Vocational and Technical Education for Youth Employment: What and how should it be implemented? Lessons from Selected Secondary Schools in Dodoma Municipality

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Abstract

The purpose of this study was to find out what and how Vocational and Technical Education (VTE) should be implemented at secondary school for youth employment in Dodoma Municipality. To obtain data for this study, the qualitative approach using a case study was employed. The sample for the study comprised 72 respondents, of whom 18 were secondary school teachers, 40 students and 14 parents. Purposive and simple random sampling was used to select the schools and teachers, whereas the students were selected with the assistance of academic masters. Convenience sampling was used to select the parents involved in this study. Three methods were used to collect data, namely interview, focus group discussion and documentary review. The results revealed that subjects such as Sports and Games, Commerce and Book-keeping, Elementary Engineering, Additional Mathematics, Agricultural Science, Home Economics, Computing, Ceramics, Technical Drawing, Carpentry, Masonry, Plumbing, Lumbering and Music needed to be taught through VTE. When asked how VTE should be implemented, most respondents suggested the school-based approach. The study recommends the provision of modern equipment and other facilities, collaboration between the government and stakeholders in the provision of the requisite resources, and the preparation of enough VTE teachers.

Key Words: Vocational and Technical Education, Employment

Introduction

Secondary education has been used by developed and developing countries to develop the skills and competencies that are of value to graduates who work in them and to the public and private sector. Many countries in Latin America, the Caribbean, Asia and Africa are grappling with the question of how to provide adolescents with the skills and knowledge to enable them to move to tertiary education, or to ensure that students who have finished secondary school make a smooth transition to work (Holsinger & Cowell, 2000).

It is increasingly becoming recognized that secondary schools are the most appropriate level for introducing vocational and technical education (VTE) in any form due to the decline in government employment and the shrinkage of the formal labour market in general (Yamada, 2001). In addition, secondary education is increasingly being considered to be complete on its own as UNESCO (2002) comments that the foundation skills necessary for a decent life and work are to be consolidated at this level. Moreover, rather than aiming exclusively at paving the way for a subsequent university education, VTE enables graduates to operate small businesses or find employment without further qualifications.

Fafunwa (1971) and Aw and Mariro (2001) pointed out that one of the key purposes of VTE at secondary education level in Sub-Saharan Africa has been to service the developmental needs of society. Education philosophers, according to Mandebvu (1989), feel that the social, political and economic world outside the school can be changed, if not completely, by VTE in the content of education.

Many countries have introduced VTE as part of the formal school system for various purposes, including development of "the whole person", the socio-political goal of providing equality of opportunity for a wide range of talents, and the economic goal of preparing students for the world of work with more economically relevant education (Lauglo & Maclean, 2005). Nevertheless, public education systems generally in Sub-Saharan Africa have a poor track record in meeting the demands of the labour market. As a result, prospective employers often pay little attention to certification but instead insist on a demonstration of skills and abilities (Ndala, 2006). Bregman and Stallmeister (2005) agree with Ndala (2006) that the curriculum promotes rote learning and provides few opportunities for transferring and internalizing knowledge.

In Tanzania, for example, secondary education has largely continued to provide general education, leading to a high number of youths graduating with very little or no specific skills for employment. On the other hand, controversies among researchers and education practitioners still exist as to whether or not to vocationalize secondary education in developing countries such as Tanzania and especially how to implement it. For example, Psacharopolous (1987) and the World Bank (1995) argue against vocationalization because the rate of return is higher when investing in secondary education in general than in vocational secondary education. Meanwhile, The National Institute of Educational Research (NIER) (2007) argues for vocationalization. This debate has left the youth in a dilemma.

Vocational and Technical Education (VTE)

Gough (2010) points out that throughout history, various terms have been used to describe elements of the field known as technical and vocational education and training (TVET). These comprise; Apprenticeship Training, Vocational Education, Technical Education, Technical-Vocational Education, Occupational Education, Vocational Education and Training (VET), Professional and Vocational Education, Career and Technical Education, Workforce Education and Workplace Education. Rauner and Maclean (2008) comment that these terms have been rooted in research since Sweden reformed the pedagogy of the 19th century. These terms have existed for a long time and are commonly used in specific geographic areas, ranging from the Scandinavian countries, the United States, Russia and Europe, and later to developing countries (Rauler and Maclean, 2008; Gough, 2010).

Vocational education refers to courses for young people which are offered as a lower-prestige alternative to academic secondary schooling and which lead to manual, craft and secretarial jobs, while technical education slots into the hierarchy above vocational and below academic education, which in theory leads to technician jobs (Wolf, 2002 as cited in Gough, 2010). Therefore, vocationalized secondary education refers to curriculum elements of a practical kind of vocation that is introduced into a secondary school curriculum that remains dominated by general education subjects (Lauglo, Akyeampong, Mwiria & Weeks, 2002). This means incorporating in the curriculum minor subjects such as Handicrafts, Industrial Art, Agriculture, Domestic Science and Accountancy or other skills relating to Business and Commerce and courses in Computer Applications, whereby each student pursuing general education subjects of the 'academic kind' qualifies to study (Lauglo *et al.,* 2002). Closely related terms are 'diversified curriculum' (Psacharopoulos &William, 1985) and 'practical subjects' (Lauglo, 1985).

Youth Employment

Unemployment among youth has become a worldwide concern in this 21st century. One of the noted causes of youth unemployment is the mismatch between the competencies youth have acquired through schooling and the needs of the labour market (International Labour Organization, ILO, 2013). Importantly, it is estimated that in 2013 as many as 73 million young people were unemployed while at the same time informal employment among them remains pervasive and the transition to decent work is slow and difficult (ILO, 2013).

Nevertheless, it is generally believed by people that youth should be trained to serve today's and tomorrow's society, but they can only do that if they are provided with the skills and knowledge needed in the world of work (UNESCO, 2002). Moreover, UNESCO (2015) observes that the only way to prepare young people for decent work is through consolidating foundation skills at lower secondary education level, as primary education is no longer the answer for decent employment. Peter and Michaela (2010) add that after secondary school the youth are supposed to be oriented to work, provided with guidance about their career paths and helped to find jobs that are relevant to their needs. Further, Payne (2008) cited in Gough (2010) emphasizes that politicians, employers and other people confirm that VTE is extremely important for providing learners with a career and professional satisfaction as it treats them as a human beings who need to survive and make sense of life through work (Gough, 2010).

Research Questions

This study was guided by two research questions as follows:

i. What VTE subjects should be taught at secondary school for youth employment?
ii. Which approach should be used to implement VTE at secondary school for youth employment?

Literature Review

In Malaysia, Ibrahim and Hashim (2010) did a study on the integration of vocational streams in secondary school and discovered that a relevant curriculum based on vocational needs should be developed. A relevant vocational curriculum should be concerned with needs that are common in certain locations. If a school is located in an area where the residents depend on fishing for a living, a curriculum should be developed focusing on the skills needed for repairing boats or for effective fishing. Their study further revealed that VTE needed to differ from one location to another and that it should be open and flexible for students moving from lower secondary to higher secondary school and on to tertiary level.

Porter (2006) conducted a study involving students of New South Wales and Queensland schools about what makes vocational training programmes in schools work. The study revealed that the majority of students liked doing the practical activities associated with VTE subjects but had difficulties in articulating the name of their VTE course and the expected final qualification. Students viewed VTE as offering them a head start and that the work placement component of VTE subjects provided them with an opportunity to 'make a heap of contacts' for the future.

Okocha (2009) analysed parents' attitude towards vocational education using a questionnaire with a sample of 200 respondents. It was revealed that 79% of the parents felt that vocational and technical education programmes were appropriate and relevant for the country's economic productivity and technological progress. It was moreover found that 69% of the parents felt that vocational education best suited the lower socio-economic group in society. Nevertheless, 89.5% of the parents indicated that the subject provided skills for employment.

Hojlund (2006) studied vocational skills formation in communities, using the ethnographic approach in Morogoro Municipality, and noted that the secondary school policy of 'a secondary school per ward' constituted a challenge of linking skills formation in the *Stadi za Kazi* studied in primary schools to the profiles of lower secondary schooling. Macha (2007) assessed whether vocationalization of the secondary school curriculum equipped students with work skills using non-participant observation, semi-structured interviews and documentary review and found that vocationalization of the ordinary level secondary school curriculum was ineffective in equipping students with work skills. He suggested that efforts should be made by all education stakeholders to have effective vocationalized secondary education. Mwasenga (2008) studied society's perception of and response to the vocational education and training authority (VETA) in Dar es Salaam region. It was revealed that economic, political and social factors were instrumental in transforming the provision of vocational education in secondary schools.

Methodology

To obtain data for this study, the qualitative approach using a case study was employed. The sample for the study comprised eighteen secondary school teachers, forty form four students from five schools in five different wards and fourteen parents from Dodoma Municipality.

Purposive and simple random sampling was used to select schools and teachers, whereas students were selected with the assistance of academic masters. Convenience sampling was used to select the parents involved in this study. Teachers were selected for this study so they could share their experience of VTE while form four students were selected because they had been in school for a long time and were able to engage in a meaningful and productive focus group discussions (FGDs).

Three methods were used to collect data, namely interview, FGDs and documentary review. Interviews were used with teachers to give them the chance to express their views, hopes and expectations. FGDs were used with students and parents so that they would be able to build on each other's ideas and comments, and documents were reviewed to complement the other sources. Creswell (2003) argues that during fieldwork the qualitative investigator may collect documents such as newspapers, minutes of meetings, official reports and letters. Documents that were reviewed in this study were official documents, such as government circulars no.9 and no. 1 issued through the Ministry of Education and Culture (MoEC) in 2004 and the Ministry of Education and Vocational Training (MoEVT) in 2006. Also, various syllabi were reviewed and the 2014 education policy. Most of these documents were obtained from the heads of school.

After collecting the data, they were analysed by putting the themes into categories, interpreting them and subjecting them to content analysis. Narratives were verbally quoted to avoid distorting the meaning.

Results and Discussion

VTE Subjects that should be taught at Secondary School for Youth Employment

This was the first research question that sought to investigate what VTE subjects should be taught at secondary school for the purpose of enhancing youth employment. Data were collected through interviews with teachers, FGDs with students and parents and documentary review. All the teachers mentioned the subjects of Agricultural Science, Computing, Mechanics, Home Economics, Entrepreneurship, Carpentry and Architecture. One VTE teacher emphasized the teaching of Agricultural Science by showing the researcher the various facilities in his school. The teacher pointed out the following:

> You know our school had Agricultural Science before it was abandoned. Some facilities such as ploughing and planting machines are still good as you can see for yourself in our department, but they are left there without being utilized. Therefore, the reintroduction of Agricultural Science is a very good idea (School A).

Photograph 1 shows the ploughing and planting machine in school A which was shown to the researcher by the teacher. The machine was lying idle in one of the school laboratories.

Photograph 1: Ploughing and Planting Machine in School 'A'

Photograph 2 depicts some motor vehicle engine parts which had been used for teaching and learning one of the VTE subjects, mainly motor vehicle mechanics, which equipped learners with basic skills to repair vehicle engines.

Photograph 2: Motor Vehicle Engine Equipment in School 'A'

One could interpret from the statements and the photographs shown to the researcher that the teacher was not comfortable with the machines lying idle because agricultural science and motor vehicle mechanics were no longer being taught. In the same school, one teacher argued that VTE, especially agricultural science, would give students various skills including environmental conservation and ploughing, which would promote agricultural development. One teacher for example said the following:

> Commerce and Book-Keeping are good subjects which require special equipment with adequate materials to facilitate teaching and learning. However in our school, there is nothing in the form of a laboratory or materials to facilitate effective teaching and learning (School E).

The teacher was of the view that in the secondary school he used to teach in there were laboratories and adequate materials to facilitate teaching and learning. Students were really interested in the subjects and acquired the skills and knowledge for running a business and at the end performed well in national examinations. Another teacher asserted the following in an interview:

> Teaching VTE subjects like Home Economics is a profession like any other profession. I feel bad regarding the direction of my job. You never know if students will successfully complete the Home Economics course because the facilities have been damaged. But I still suggest Home Economics (School C).

From the statements it can be deduced that the teacher was very interested in teaching Home Economics but was not comfortable with students' future prospects, given the manner in which the government was handling VTE and the poor facilities and equipment in schools. The suggestion made by the teacher implied that the government should have a strategic plan for VTE.

FGDs with students revealed further that subjects such as Sports and Games, Commerce and Book-Keeping, Elementary Engineering, Additional Mathematics, Agricultural Science, Home Economics, Computing, Ceramics, Technical Drawing, Carpentry, Masonry, Plumbing, Lumbering and Music needed to be taught through VTE. The majority of the students suggested that such subjects should be taught as subjects while a few of them suggested that they should be taught as topics integrated in existing subjects. Four students made the following comments in this regard:

> I learn Cookery at my school. I know to cook cakes, bread and many other snacks and I know that with these skills I will be employed in various hotels after graduation. This education will help me to travel and work in other parts of the world (School C).

> It is too bad that our Needlework teacher passed away recently. My sibling who is studying at the college told me all about the subject. It sounds like the programme is very interesting and it pays. I wish I could study this subject because I tried to sew patches on torn clothes using our sewing machine at home in my early years but now I fear my dream will not come true (School C)

> I don't think Agricultural Science is only for students who do not perform well in their academics and who live in the villages. That is a stupid idea! I am interested in Agricultural Sciences although I reside in an urban area. If this subject were taught in my school I would really love to learn it because apart from using such skills in *shamba work*, it would improve ways of conserving the environment and help with gardening (School D)

> I think because of the on-going slogan of entrepreneurship, learning Commerce and Book-Keeping would provide us and other learners with skills to become entrepreneurs. I am happy that my dream may one day come true (School B)

It can be noted from the students' views that the VTE subjects were closely linked with their future dreams of getting employment and a good life in general. They felt comfortable taking the VTE subjects because they would make them employable.

Parents, on the other hand, mentioned Carpentry, Textiles, Cookery, Drawing and Electricity as appropriate subjects to be taught in VTE. One FGD with parents in an urban setting revealed that the subjects would enable students to master normal urban life and reduce the government's burden of having to import skilled labour power. One parent for example made the following remarks:

> The current decline in the production of industries and in the agricultural sector is a result of the omission of VTE subjects in the education system and secondary education in particular. Therefore, VTE subjects are needed to increase production skills in various sectors of the economy (Group A).

The findings show that parents viewed the academic-based curriculum as containing subjects that provide knowledge that is more abstract, leading to the mass failure of learners in the national examinations, who stay jobless at home and continue to be a burden on their parents who must continue to feed them.

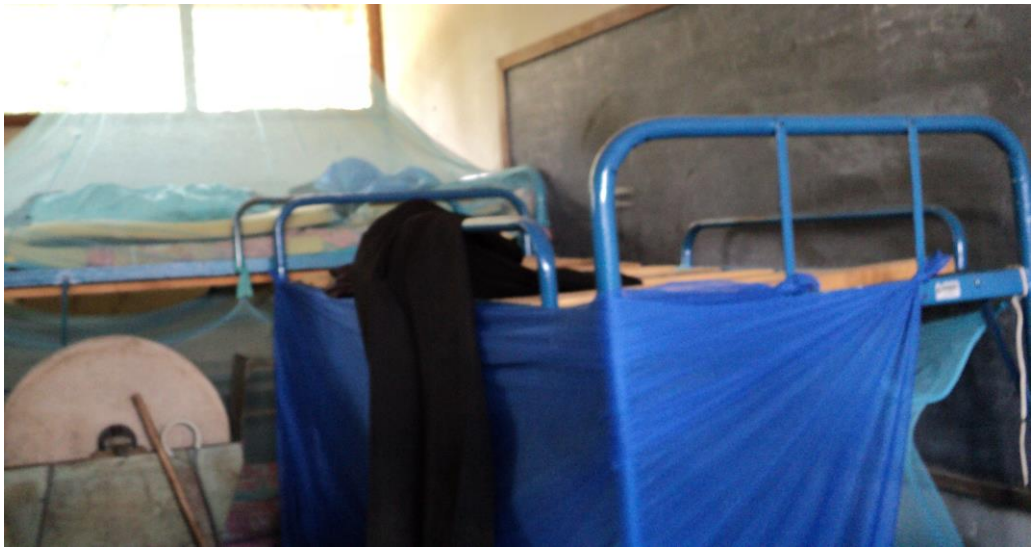
The researcher also reviewed some documents to find out which VTE subjects were recommended to be taught in secondary schools. She noted that the MoEVT, for example, had indicated subjects such as Additional Mathematics, Arabic, Bible Knowledge, Fine Art, French, Information and Computer Studies, Islamic Studies, Music, Physical Education and Theatre Arts to be added to academic subjects such as History, Geography, Physics and Chemistry, Mathematics, Biology, Civics, Religion, Kiswahili and English.

Other subjects such as Sports and Games, Commerce and Book-Keeping, Elementary Engineering, Agricultural Science, Home Economics, Ceramics, Technical Drawing, Carpentry, Masonry, Plumbing, Lumbering and the like, which were previously in the curriculum, were to be offered more effectively and successfully by other related institutions or ministries without mentioning them. The reason mentioned by the ministry was mainly the acute shortage of resources such as teachers and teaching and learning materials (United Republic of Tanzania (URT), 2004).

The researcher was interested in finding out if the requisite facilities were available in the school laboratories that previously facilitated VTE and other subjects like Additional Mathematics, Arabic, Bible knowledge, Fine Art, French, Information and Computer studies, Islamic studies, Music, Physical Education and Theatre Arts. Out of the five schools involved in the study, only two (schools A and C) had such facilities as depicted in photographs 3, 4 and 5.

Photograph 3: Damaged Cookers in School 'C'

As can be gathered from the photograph, the laboratory had plenty of facilities such as cookers but they had been abandoned and left to decay. Practically, in such circumstances, the teaching of Home Economics such as Cookery was impossible.



Photograph 4: Laboratory for Agricultural Science in School 'A' turned into a dormitory

Photograph 4 shows that the original function of some of the laboratories had changed. Instead of keeping facilities and equipment for Agricultural Science, the buildings had been turned into a students' dormitory.

Photograph 5: A Building for Keeping Animals in at School 'A'

Photographs 3, 4 and 5 reveal the current state of some VTE equipment in the schools. Some laboratories were no longer in use because of the unavailability of facilitators who could teach the subjects students apparently like. In addition, most of the facilities have been damaged, others do not fit the subjects mentioned while some have been turned into dormitories.

An Approach for Implementing VTE at Secondary Schools for Youth Employment

The researcher was also interested in finding out the approach to teaching and learning such subjects if reintroduced in the schools. The interviews with teachers revealed that they had varied opinions on how those subjects would be taught. The majority of the VTE and general teachers suggested having two or three large boarding schools in one district that would offer all VTE subjects. A few secondary school VTE and all general teachers from schools A, D and E argued for special schools which would have VTE subjects such as Agricultural Science taught alongside academic subjects, while two teachers from school B would like the subjects to be taught in all schools.

Virtually all the students said that it would be better to have one big school in every two or three regions offering all the VTE subjects. In that particular school all VTE and academic-based subjects would be taught and students would be allowed to opt for subjects of their interest. One student pointed out the following in FGD:

> The government has to invest in a big secondary school like it invested in the University of Dodoma, which will have all VTE subjects. This will ensure the provision of high quality VTE and proper utilization of resources, and it will also show that the government is really committed to vocational education and training (School D).

The opinion of students that VTE should be school-based concurs with that of Lauglo (1993), who found that the school-based approach was ideal in that it would be broad and prepare students for economic and technological changes. Only a few students were of the view that VTE should be integrated in other related subjects. One example mentioned were topics in Agricultural Science which could be integrated in various subjects such as Geography and Home Economics.

When parents were asked to identify the approach to teaching and learning VET subjects, their general response was that the teachers knew how best to teach the subjects. Nevertheless, they all emphasized practical training. The findings suggest that the parents were unaware of the fact that they were important stakeholders who could recommend that their children be taught VET subjects.

1.3 Conclusion and Recommendations

In the light of the results, the study concludes that VTE subjects such as Agricultural Science, Sports and Games, Commerce and Book-Keeping, Elementary Engineering, Home Economics, Ceramics, Technical Drawing, Carpentry, Masonry, Plumbing and Lumbering are needed in the secondary school curriculum due to the fact that the current education system has failed to equip its students with the skills needed for employment.

The study recommends that, since VTE is practice-based, the MoEVT, in collaboration with stakeholders, needs to invest in preparing teachers, and purchasing and maintaining new and modern equipment to facilitate the teaching and learning of VTE subjects. Lastly, because of the rapidly deteriorating opportunities for formal employment in the labour market, the government has to assume the key role of sensitizing various education and development actors about the need to provide VTE in secondary schools, as few students have the opportunity to go for further education.

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