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AN ANALYSIS OF TECHNICAL AND VOCATIONAL EDUCATION POLICY GROWTH AND DEVELOPMENT IN THE UNITED STATES OF AMERICA, THE UNITED KINGDOM AND AFRICA.

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Abstract

Socio-economic development is negatively affected if Technical and Vocational Education (TVE) policy growth and development is not purposefully aligned in tandem with the national economic thrust. This paper starts by defining the concept of TVE before analysing this process in American, British and African systems. The analysis suggests that Africa has important lessons to learn from the two developed countries, especially on ensuring that TVE systems produce graduates that stay within the country and contribute towards national socio-economic development. African TVE policies have to address the skills, knowledge and attitude needs of local communities, including rural areas, the informal sector, the unemployed and women. The paper suggests that TVE systems should aim at producing indigenous African researchers and designers who will utilise local resources to come up with internationally competitive appropriate technologies and products. This should bring socio-economic development to the continent, thereby reducing TVE system graduate unemployment and emigration.

Background

As the first decade of the twenty-first century draws to a close, African countries are experiencing strong socio-economic development challenges partly linked to the dearth of appropriate human skills within their populations regardless of the massive investments made into their education and training systems from independence onwards (Zengeya, 2007; UNESCO, 2005). The efficient production and effective utilisation of a nation's human resources for socio-economic growth and development is linked to the country's timely implementation of Technical and Vocational Education (TVE) policy reform initiatives (Wilson, 1992; OECD, 1996). Wilson (1992) suggests that it is important that policy is regularly reviewed so that TVE systems produce the most ideal quality and quantity of human resources needed for sustainable socio-economic development. This paper suggests that implementing timely and appropriate TVE policy reform initiatives leads

to policy growth and development matching socio-economic development reforms. Such policy growth and development seems to be a pre-requisite for the meeting of global economic development goals, such as the United Nations Millennium Development Goals for 2005 to 2014 (UNESCO, 2005). This paper analyses TVE policy growth and development in the United States of America, in Britain and in Africa with the aim of recommending an idealistic policy growth and development direction for Africa. This would enable her human resources development efforts to meet socio-economic development targets.

Conceptual framework

Technical and Vocational Education refers to any planned acquisition of the skills, knowledge and attitudes intended to develop precise competencies needed for use by participants in specific occupations or work related activities (UNESCO and ILO, 2002; Atchoarena, 1996). Policy is a course or principle of action adopted by a government, party, business, or individual, or is a set of ideas or plans that is used as a basis for making decisions (Zvobgo, 1994; Dictionary of Education, 1990). Policy is also seen as a judgement, derived from some system of values and some assessment of certain national factors, operating as a general plan aimed at guiding decisions regarding the ways and means of attaining desired goals (Nagel, 1980; Dye, 1978). This suggests that people set policy, and the policy guides their actions, either as individuals or as groups.

Technical Vocational Education policy is the officially stated position that provides guidelines or rules for those involved in the planning, decision making and implementation of TVE activities and it focuses mainly on the training taking place in technical and vocational institutions, including the education for workers, but excluding university education and training. TVE Policy Growth and Development is taken to mean quantitative and qualitative changes within the policy that result in increases in the number of policy documents, policy provisions and areas covered, and in increases in the education and training system's ability to perform certain functions, adapt to the socio-economic environment and to changes within that environment (Zengeya, 2007). This suggests that growth is the process by which the policy becomes larger, more numerous or more important as shown by the inclusion of new policy guidelines, provisions or requirements. Growth is simply an expansion of the policy to enable it to cover new areas. On the other hand, development is the process in which the education and training policy passes, by degrees, to a more advanced or mature stage, that is, it changes from a simpler to a more complex form enabling the system to have the ability to improve

on the relevance and quality of graduates (Heraty, Morley & McCarthy, 2000; Good, 1973). Thus, policy growth analysis focuses on quantitative increases while policy development analysis focuses on qualitative improvements to the system and its products.

TVE policy analysis in this paper means the process of identifying the major provisions of technical and vocational education policy and evaluating the underlying assumptions, the actual implementation and the consequences of the policy. This is done with the view of giving an estimation of the policy's growth and development with respect to quantity, quality and relevancy. The analysis is then used to propose how Africa in general, and Zimbabwe in particular can benefit from developments in the United Kingdom and the United States of America in this sphere of social activity.

History of Technical and Vocational Education Policy Growth and Development

TVE policy tends to change with time as suggested above. The change results in TVE policy growth and development which should lead to the TVE system producing graduates that meaningfully contribute towards socio-economic development. The policy change depends on a number of factors, such as the socio-political environment, the level of development and the theoretical model(s) adopted. The discussion below looks at some examples of TVE policy growth and development within various socio-economic settings.

The Roots of Policy Growth and Development

Early forms of TVE systems are found in ancient parent-offspring apprenticeships that are still prevalent in most traditional settings, especially in rural areas. In this setup, the offspring learns the rudiments of a vocation from the parent, or from other skilled members of the community, generally by pickup methods involving observation, imitation, and personal initiative (Fafunwa & Aisiku, 1982; Venn & Marchese, 1965). Historically, the training periods and the conditions of training varied greatly between vocations and between locations, and the training environment varied from favourable to exploitative (Paulter, 1993; Kelly, 1962). For example, Fafunwa and Aisiku (1982) note that one could take as little as one year and as much as ten years to train and become a traditional medical practitioner in Africa. This apprenticeship type of TVE seems to have been suitable for a society whose religious, political, cultural, economic and social institutions were based on very slow rates of change. However, changes to traditional TVE systems were inevitable and the rate of change accelerated with time. With

the passage of time, the parent-offspring method of vocational preparation seems to have been threatened by urbanisation, specialisation and the spread of technological innovation, leading to an ever increasing rate of TVE policy growth and development.

Formal apprenticeship appears to have developed with the rise of specialised occupations that required carefully planned and long continuous training. Good (1960) notes that an example of early formal TVE policy is the Code of Hamurabi written more than four thousand years ago that had provisions to ensure that skilled artisans taught their skills to the young on the job. This indicated that apprenticeship was at an advanced stage both as a customary practice and as a legal institution at that time. Paulter (1993) gives the famous Benedictine Rule governing the training of monks where at least seven hours per day of manual labour was incorporated as another example of early TVE policy. Thus, apprenticeship training and manual labour were built into the foundations for Christianity, giving rise to early forms of TVE policy (Paulter, 1993; Kelly, 1962; Good, 1960). Creating the right conditions for formalised apprenticeship training was, therefore, the earliest form of TVE policy growth and development, making it the foundation for later TVE policy reforms.

Vocational Education in Nineteenth Century Europe

By the turn of the nineteenth century in Europe, formal employment had taken over the function of the home with respect to vocational education and training (Venn and Marchese, 1965; Good, 1960). Venn and Marchese (1965) give the example of factories that were employing large numbers of workers where foremen were initially responsible for training, yet the foremen themselves also needed training. As jobs became more specialised, and more and more people required training, the school became the most logical place where training for vocations would take place. Trade competition among European states seems to have led to the realisation that the nations that had better trained workers tended to produce better quality products and services (Smith, 1999; Venn & Marchese, 1965).

Formal vocational education programmes are noted to have begun early in the nineteenth century in Prussia and Germany (Venn & Marchese, 1965; Good, 1960). Venn & Marchese (1965) note that the Germans developed one of the earliest dual system of education in which one stream followed the academic route and the other the vocational route. Those following the vocational route then trained in trade schools (called *Technikums*) where they would be trained by artisans employed in industry. This system is said

to have produced good quality graduates and their products were very competitive on the world market (Wilson, 1992). By the mid nineteenth century, the British, Australians, Swedes, Italians, French and Russians are said to have adopted the German model for their own needs (Venn & Marchese, 1965; Good, 1960). It appears that by the end of the nineteenth century, the German *Technikum* was a model for vocational educators around the world. TVE policy growth and development in Europe influenced what happened in Africa because of colonisation.

Pre-Colonial Africa's Technical And Vocational Education Policy Growth and Development

Bennell (1991), the World Bank (1989) and Fafunwa & Aisiku (1982) observe that African societies have a long and rich history of education and training. Functionality and practical application were the cornerstone of traditional African technical and vocational skills development. Whatever was learnt was seen as being practical and useful for the individual's role within the society. Education and training was an ongoing concern from early childhood up to one's passing on to the spiritual world. For example, Murphree, Cheater, Dorsey & Mothobi (1975) suggest that the focus of the informal pre-colonial TVE policy in Zimbabwe was subsistence agriculture, with an emphasis on cattle keeping. Division of labour was simple rather than complex and apprenticeship was the main method of training. The informal TVE policy for these traditional groups was training using an apprenticeship mode and skills were passed from parent to offspring or from a craftsperson to the apprentice. In Zimbabwe, the underlying philosophies in traditional TVE were "*Hunhu/Ubuntu*" and "*Umhizha/Unhlichi*". *Hunhu/Ubuntu* focused on building a unique and respectable African identity, and *Umhizha/Unhlichi* focused on developing one's skills to the highest possible level while showing love and pride in one's creations and products (Government of Zimbabwe, 1999; Chigwedere, 1996).

This traditional TVE policy grew and developed with time for it to be evident in present day Africa. An element of this traditional TVE still exists in African countries today, especially in areas such as traditional medicine, traditional arts and crafts and blacksmithing (Riddell, 1980; Mungazi, 1990 & 1993). One can conclude, therefore, that the TVE policy growth and development that occurred before colonisation was positive since it was in line with the then prevailing economic and social activities, leading to a reasonable degree of social, economic and military success for the indigenous African peoples.

Technical and Vocational Education Policy Growth and Development in the United States Of America

TVE policy growth and development in the USA appears to have a long history that dates back to the early days of the establishment of settlements by emigrants from Europe more than three hundred years ago. Bierlein (1993) suggests that in these early settlement days, Christianity played the dominant role in education and training. He observes that the 1830s witnessed the rise of the 'common school' belief that led to the development of a publicly financed elementary education system for the American masses. Smith (1999) notes that this development gave local communities the authority and responsibility for the operation and financing of education and training institutions whereby property taxes became the major means of support. As a result, education and training became available to more of the country's citizens than was the case before, laying the foundations for a strong USA state involvement in TVE.

In the nineteenth century, manual training and apprenticeship seem to have been the cornerstone of TVE policy in the USA. The apprenticeship system had been modelled on the Guild system that prevailed in Britain since it was the colonial authority (Smith, 1999; Wilson, 1992). Smith (1999) argues that even if apprenticeship was the main method of skills training, the rapid changes into industrial type societies in America called for the training of more of the population, placing strong challenges on the traditional apprenticeship method. Guilds were not as strong in America as they were in Britain because of differences in socio-economic environments. Wilson (1992) also observes that the American Depression of 1892-93 revealed the weaknesses of apprenticeship as a strategy for training the manpower needed for competitiveness in the then developing technological society. Thus, the nineteenth century closed with America coming to terms with the realisation that apprenticeship was an ineffective system that could not cope with the rapidly developing industrial technological advances of the nation, calling upon TVE policy to grow and develop to meet the nation's socio-economic challenges.

Before the depression of 1892-93 and at the World's Fair in Paris in 1867, English and American manufacturers had already discovered that their wares were inferior to those produced on the continent of Europe (Good, 1960; Smith, 1999). Smith (1999) observes that they blamed the education system at secondary school level for continuing with its traditional academic orientation, such as the teaching of Greek and Latin. The American

Federation for Labour (AFL) that was already organised by 1886, and the American National Association of Manufacturers (NAM) that was formed in 1895 had set themselves to influencing national TVE policy growth and development.

On the other hand, John Dewey (1916) was critical of the existing TVE system that seemed to validate class stratification by accepting an educational philosophy of social predestination. Mounting criticism from the associations and other stakeholders led to the passing of the Smith-Hughes Act of 1918 that provided Federal support for vocational education for the first time (Drost, 1967; Smith, 1999; Hyslop-Margison; 2001). The Act specified particular vocational programmes, created administrative procedures, and prescribed skills-based training programmes for instruction in agriculture, trade and industries, and home economics (Hyslop-Margison, 2001; Bierlein, 1993). The major weakness of the Smith-Hughes Act was, however, that the programmes included in it were not compulsory, leading to its criticism. Nevertheless, the Act brought the Federal Government into an alliance with the states to offer free vocational education to students attending secondary school, to older persons not attending secondary school, and even to persons already in the workforce (Venn & Marchese, 1965). These were the beginnings of a strong school or college based TVE system in the United States of America.

The depression era of 1930 to 1941 and the Second World War and its aftermath led to various socio-economic challenges that prompted yet another major round of debate leading to USA TVE policy growth and development. In 1943, the National Education Association (NEA) produced its 42nd yearbook that featured vocational education as the topic of greatest importance in American schools (Smith, 1999). The following year, the NEA's Education Policies Commission introduced *Education for ALL American Youth,* a programme that advocated a full range of vocational education and training to prepare high school students for perceived labour force needs (Hyslop-Margison, 2001).

Smith (1999) notes that the launching of the Russian satellite Sputnik in 1957 sparked yet another round of heated debate on TVE policy in America. The debate raged on until the second legislation affecting vocation education, the Vocational Education Act of 1963, was passed into law. Tanner and Tanner (1980) suggest that the Act was the single most influential piece of vocational education legislation since the Smith-Hughes Act of 1918. This is mainly because of its inclusion of a wider range of players, leading to the involvement of the majority of the target population.

The Manpower Development and Training Act of 1962 created the first major federal job training programme initiated at national level. The programme was followed by another under the Economic Opportunity Act of 1964 (the Job Corps Programme) and then the Work Incentive Programme (WIN) of 1967, that provided training to welfare recipients (Smith, 1999). Nevertheless, these various acts seem to have presented a disjointed TVE policy within the nation. The first attempt at consolidating TVE policy in the USA was through the Comprehensive Employment and Training Act of 1973 that transformed a number of population specific job training programmes into block grants, which were then given to the states (Hyslop-Margison, 2001). The 1973 Act devolved the responsibilities for job training to the states and localities. The Job Training Partnership Act of 1982 that replaced the Comprehensive Employment and Training Act of 1973 consolidated and devolved job related training responsibilities to the states. One of the most recent TVE policies in the USA is the Workforce Investment Act of 1998, which became law from 1 July 2001, which established a national workforce preparation and employment system to meet the needs of business, job seekers and those who want to further their carriers (United States Department of Labor [sic], 2001). This Act marked a shift towards better coordination and focus in TVE policy, leading to a better utilisation of human resource.

The above discussion shows that TVE policy growth and development in America was characterised by increases in the provisions for education and training activities, the inclusions of local government, central government and of industry as key players in TVE programmes coordinated at national level, and the funding of TVE activities by the Federal Government. Quantitative aspects of USA TVE policy growth and development included the inclusion of key players and involvement of the Federal Government in TVE activities and institutional or organisational level, while qualitative aspects included making TVE activities relate to the requirements of the job market, and the consolidation of federal funded job training programmes to remove duplication and optimise utilisation of education and training resources. The major triggers for TVE policy growth and development in the USA seem to have been economic performance and fluctuating levels of employment.

Technical and Vocational Education Policy Growth and Development in The United Kingdom

Traditional apprenticeship and technical training in schools and colleges seem to have been the cornerstone of TVE policy in the United Kingdom (UK). Kelly (1962) observes that formal TVE in the United Kingdom has

a very long history dating back to the passing of the Statue of Artificers of 1564 that can be considered the first formal TVE Policy statement in England (Kelly, 1972; Good, 1960). This inaugural statute sought to regulate the training of artisans through laying down conditions under which the training could be done. The formal system of apprenticeship training had first developed in the later Middle Ages and came to be supervised by Craft Guilds and town governments. Craft Guilds were powerful associations of artisans who had formed their own companies after training as apprentices and becoming master craftsman. The master craftsmen were entitled to employ young people as an inexpensive form of labour in exchange for providing formal training in the craft. The Guilds were very powerful and conservative, determining conditions of entry and training as an apprentice (Wikipedia, 2007; Good, 1960). Most apprentices were males, but female apprentices could be found in a number of crafts, such as embroidery and silk-weaving.

Apprentices were young (usually about fourteen to twenty-one years of age), unmarried and would live in the master craftsman's household. Most apprentices aspired to becoming master craftsmen themselves on completion of their contract (usually a term of seven years). To become a master craftsman, the graduate apprentice had to embark on a journey and practise his trade in a far away place. On return to his homeland, he would be referred to as a 'journeyman'. However, a significant proportion of master craftsmen would never acquire or set up their own businesses (Wikipedia, 2007).

Within the schools system, education and training in the UK seems to have started from uncoordinated private enterprise then gradually became government controlled through local authorities. Voluntary societies, chiefly made up of religious bodies and the rich, were the main providers with sons of wealthy parents being sent to expensive public schools in which the curriculum was dominated by Greek and Latin (Good, 1960; Ensor, 1968). However, the education received at non-conformist schools was more closely linked to the world of work and included subjects such as science and accountancy. A government Privy Council Committee was formed in 1839 to administer grants to the voluntary societies, thus gaining supervisory powers. To assist the Privy Council, an Education Department was set up in 1856. Ensor (1968) suggests that the powers of the Education Department were enhanced by the Elementary Education Act of 1870 that divided the country into about 2500 school districts, set up School Boards with powers to build new schools and make their own by-laws, thus, creating healthy competition in TVE activities between local authorities.

The 1870 Act was followed by the Education Act of 1880 that made attendance at school compulsory for children up to the age of 10 (Ensor, 1968). Good (1960) states that the Privy Council Committee was replaced by a Board of Education in 1899, whose work, particularly in secondary education, was extended by the Education Act of 1902 and subsequent legislation. The 1902 Act abolished all 2568 School Boards and handed over their duties to local borough or county councils. These new Local Education Authorities (LEAs) were given powers to establish new secondary and technical schools as well as developing the existing education and training system. The Education Act of 1918 increased central grants to at least fifty percent of expenditure by the LEAs. A Ministry of Education replaced the Board of Education through the Education Act of 1944 (Wilson, 1992; Ensor, 1968). The Act envisaged education as a continuing process and established the principle of secondary education for all, and the school leaving age was increased to 16 years. The permissive powers of local authorities were replaced by compulsory powers (Ensor, 1968; Good, 1960).

Kelly (1962) and Good (1960) observe that criticism of the employability skills of school graduates and the education of workers during the late eighteenth century led to the mechanics institute movement. By 1850, there were 622 Mechanics Institutes in England and Wales with over 600,000 members (Ensor, 1968; Tylecote, 1957). The term 'mechanic' was used to refer to artisans of all trades who were involved in the various industries. However, the institutes eventually passed from the mechanics to the middle class, partly because few artisans had a good elementary education and partly because too few found direct use for a knowledge of science (Wilson, 1992; Ensor, 1968; Kelly, 1962). Ensor (1968) notes that the mechanics institute movement led to the development of national examination systems for vocational and technical areas. The examination systems thus developed were the College of Preceptors founded in 1853, the Society of Arts in 1856-7, and state examinations from 1859 onwards. Wilson (1992) observes that the City and Guilds of London Institute took over from the Society of Arts in 1879.

By 1880, the existing TVE institutions in the United Kingdom were being criticised for not responding to individual and society's needs (Ensor, 1968; Kelly, 1962). Ensor (1968) notes that these criticisms led to the passing of the Technical Instruction Act of 1889 that established a local authority for technical education (the county, or county borough, council), and it removed the requirement in the previous legislation for payment of grants to 'industrial classes' only, a term that seemed to exclude most of the future masters and

managers of factories (Wilson, 1992; Ensor, 1968). The 1889 Act empowered the councils to levy industry and to raise large sums of money through loans for new buildings, leading to the expansion of the TVE system in most metropolises. At that time, general education was under the Department of Education and TVE examinations were under the Science and Art Department. The two departments were united in 1899 and this was legalised by a 1902 Act (Wilson, 1992; Ensor, 1968).

Wilson (1992) notes that, while the government had been responsible for funding post secondary education, the funding of TVE after secondary education was the responsibility of employers up to 1964. The Industrial Training Act of 1964 is seen as being the first major government intervention in the training sector as the British government reversed long-standing laissez-faire policies (Kelly, 1962; Wilson, 1992). The Act created 24 Industrial Training Boards (ITBs) in a variety of industrial and service sectors. The Employment and Training Act of 1973 introduced central co-ordination and planning of labour force policy, creating the Manpower Services Commission (MSC). The MSC was created to co-ordinate, and later replace the ITBs. The creation of the MSC resulted in the transfer of training administration and operating costs from industry to the government. Nevertheless, economic restructuring of the Margaret Thatcher Government during the mid 1970s led to rising unemployment and a decline in industrial training (Wilson, 1992; Ainley and Green, 1996). By the late 1970s, MSC expenditure seems to have shifted from skills training to social programmes with a training content.

The Employment Act of 1987 reorganised the MSC, renaming it the Training Commission, and effectively dismantled it. With that move, the responsibility for the financing of training was shifted from government back to the employers. The Education Act of 1988 and the Further and Higher Education Act of 1992 are seen as having marked a shift in 'knowledge policy' in the United Kingdom (Ainley and Green; 1996). This is because the previous policy had been based upon imitation of Germany's 'dual policy' of education and training, especially during the days of the MSC. Under this policy, first the Youth Opportunities Programme (YOP) in 1978, and then the Youth Training Scheme (YTS) in 1983, were introduced to replace the apprenticeships that had virtually disappeared with the collapse of manufacturing industry after the end of the long boom in 1973. The current industry-led National Vocational Competencies and Qualifications (NVCQs) framework then replaced these schemes. The NVCQ set up is based on the North American model (Ainley and Green, 1996). This seems to have signalled the serious scaling down of

traditional apprenticeship training in the UK, with the major thrust now being on college diplomas and degrees.

The above discussion shows that TVE policy growth and development in the UK occurred in a manner largely different from what took place in the USA. Even if traditional apprenticeship was the original cornerstone of TVE policy growth and development in both countries, the USA abandoned the apprenticeship system much earlier than the UK. However, the TVE policy growth and development in both countries was linked to identified deficiencies in the human resources skills needed for socio-economic prosperity. The TVE policy reforms that occurred in both countries seem to have been aimed at matching TVE policy growth and development with economic development. This is because the policy growth and development was in response to human resources requirements for sustainable economic development. TVE policy growth and development in the two countries had a bearing on developments in Africa as discussed below.

Technical and Vocational Education Policy Growth and Development in Colonial Africa

In this discussion, colonial TVE policy refers to the policy for the education and training provided to Africans during the rule by foreigners from outside Africa. In most parts of Africa, the policy started with the rule by Arabs, followed by either the Portuguese, Belgians, Spanish, French, Italians, Germans, or the British (Batey, 1955; Fafunya & Aisiku, 1982; Munowenyu & Murray, 1990). Colonial powers began their colonisation by introducing, into these countries, a new range of economic activity that needed workers with a certain new level of education (Lauglo & Lillis, 1988; Mungazi, 1990). The activities included the commercialisation of some of the traditional agricultural crops for export, the establishment of mining ventures in areas where valuable mineral resources existed or some other activity that suited the colonisers' interests. The colonisers also put in place TVE policies that sought to groom a group of loyal "comprador elites" to hold key administrative and supervisory positions for a minority selected from the locals (Lauglo & Lillis, 1988).

Colonial TVE policy was in line with the policy of the European missionaries who were already active in most parts of the continent when colonisation took place at a large scale after the Berlin Conference of 1884 (Fafunwa & Aisiku, 1982). Missionaries were providing a limited amount of TVE within their mission settlements since their education focused on the teaching of

the Africans how to read and write so that they could read the Bible and some would become clerks, secretaries and preachers. The limited amount of TVE provided by the missionaries was within the Liberal philosophy and focused on home craft skills, such as building, carpentry and tailoring. In the face of criticism of missionary education by progressive thinkers within and outside the colonies, the colonialists became involved in the limited provision of TVE to the indigenous Africans, especially after the Second-World War in which African soldiers fought side-by-side with European solders (Fafunwa & Aisiku, 1982). However, the changes seem to have just shifted the emphasis of education and not the aim. This was because separate provisions for the indigenous locals and for the settlers were generally maintained within colonial education and training systems up to the attainment of political independence by the colonies.

Fafunwa and Aisiku (1982) note that colonial education was characterised by lack of coordination, especially during the early colonial period. This lack of co-ordination was evident within the colonies and within the African continent. For example, each colonial power imposed its own system of education on the colony, regardless of what was happening next door. Even if transforming the lives of the locals through their adoption of foreign cultures was the common aim of colonial education and training, wide differences were evident from country to country, and between schools and colleges supported by different missionaries within one country (Fafunwa & Aisiku, 1982; Mumbwengegwi, 1986). For example, the French focused on "Frenchising" the Africans through a policy of assimilation and association that made education in their colonies a replica of the education system in France. The British were interested in establishing Anglo Saxon systems and culture in the colonies, with the TVE systems in the colonies seemingly based on policies that were replicas, or were very similar, to those in Britain.

Colonial administrations in general tended to provide to the locals education and training that was not aimed at benefiting them within their culture. The curriculum was very narrow and was aimed at placing the Africans in auxiliary positions in the new socio-economic environments that were established after colonisation (Fafunwa & Aisiku, 1982; Bacchus, 1988). This means that colonial TVE policy grew and developed in a direction that was not meant to be appropriate for the needs of indigenous Africans, but was aimed at placing them in subordinate roles in the formal employment sector. In comparison, TVE policy for the colonialists' children in Africa (including Indians and Coloureds) grew and developed in a direction aimed

at providing a superior system aimed at preparing them into managerial positions in the public sector, and in commerce and industry (Fafunwa & Aisiku, 1982; Riddell, 1980; Mungazi, 1990). This led to TVE policy growth and development up to independence that facilitated separate and distinct TVE systems, a superior one for the settlers' children, including those for Indians and Coloureds, and an inferior one for the Africans, prompting the Africans to fight for independence to correct the imbalances.

Post-colonial Africa's Technical and Vocational Policy

Saunders and Sambili (1995) argue that the equitable distribution of educational opportunities was core to most, if not all, independence struggles in Africa. The failure to have full access to the education and training system curtailed the Africans' chances of leading a life similar, or equal, to that of the colonialists. Since they had very limited access to TVE during colonial rule, most Africans found themselves failing to access gainful employment and high paying jobs (Atchoarena, 1996; Fafunwa & Aisiku, 1982). This led to a situation where there were widespread policy changes with the attainment of independence by most African governments as they endeavoured to uplift the lives of their people. TVE policy growth and development was linked to economic development by the new African governments.

Trends Soon After Independent

At independence, the majority rule governments that came into power in African countries acknowledged that colonial systems had natured a TVE policy growth and development that resulted in TVE systems that were inappropriate to their needs. Most independent governments then embarked on TVE policy reforms aimed at correcting the imbalances created by colonial regimes (Atchoarena, 1996; Zvodgo, 1994; Fafunwa & Aisiku, 1982). As a solution, most newly independent majority rule governments adopted nationalist, socialist and pan-Africanist policies and made education and training a human right issue. It appears the resultant TVE policy was meant to be people centred, seeking to give power to the people by removing all forms of discrimination of the colonial era, and by increasing access into, and the output of, the TVE system.

Generally, newly independent governments invested heavily in TVE systems reforms as a way of filling the gaps left by fleeing skilled whites. The heavy investment was also aimed at correcting the imbalances of the past and bringing indigenous blacks into the mainstream of economic activities. These initiatives received generous support from donors during the first few

years of independence in most African countries. The support seems to have been aimed at encouraging the Africans to carry on utilising the education systems that had been created before independence through focusing on expansion rather than on meaningful curriculum innovating reforms. As a result, the general inappropriateness of the TVE systems was perpetuated, eventually contributing to the large-scale emigration of African TVE system graduates to the countries of their former colonial masters.

Atchoarena (1996) argues that in spite of the relatively heavy expenditure on TVE systems by African governments, clear evidence of the return on investment was lacking. Saunders & Sambili (1995) further observe that the educational reforms and the qualifications attached to them were expanded more for political and cultural reasons than for functional propriety. The expansion in most African post-colonial TVE systems resulted in the overproduction of graduates and rising unemployment (Riddell, et al., 1997; Bennell, 1991). This rapid expansion of the TVE systems in newly independent African countries seems to have resulted in the production of a huge resource of a young trained indigenous people and the rapid Africanisation of key positions in the public service, commerce and industry, creating a generally young establishment through to the highest positions. This was more evident in the public sector than in commerce and industry (Bennell, 1991).

The long-term effect of this situation seems to have been that many young Africans reached the highest positions of service quickly, so that prospects of promotion were reduced or blocked for those that entered the race a little later. For example, this situation was evident only a few years after independence in Kenya, Zimbabwe, Ghana and many other African countries (Zvobgo, 1997; Saunders & Sambili, 1995; Chivore, 1992). Makau (1985) and Hughes and Mwiria (in Saunders & Sambili, 1995) have suggested that there now exists a syndrome characterising the post-independence period to date in which the number of educated aspirants for employment in African formal employment sectors consistently outstrip the capacity of the sectors to create real opportunities. These rising levels of unemployment have led to an exodus to developed countries by the graduates of TVE systems in Africa and have presented very strong challenges to African governments. For example, Zimbabwe's National Economic Consultative Forum estimated that nearly one-quarter of Zimbabwe's population had emigrated in search of greener pastures by the end of the year 2003, creating serious shortages n critical areas, such as teaching, the health sector and the engineering lisciplines (National Economic Consultative Forum, 2004). It appears that

by the year 2005, there were more African TVE system graduates in th
Diaspora than within the continent of Africa. The continent was facing ;
need for TVE policy growth and development to address the challenge:
of appropriateness and relevance of local TVE systems in order to utilise
investments in human capital.

The above discussion suggests, therefore, that TVE policy growth and
development after political independence in most African states has been
in response to perceived imbalances within colonial TVE systems. The
resultant post independence TVE policy growth and development tended to
be in response to calls for a more people oriented policy through the opening
up of opportunities that had been denied to the local indigenous Africans.
The implementation of the policy reforms enjoyed considerable support from
donors, such as the European Union, the Canadian Development Agency
(CIDA), the United States Development Aid (USAID), the World Bank and
many Non Governmental Organisations (NGOs) during the early stages of
independence. However, this support has tended to wane with time, and
resource allocations to the TVE systems declined, leading to an apparent
compromise in the quality of service from the systems. It appeared the
close of the twentieth century was the time for further TVE policy reform,
as acknowledged by the African Union, COMESA and the World Bank.
The reform should have been aimed at directing TVE policy growth and
development towards addressing the individual, as well as the regional,
needs of the African labour markets.

Policy Challenges For African Countries

By the end of the first five years of the twenty-first century, TVE systems in
Africa had to respond to the challenges of excessive rigidity, reduced levels of
training resources (especially financial allocations from central government),
poor teaching quality, isolation from industry and low external efficiency
(Zvobgo, 1997; Atchoarena, 1996; Saunders & Sambili, 1995; Chivore, 1992).
Atchoarena (1996) has argued that shrinking donor support and government
budgets were leading to a marked deterioration of TVE systems towards the
close of the twentieth century, while privatisation and restructuring of large
portions of industry tended to increase unemployment and push a growing
part of the urban labour force towards the informal sector. The problem was
evidenced by a large number of system graduates failing to be gainfully
employed within the formal sector. This means that the informal sector in rural

and urban areas was playing an ever-increasing role in African economies, yet the TVE systems had not prepared most of the graduates for this kind of environment (Bennell, et al., 1999; Mandebvu, 1994).

Most Africans live in rural areas and depend on agriculture. For example, Zimbabwe's population census for 2002 revealed that about seventy-five percent of the economically active population lived in rural areas (Government of Zimbabwe, 2002). Within this rural population, 55 percent were females, and over 60 percent of them were in agriculture related occupations. This means that a higher overall economic activity in Zimbabwe in 2002 was in rural areas than in urban areas, and agriculture was the dominant activity. This situation is typical of most, if not all, African countries south of the Sahara Desert. Even if some training for rural peasants takes place in TVE institutions in rural areas, the number of rural peasants requiring training in agriculture heavily out-weighs the training centres' or colleges' capacity in African countries (Bennell, et al., 1999; Mandebvu, 1994; Bennell, 1991). This requires African TVE policy to grow and develop in a direction that best addresses the needs of rural populations, especially rural women. This is also in view of the fact that the majority of African secondary schools are in rural areas. However, these graduates prefer to look for employment opportunities in urban areas rather than in rural areas (World Bank, 1990; Atchoarena, 1996). Such a preference should lead to a situation where the majority of African tertiary institution system graduates are likely to be found in urban rather than in rural areas. One can propose, therefore, that since the majority of African citizens reside in rural areas and derive their livelihood from agriculture, TVE policy should grow and develop in a direction aimed at addressing this reality.

Comparing Western and African Technical and Vocational Education Policies

TVE policy growth and development in western developed nations seems to have been influenced by modernisation theories, especially the Human Capital theory as evidenced by a desire to enhance the standard of living of the majority of the people through improved economic performance at global level (Ainley & Green, 1996; Wilson, 1992; Torres, 1991). In the United States of America, the policy makers' concerns were largely to do with the availability of useful work related skills in the majority of citizens through focused state involvement in TVE activities (Wilson, 1992). TVE policy in western nations seems to have generally grown and developed from heavy reliance on the traditional apprenticeship system to competency

passed models that aim at developing a broader range of skills within the high school system, skills that are then refined or further developed at tertiary level. The TVE policy growth and development in Western societies has led to elaborate education and training systems for workers that ensure a sustained upgrading of skills and the continued learning of new skills as required by the ever changing work environment (Smith, 1999; Hyslop-Margison, 2001).

In comparison, TVE policy growth and development in African countries has been influenced by the need to mould unity, especially with respect to the issues of racial discrimination and access. Most African education and training systems seem to have retained the important characteristics of the Western education TVE systems they inherited at independence, albeit with cosmetic modifications. The curricula seem to have been modified for social reasons, rather than for economic ones, maintaining the systems' inappropriateness of colonial times as evidenced by a rather heavy emigration of system graduates to Western economies. Increased access to the TVE system by Africans after independence only resulted in ever increasing under-utilisation rates. The increased access to the TVE system has not been met by similar increases in the availability of jobs in the formal job market, resulting in high graduate underutilisation levels. Graduates of African TVE systems have, as result, turned to the informal sector for employment, and have emigrated in large numbers to more active economies, especially outside the African continent.

TVE policy growth and development in African countries generally seems not to have taken a direction that addressed the needs of the local job markets within a majority of companies established before independence, tending to maintain the curricula of colonial times. Furthermore, TVE policy growth and development in African countries seems not to have benefited from available TVE policy growth and development analysis research, even if a considerable amount of this research has been carried out on African TVE systems. This suggests that research on the TVE policy growth and development seems to play a more significant role in guiding policy formulation by policy makers in Western nations than in African countries. For example, policy makers in the United States of America, United Kingdom and Japan have relied on research for reviewing and improving on policy (Borg & Gall, 1989). Even if research on the financing of technical and vocational education in Sub-Saharan Africa by the World Bank led to the review of the Bank's funding policy for TVE programmes in these Africa countries, not much use of research has been implemented across the board in Africa (World Bank,

1990; Atchoarena, 1996). The World Bank sponsored education and training research in Kenya and Nigeria, observing that the countries had serious manpower constraints that impinged negatively on development, leading to the Bank sponsoring the 'Return to the Basics" programme (Katedza, 1987:36). The Organisation for Economic Cooperation and Development (OECD) has carried out studies in member countries and presented TVE policy reform proposals for member states. For example, the research by the OECD led to large-scale and widespread reform and TVE policy growth and development in member countries in the mid 1990s (Dwyer and Wyn, 1998; Levin, 1997). The development of post compulsory education TVE policy in Australia from the early 1980s seems to have been influenced in its beginnings by major OECD reports on youth policy, such as OECD/ CETI 1983 and OECD 1984 (Gleeson, 1995; Dwyer & Wynn, 1998). In a similar manner, the European Union (EU) has produced White Papers that have highlighted the necessity for increased investment in education and training as a strategy for improved economic performance (Heraty, et al., 2002). The EU has put in place such programmes as Leonardo Da Vinci, Socrates, New Opportunities for Women (NOW), and ADAPT that aimed at aiding member states in coming up with new TVE policies that focus on improved economic performance (Lauglo & Lillis, 1988; Heraty, et al., 2000).

Research on TVE policy growth and development seems to have been used in many developed countries to aid policy makers in coming up with new more focused and effective policies. For example, in his analysis of the expansion of technical education and training in Hertfordshire in the United Kingdom during the 1920s and 1930s, Parker (1995) showed that a well planned and focused TVE policy growth and development contributes positively towards economic growth. In that research, a clear and focused TVE policy was seen as critical for national economic growth and development to take place. Weiss (1977) and Wilson (1992) note that every TVE policy growth and development initiative in the United States of America has been preceded by research and a strong national debate on the research's findings. This means policy research is an important ingredient for TVE policy growth and development.

Recommended Technical and Vocational Education Policy Growth and Development Direction for Africa

It is in view of the foregoing that this researcher undertook to study TVE policy growth and development in the United States of America, Britain and Africa. This discussion, therefore, should provide useful information for

understanding current TVE policy related problems being experienced by many African countries, including Zimbabwe. This researcher is proposing the following for an ideal TVE policy growth and development to take place within Zimbabwe and other Sub-Saharan countries:

1. African technical and vocational education systems should respond to the skills, knowledge and attitudinal needs of local dominant economic activities (for example, rural agriculture, the informal sector and small and medium enterprises);
2. Technical and vocational education curricula in African countries should aim at developing independent and home grown appropriate science and technology, moving away from being carbon copies of curricula in the countries of former colonial masters;
3. Technical and vocational education policy growth and development in African countries has to effectively address the knowledge, skills and attitude needs of socially disadvantaged groups, such as women, the unemployed or underemployed and rural communities, since these comprise the majority of most of their national populations;
4. African governments should not only create employment opportunities within their agricultural, commercial, industrial and other sectors, but should also create effective and efficient technical and vocational education systems that utilise indigenous structures for developing and utilising appropriate technologies designed and developed through African creativity and ingenuity; and
5. African technical and vocational education policy growth and development should be guided by research conducted within Africa by her researchers.

In conclusion, one may confidently observe that the growth and development of Africa's TVE policies from colonisation to the first five years of the twenty-first century has not adequately met the continent's human resources requirements as evidenced by a rather high graduate underutilisation and emigration to other continents. Not enough employment opportunities are created within the continent to keep these graduates. An idealistic future policy growth and development direction for the continent is one in which national TVE policies adequately address the continent's human resource challenges in relation to international socio-economic development objectives that include poverty reduction and effective local utilisation of system graduates. This means that national policies should best grow and develop in a direction that is in tandem with socio-economic development to ensure realisation of international development objectives.

African TVE policies should set the right environment for producing national human resources in adequate quantities and qualities for the various levels of knowledge, skills and attitudes required by their economies that are now supposed to look at home grown solutions to socio-economic development challenges. Africa urgently needs a dedicated and patriotic labour force that does not look to other continents for employment, which means that she needs to create politically and economically stable, enabling working conditions. Her TVE policies should grow and develop in a direction that will produce this labour force. This should see the continent's TVE policies grow and develop in an ideal direction that should be in harmony with socio-economic development objectives, thereby guaranteeing social and economic prosperity.

Summary

This discussion has shown that the major issues with respect to TVE policy growth and development relate to quantitative and qualitative changes within the policy. Examples of TVE policy growth and development have been given from the United States of America, the United Kingdom and Africa. Industry and private individuals guided British TVE policy growth and development. Early British TVE policy was heavily guided by Craft Guilds and later by employers in industry and commerce. Being a former colony of Britain, early TVE policy growth and development in the United States had strong links with practices in Britain. The system was heavily dependent on apprenticeship training during its formative years. However, from the mid nineteenth century onwards, the system moved away from heavy dependence on apprenticeship training to school and college-based training with heavy Federal Government involvement. This made the system more non-traditional than the British system.

Formal African TVE policies originated from practices in the European countries that had colonised the continent during the nineteenth century. Nevertheless, the TVE policies that were adopted during the colonial period were not relevant to the needs of the African continent but were meant to benefit the colonising countries. This led to independence governments reforming TVE policies with the hope of addressing the imbalances created by colonial administrations. The reforms tended to address social concerns rather than economic ones. This led to a high unemployment and underemployment for African TVE system graduates, with most of them leaving the continent to seek employment in other continents, suggesting that African TVE policy was not growing and developing in a direction that addressed Africa's needs.

As a solution to the problem of African TVE policies growing and developing in a direction that does not address local needs, this study has recommended that the policies should respond to the economic needs of dominant local economic activities such as agriculture, the informal sector and small and medium enterprises. The curricula in African countries should aim at developing independent and home grown science and technology, moving away from being carbon copies of curricula in Western countries. It is important that African TVE policies grow and develop in a direction that effectively address the knowledge, skills and attitude needs of specific groups, such as women, the unemployed or underemployed and rural communities. These groups comprise the majority of most national populations and empowering them through appropriate TVE policy should lead to changes that can be widespread, long lasting and of immediate benefit. African governments have to create stable, enabling political and economic environments, and TVE systems that develop and utilise appropriate technologies designed and developed through relevant African creativity and innovation. It is this researcher's sincere belief that implementing these recommendations will lead to African TVE policies supporting economic reforms and contributing to socio-economic prosperity for the continent.

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