical institutions has been enhanced; the technical training institutions were upgraded to National polytechnics; TIVET centers of excellence have been established; the Technical and vocational education and training Act was enacted in 2013; and Sessional Paper No. 1 on reforming education and training for Sustainable Development in Kenya was enacted in 2019.

Sessional Paper No. 1 of 2019

The fundamental goal of Technical Vocational Education and Training (TVET) with the implementation of Sessional Paper No. 1 of 2019 is to create a unified TVET system to produce quality skilled human resources with the appropriate attitudes and values for the attainment of the SDGs and Vision 2030. The following list of particular TVET goals was included in the sessional paper: Promotion of the dignity and decency of labor; provision of adequate and suitable skilled artisans, craftsmen, technicians, and technologists at all levels of the economy through practical training and work experience; ongoing transfer of technology through a collaborative approach between TVET institutions and the relevant industries; the provision of more comprehensive training options for the rising number of trainees, including school leavers, to improve employability; the ongoing improvement of trainees' knowledge and skills at their own pace; providing a dynamic curriculum that responds to the labor market demands of a dynamic economy, imparting marketable skills, technical competency, and attitudes, building on prior learning by supporting youth entrepreneurial and technological innovations, refocusing learners' potential on productive economic and social activities, and teaching values and life skills.

In 2030, Kenya is expected to have a total population of 60 million, up from the approximately 45 million people there now, according to paragraph 4.43 of the framework on TVET. In order to accommodate the expanding population, investments must be made, and the wealth and employment base must be expanded through increased productivity growth. A total of 202,556 students were enrolled at 1,300 colleges in 2017. This demonstrates the substantial growth of TVET institutions and student enrollment. Despite the progress made in enhancing access and quality, the TVET sector continues to face many the following challenges: Negative attitude towards TVET; insufficient number of trainers with pedagogical competency, inadequate number of TVET centers, limited availability of customized teaching and learning materials, deficiency of TVET graduates in the

Competencies required for work and life, limited industry participation and inadequate research support services. Other challenges include poor geographical distribution of TVET institutions, negative perception of TVET, and low enrolment of female students. Also, an unfriendly environment for learners with special needs and disabilities has been a challenge. Furthermore, there is uncoordinated admission of students to TVET institutions. There is also low enrolment in TVET institutions due to the high cost of technical training and lack of awareness. As result, most trainees end up in cheap alternative programs whose graduates do not acquire the requisite skills necessary for the 21st century. To address these challenges, the framework recommended: Expansion of TVET programs at the national, county, and constituency levels; and the provision of adequate training opportunities for accessible competency-based training.

To implement the TVET policies, the framework recommended adoption the following strategies: Establishment of a baseline on the status of TVET in the country; sensitization of stakeholders on the role of TVET; Strengthening of centralized admissions service for TVET students; Expansion of TVET facilities targeting national priority sectors; provision of TVET training while ensuring affirmative action with respect to vulnerable groups; development of flexible training framework that uses modular processes and, adoption of appropriate technologies in TVET provision; enhancement of participation of women in TVET and gender mainstreaming through affirmative action; provision of career guidance and placement services to TVET students; integration of aspects of Technology and Vocational Education and Training in the curriculum at all levels of education; and development of a mechanism to streamline the registration and accreditation of TVET institutions and implementation of TVET curriculum. Besides, industry partnerships to be provided to the trainees with on-the-job industrial attachments to real-life industry projects and applications.

Major Findings

- The main purpose of technical education policy during colonial Kenya was the indiscrimination of Africans. Technical education was aimed at the production of cheap labor for Christian missionaries and white settlers. This made Africans embrace technical education negatively.
- Independent Kenya had to redress discrepancies created by the colonial government. technical and vocational education is emphasized in Kenya as envisaged in Sustainable Development Goals and vision 2030.
- Legal frameworks have been developed for the promotion of technical education in Kenya
- Technical education currently faces some challenges for effective implementation.

Conclusion

From the study undertaken, it can be demonstrated that technical and vocational education was emphasized during the colonial and post-colonial periods. The colonial intention was directed toward the indiscrimination of Africans. This made technical education have a negative impact. Independent Kenya had to address issues of technical and vocational education to heal colonial wounds. It was a challenge to the post-independent era to give technical education the image it deserved. Various education consumers addressed these issues. However, there was a lack of legal framework for the implementation of technical and vocational education. With Kenya's education sector support program; Sessional paper number 1 of 2005, Technical Education Act of 2013, and Sessional paper number 1 of 2019, technical education currently has a legal framework to back it. As a result, funds have been allocated to support the implementation of technical, Industrial, vocational, and entrepreneurship programs.

Recommendation

The study identified the main gap in technical education policy as being a lack of addressing the issue of qualified teachers in technical institutions. Policymakers have to revise various policies and put all technical institutions under one ministry. There is only one technical teacher training institution. Therefore, education planners should recommend the opening of at least one institution per county to enhance the expansion of teaching opportunities for technical education. Quality was not captured in sessional paper number one of 2005. The issue of quality should be addressed to provide quality technical education. For quality education to be enhanced, the issue of supervision of technical institutions is pertinent. There are no adequate supervisors for technical institutions. Currently, there is only one District Technical Training Officer for about five districts. More officers should be hired to implement quality technical education. Though, legal frameworks on TVET identified TVET challenges, and suggested strategies to be adopted, they have not been implemented. The TVET legal frameworks should therefore be adhered to reflect the aspirations of vision 2030.

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