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INFLUENCE OF AWARENESS AND INSTITUTIONAL ACCESSIBILITY ON THE CHOICE OF TRAINING BY STUDENTS IN TECHNICAL INSTITUTES OF SCIENCE AND TECHNOLOGY IN BUNGOMA COUNTY, KENYA

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Abstract:
In Kenya, TVET programmes in technical institutes of science and technology usually target the population of students who do not progress to secondary school and higher levels of education. However, while the number of students in schools continues to increase due to population growth, the number of school leavers enrolling in technical institutes of science and technology for various career courses has remained low over the years. This paper is a report of a study whose objective was to determine whether and how awareness and institutional accessibility influenced the choice of training by students in technical institutes of science and technology in Bungoma County in Kenya. The study was guided by social cognitive career theory of 1994 as posited by Lent, Brown and Hackett. A mixed methods methodology and descriptive survey research design guided the study. Purposive, stratified and simple random techniques were employed to select the research sample. The sample comprised of students pursuing Artisan Certificate and Diploma levels of training. A sample size of 291 students from a population of 1124 was used. The data was collected using questionnaires whose reliability and validity was tested and determined. Descriptive statistics was used in data analysis with the help of the statistical package for social sciences (SPSS) programme. The results indicated that students were aware of TVET institutions but were unaware of the courses offered and the entry requirements. These could be among the factors contributing to low enrolment in TVET institutions in the region. Most of the TVET institutions in Bungoma County were accessible by the students. The study

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recommended that the TVET institutions should advertise their courses more especially by sending their brochures to primary and secondary schools.

Keywords: technical and vocational education and training; awareness; accessibility; enrolment

1. Introduction

Technical and vocational education and training in Kenya has been receiving less attention as observed by a number of researchers. This has been confirmed by the low funding the institutions receive from both the government and the donor community. As a result, technical and vocational training education has become very expensive and unaffordable to many people especially the rural poor. This was ascertained by Ngerechi, (2003) and Nyerere, (2009) whom separately observed that there was a funding constraint that required solutions to increase access to the TIVET institutions.

Fluitman, (2005) argued that, Most TIVET institutions are located in the urban areas and those found in the rural areas are far apart making them inaccessible to most people. On the other hand, Afeti, (2009), observed that TVET is more expensive to deliver as compared to other educational levels, particularly primary and secondary education. He also found that, in many African countries, children of poor parents are unable to afford the fees charged by the training institutions. This has limited access to the TVET institutions.

Good decision making process relies on adequate information and effective strategies for making choice. This could be one of the factors that have influenced the choice of TVET choice by most of the students as observed by Borchert (2002). That is, the level of awareness by the population on the existence of certain preferential courses in these TVET institutions could be lacking therefore hindering decision making by the students. This paper is a report of a study whose objective was to determine whether and how awareness and institutional accessibility influenced the choice of training by students in technical institutes of science and technology in Bungoma County in Kenya.

1.1 Background of the study

Technical and vocational education and training (TVET) is broadly defined as education which is mainly to lead participants to acquire the practical skills, know-how and understanding necessary for employment in a particular occupation, trade or group of occupation (Atchoarena, & Delluc, 2001). Such practical skills or knowhow can be

provided in a wide range of settings by multiple providers both in the public and private sector.

Recently, the government of Kenya elaborated a new development blue print, the Vision 2030 that aims at making Kenya a newly industrializing middle income country providing high quality of life for its citizens by the year 2030. This is in line with the first Millennium Development Goal, to eradicate extreme poverty and hunger. This can be achieved through skill training which is critical for sustainable industrialization and poverty reduction in terms of creating a mass of technical and entrepreneurially qualified people, who are able to stimulate investment opportunities, create jobs and increase productivity, GoK, (2007).

King and Palmer (2008) argued that there appear to be a renewed interest in vocational education and training in developing countries in the last years. On the other hand, the African Union [AU] (2007) observed that, there is a fresh awareness among policy makers in many African countries and the international donor communities of the critical role that TVET can play in national development.

Kenya Education Sector Support Programme [KESSP] 2005 – 2010 (GOK, 2005) outlines three main objectives of TVET in Kenya :

(i) Provide increased training opportunities for school leavers that will enable them to be self-supporting;

(ii) Develop practical skills and attitudes which will lead to income earning activities in the urban and rural areas;

(iii) Provide technical knowledge, vocational skills and attitudes necessary for manpower development.

Achievement of these objectives can however be hampered by a number of factors as observed by O'Brien (1996), that, every student carries the unique history of their past and this determines how they view the world. That history created, in part by the student's environment, personality, and opportunity, will determine how students make career choices. It then follows that how the student perceives their environment, personality, and opportunity also will determine the career choices students make.

Venable, (2011) observed that career choices are not made based on one factor but on many influences, that is, individual, cultural, social and environmental. She also says that the combination and interaction of various influences on decision is unique to trainees and their situation. Natallie, (2006) in a study on factors influencing career choices of adolescents and young adults found out that young adults and adolescents are faced with obstacles that deter them from implementing their future career choices. In the study all youths voiced that the lack of financial resources to attend additional

schooling or training, college acceptance and being capable of graduating as their major barriers.

The Totally Integrated Quality Education and Training (TQET) report of the commission of inquiry into the education system of Kenya (GOK, 1999), observed that, although the 8-4-4- system of education introduced in 1987 was expected to encourage orientation towards acquisition of technical skills, there was tendency to look down on technical education. In all the districts visited by the commission, it was observed that only those who could not make it to secondary school were admitted to technical institutions while in North-Eastern Province technical education was regarded as being for the "tumal" or lower classes, leading to poor enrolment.

The commission insisted that if Kenya is to move forward towards industrial and technological development, one of the major challenges it to change this attitude so that technical education becomes accepted as the tool that will enable Kenya to achieve accelerated economic development through industrialization. However, while the number of students in schools continues to increase due to high population growth rate, the number of school leavers enrolling in youth polytechnics and institutes of technology for various career courses is declining.

Ferej, Kitainge and Ooko (2012) observed that in Kenya the informal sector provides training to more youth than all the formal systems combined together. This thus calls for a study on factors influencing the choice of technical and vocational training by students in institutes of science and technology in Kenya. In Kenya, technical and vocational education training programs are offered in institutes of science and technology, technical training institutes and youth polytechnics.

Due to this there is need to investigate the extent to which awareness and institutional accessibility influence the choice of technical and vocational training programs by students in institutes of science and technology in Kenya and this was the purpose of this study.

2. Research Question

The Research Question that guided this paper was: To what extent does awareness and institutional accessibility influence the choice of TVET in technical institutes of science and technology in Bungoma County?

2.1 Statement of the Problem

According to the Ministry of Education and Ministry of Higher Education, Science and Technology sessional paper of 2012, the TVET sub-sector in Kenya has experienced

moderate growth over the last 40 years. However, the sub-sector is yet to produce adequate and skilled middle level human resource required to meet the demands for national development. The Vision 2030 on the other hand placed special demands on TVET as the leading engine that the economy must essentially rely upon to produce adequate levels of middle level professionals that will be needed to drive the economy towards the attainment of the vision. The vision 2030 intends to create a globally competitive and adaptive human resource base to meet the requirements of a rapidly industrializing economy. This is to be attained through life-long training and education. This would be achieved through establishment of new technical training institutions, as well as the enhancement of closer collaboration between industry and training institutions. It proposes increasing the school enrolment rate to 95% and increasing the transition rates to technical institutions and universities from 3% to 8% by 2012.

However, TVET sector is faced with a challenge of negative perception and poor image which has accumulated over time and has been unattended. Sometimes, TVET is seen as last choice form of education and not a preferred option in education and training as observed by the Ministry of Education and Ministry of Higher Education, Science and Technology in Session paper of 2012.

Due to this, the researcher felt that it was timely to investigate the factors influencing the choice of technical and vocational training by students in technical institutes of science and technology in Bungoma County, Kenya. The researcher has come across many students in the region who after graduating from secondary school just remain at home or engage in other income generating activities without any technical skills required for such activities. The researcher also conducted a survey on the TVET institutions in Bungoma County and noted low enrolment in the institutions despite having many facilities that would accommodate more students. This study thus investigated whether and how awareness and institutional accessibility influenced the choice of TVET in technical institutes of science and technology in Bungoma County?

2.2 Justification of the Study

The TVET philosophy is based on national development agenda and in particular, Vision 2030. It is focused on providing skills that meet workplace needs as well as self-employment. Tertiary education, including TVET, is premised on the principle "education and training for the workplace". TVET is therefore provided for the purpose of guaranteeing human and economic development. The outcomes of TVET must therefore be human resources fit for the job market. Vocational Education and Training component is responsible for the production of skilled operators to service construction, maintenance and operation of equipment and infrastructure. (GoK, 2012).

Kenya on the other hand has a large cheap unskilled labour force as a result of lack of education and training. This clearly shows that the role of TVET institutions in offering skills and knowledge has not been keenly appreciated (Mureithi, 2009). TVET programmes in Kenya targets to absorb the large proportions of students who cannot progress to the secondary and higher levels of education. Out of the approximately 600,000 graduates of primary education, only 350,000 proceed to the secondary school. At the end of secondary cycle, only 20,000 proceed to the university and the rest 200,000 are expected to be catered by the middle level colleges and TVET Institutions. In 2007, the enrolment in TVET Institutions was 76,516 (Nyerere, 2009). Dahl (2003) and Simiyu (2003) in their studies indicated that enrolment in TVET institutions was declining.

In 2010, 357,488 candidates sat for the Kenya Certificate of Secondary Education (KCSE) examination. Of this number, 97,137 obtained the minimum requirement for University admission at C+. The public universities in that year admitted 32,000 students while the private universities admitted another 10,000 students. In 2011, the enrolment in public TVET institutions was 60,000 with the annual intake being roughly 25,000. Other middle colleges in the public and private sectors are estimated to have admitted another 75,000 students. Thus of the 357,488 KCSE candidates in 2010 only 142,000, or 40% could find opportunities for further or higher education. The rest 215,488 or 60% have to seek room in the existing structure to undertake formal training or join the workforce. There is no doubt that this constitutes a huge loss to the national economy (GoK, 2012). These arguments point to the need to investigate the extent to which awareness and accessibility influence the choice of technical and vocational training by students in technical institutes of science and technology in Kenya.

3. Theoretical Framework

The study was guided by Lent, Brown and Hackett's Social Cognitive Career Theory of 1994. The Social Cognitive Career Theory (SCCT) is a framework based on Bandura's (1986) social learning theory. The theory attempts to complement and build conceptual linkages with existing career development theories. SCCT concepts are primarily derived and adapted from Bandura's social cognitive theory (SCT). SCT is a learning theory that emphasizes the role of a person's cognitive processes and mechanisms in guiding motivation and behavior. It proposes overt behavior is a byproduct of the interchange between a person's experience and self-system. However, experience is formed through continual interaction with a surrounding environment. Environmental information can be transmitted to an individual directly, vicariously, and/ symbolically. Bandura emphasizes observation as a major source of environmental information. The

environment in this case will be access to facilities, information, knowledge and persons s/he will be interacting with. This theory was used to determine whether and how awareness and accessibility influenced the choice of technical and vocational training by students in technical institutes of science and technology in Bungoma County in Kenya.

3.1 Literature Review

In this section, is literature review on awareness of and accessibility of TVET in Kenya. According to Nyerere (2009), the main objective of TVET is to improve access to good-quality vocational education. Ngerechi (2003) also posits that, among other aims of TVET is the provision of increased training opportunities for the increasing school leavers and continuous upgrading of skills and knowledge at the pace and ability of the trainees.

In a study of factors influencing career choices, Natallie, (2006) found out that most adolescents and young adults are faced with obstacles that deter them from implementing their future career choices. In the study all youths voiced that the lack of financial resources to attend additional schooling or training, college acceptance and being capable of graduating as their major barriers.

Afeti, (2009), on comparison between primary and secondary levels of education, found out that TVET is much more expensive to deliver. He also did found that, in many African countries, children of poor parents are unable to afford the fees charged by training institutions. From the findings, he did observe that, the good technical and vocational schools are located in the big towns and cities, thereby limiting access to rural folks.

Fluitman, (2005), observed that most of these institution are located in the urban areas and those that are located in the rural areas are far apart making them inaccessible to most people. Nyerere, (2009), and Ngerechi, (2003), also did concur with the observation and concluded that, it was a constraint that needed solutions to increase access without necessarily creating a multiplicity of TVET institutions.

Amuka (2011), on examination of effects of cost sharing policy on science and technology education and training in Kenya established that there was curriculum inflexibility due to cost implications. Some courses were too expensive for the students to undertake. The Ministry of Education, Science and Technology, Sessional paper No.1 of 2005, on policy framework for training and research, noted that the challenges facing this sub-sector include; inadequate facilities and capacities to cater for those who complete primary and secondary education and which undertake TIVET training. It also observed that equipment and physical facilities used for training are inadequate,

old and outdated. It also noted that most of the training reference materials and textbooks are sourced from oversees, which make them costly hence unaffordable.

Mwiria (2005) also observed that the cost of teaching vocational subjects in Kenya, with exception of business studies, has proved to be higher on average than that of teaching all other subjects. From this, it can already be deduced that technical and vocational education is quite expensive to be afforded by most people and in particular the poor rural in Kenya. Most of them are also located away to be easily accessed by most people. For instance in Mt. Elgon there is only two institutions offering technical and vocational training which would make it difficult to access in terms of proximity.

Harl, (2009), in the study Technical and Vocational Education and Training (TVET) and skills development for poverty reduction noted that there is a lack of tool kits, modern machineries for demonstration and hands-on learning, local transport, dormitories and hostels, not to mention cafeterias and child care for adult women. Even when mobile training units exist, there are difficulties in moving them to remote rural areas. He concluded that, without safe schools and training equipment, from desks to labs and tool kits, the success of any learning activity cannot be ensured.

Borchert (2002), in his study on career choice factors of high school students, noted that, for students to make good decision on career choices, they need adequate information. This means that students must also be aware not only of the existence but also the courses being offered and the entry requirements for them to make informed decisions to enrolling into the technical and vocational training programs.

Despite the importance of TVET in a country's economic and national development, technical and vocational education and training in Kenya has been receiving less attention as observed by a number of researchers. This has been confirmed by the low funding the institutions receive from both the government and the donor community. As a result, technical and vocational training education has become very expensive and unaffordable to many people especially the rural poor.

Many donors currently channel the majority of their aid for education into achieving the Universal Primary Education (UPE) and gender parity. For instance, DFID allocates about 80% of its aid for education to basic and primary levels while USAID allocated 72% of total education funding to basic education (King et al 2007). The World Bank's position on TVET has changed radically in the past two decades. Lending priorities shifted from TVET projects (nearly 30% of its total lending to the education sector by late 1970s) to basic education -reducing the share of TVET in total education sector lending to 5% by 1994 (Altinyelken, 2004).

The governments and other stakeholders have engaged other development partners in realizing donor interventions. The Ministry of Science and Technology in Kenya formally requested for technical and financial assistance from the Netherlands Government to strengthen TVET in the country. In view of this request the state agency for International Business and Cooperation, and part of the Dutch Ministry of Economic Affairs, awarded Devotra B.V. the assignment to execute a feasibility study under the Dutch PESP Programme (Programme for Economic Co-operation Projects).

The African Development Bank (AFDB) Group in 2008 approved a 25 million Units (equivalent to US$ 37.2 million) loan to Kenya to help finance a TVET Project in the country. The programme aims at improving access, quality and relevant skills development, the intervention will assist in the implementation of the KESSP-TIVET Investment programme aimed at ensuring the development of a national skills training strategy, enhancing transitions from primary and secondary to TIVET, establishment of TIVET centers of excellence, skills enhancement for automation and computer integration in industry, development of a bursary awards programme, creation of industrial incubators and provision of equipment to polytechnics to enable them offer degree-level courses.

Fluitman, (2005) observed that, the focus of UN Millennium Development Goals (MDG) is on basic and especially primary education (MDG 1). This emphasis on the first cycle of education contributes to the neglect of post-basic education and training including technical and vocational education and training. Bennell (1999), found that vocational education and training (VET) was largely absent in most governments and donor poverty reduction strategies in developing countries. This marginalization of VET is due to a lack of donor investment and inaction by many governments. While there is a need to adjust development efforts and build the human assets and capabilities of the poor, vocational education and training has been receiving less and not more attention.

The constituency development funds in Kenya for instance have been directed to funding of development of new primary schools and secondary schools. The funds have also been used in the development of the existing primary and secondary schools. Very little has however been set aside for the development of the existing polytechnics, technical and vocational training institutes and non for creation and development of new ones. This has made places unavailable for the form four graduates intending to join them.

The enrolments in TVET institutions in Kenya have been low despite the increased population of students graduating from both primary and secondary schools in Kenya. There could be many reasons to explain this but from the literature reviewed,

awareness of and accessibility of TVET could be contributing factors. This study thus set out to investigate the influence of awareness and institutional accessibility on the choice of training by students in technical institutes of science and technology in Bungoma County in Kenya.

4. Research Design and Methodology

This study used a Mixed Methods research methodology and a descriptive survey research design. The study was carried out in three TVET institutions in Bungoma County. Of the three, one was an institute of science and technology and two were technical institutes. Bungoma County was chosen because from observation, despite the county having the two technical institutes and the one institute of science and technology, the enrolment in the institutions is still low. Secondly, there are many students who after graduating from secondary school just remain at home or engage in other income generating activities without any technical skills required for such activities. The two technical institutes and one institute of science and technology had a population of 1124 students.

All the three institutions offering TVET in Bungoma County were used in the study. Stratified and simple random sampling technique was used to select students due to the different nature of courses offered and different admission requirements. The stratum was based on course levels that are Artisan Certificate or Artisan Diploma. From each stratum, a sample of students was selected through simple random sampling method. A sample size of 291 students out of 1124 was used. These represented 26% of the population.

The research utilized questionnaires for students for data collection. The questionnaires were used to collect information on the extent to which awareness and institutional accessibility influenced the student's choice of technical and vocational training in Bungoma County in Kenya. Out of the sample size of 291 students, 182 respondents returned their questionnaires. A test retest reliability estimation method was used to determine the reliability coefficient of the questionnaires. The reliability coefficient of the instruments was found to be 0.8. This was found to be adequate as supported by Weiner (2007). The research instruments were also developed based on the research purpose and objectives to ascertain validity.

5. Results

This study investigated the influence of awareness and institutional accessibility on the choice of training by students in technical institutes of science and technology in Bungoma County in Kenya. This section presents the findings that were gathered.

5.1 Awareness of TVET by students prior to joining the training

The researcher attempted to get information on the extent to which the students were aware of the courses offered and the entry requirements from the technical and vocational training institutions prior to joining the institutions.

Most respondents were of the opinion that they were not aware of the courses offered in technical institutes and institutes of science and technology; 31.3% said that they were aware, 61.5% were not aware and 7.2% were neutral.

On entry requirements, most respondents were of the opinion that they were not aware of the entry requirement prior to joining the training; 24.2% were aware, 66.5% not aware and 9.3% neutral. This could be one of the factors causing low enrolment in TVET programmes. This is in agreement with Borchert, (2002), who argues that information is very vital in career choice decision making.

In addition, 64.8% of the respondents said that they were made aware of the institutes by friends who had joined the institutions, 16.5% were made aware through the mass media and 18.7% gave no response. This in agreement with Crosnoe et al, (2003) who said that, friends and peers are potential sources of positive relations towards education and job search.

5.2 Affordability of technical institution programmes by students

Majority of the respondents were satisfied with the affordability of the technical institutions programmes at 56%, 13.2% indicated them being very affordable, 20.9% indicated it being less affordable and 4.4% said the programmes are less affordable and 1.6% confirmed as not affordable at all. The results indicated that programs in technical and vocational training institutions and institutes of science and technology are affordable in Bungoma County.

These results contradicts Afeti, (2009), who had observed that, as compared to other levels of education, that is primary and secondary, TVET was much more expensive to deliver and that children of the poor parents are unable to afford the fees. Mwiria, (2005) and Amuka, (2011), also made the same observation that TVET is much expensive and unaffordable to many. The study has however shown that TVET is much

affordable meaning that there could be other factors causing low enrollment other than affordability.

5.3 Proximity of the technical institutions

The findings showed that most of the institutions were far rendering most of them inaccessible; 44% of the respondents suggested that the institutions are far and 14.8% said the institutions were very far. 36.3% indicated the institutions were near and 2.2% suggested that they were very near. Indeed, proximity could be a reason for low intake. This is in agreement with Afeti, (2009) who observed that the institutions were located far apart and away from residential areas and this could limit access.

5.4 Ease of enrolment in a technical institute compared to secondary school

The study findings showed that it was easier to be enrolled in technical training institute than in secondary school. 19.2% of the respondents strongly agreed, 50.5% agreed it was easy, 20.3% were neutral and 7.1% didn't agree with enrolment being easy. This is in contradiction to Natalie, (2006) whom cited acceptance as one of the major barriers to student's enrolment in technical and vocational training.

Majority of the respondents indicated that it was difficult to enroll in other tertiary institutions than technical institutes; hence, it wouldn't take much effort to enroll in a technical institute. 17% indicated that it was very difficult 33.5% indicated that it was difficulty, 28% slightly difficult and 11% were of the contrary opinion saying it was easier enrolling in tertiary institutions than technical institutes.

This is however in contradiction to Natallie, (2006), where from his study most youth voiced out that, lack of financial resources, acceptance and being capable of graduating as the major barriers to student's career choices. Most of the respondents indicated that it was difficult to enroll in other tertiary institutions than technical institutes with only 11% having the contrary opinion.

6. Conclusions and recommendations

Based on the research question it was concluded that, TVET programmes in technical institutes and institutes of science and technology in Bungoma County were affordable and accessible. However, most students were not aware of the courses offered and the entry requirements prior to joining the institutions which could be causes of the low enrollment in the TVET institutions.

Based on the research findings, it was recommended that in order to make technical and vocational training to be much attractive and to increase its enrolment,

more emphasis should be put into advertisement of the TVET institutions, showing the courses they offer and their entry requirements. This can be through brochures that can be sent to primary and secondary schools.

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