

An Empirical Evaluation of Technical, Vocational, Education and Training (Tvet) Processes In Kenya

Susan Ngure

Human Resources Management

Abstract

This paper examines key stakeholders evaluations of the Technical, Vocational, Education and Training (TVET) processes in Kenya. The paper responds to on-going debate in the business community, media and training practitioners to the perceived mismatch of the skills required in the industry and those produced by the TVET program. Data for this paper were collected from government documents, previous research papers, and business reports and editorials. In addition, primary data were collected by using semi-structured questionnaires, focus group discussions and observations. Respondents included education officers, business employers and employee and trainers and trainees of four TVET institutions. **Findings:** Most stakeholders were happy with TVET objectives and its contribution in furnishing the industry with requisite skills. However, they enumerated various challenges that make it difficult for TVET to respond adequately to the industry's skill needs. Discussion was guided by the Kirkpatrick's evaluation model that has four levels: reaction, learning, behaviour and results. **Recommendations:** Addressing the mismatch of skills in TVET institutions: through a current skills' inventory, tracer studies of TVET graduates, regular program evaluation, creating linkages with the industry, enhancing industrial attachments and a flexible TVET curriculum. **Quality of training:** Accredited Business owners as trainers, introduce short trainer competency courses and TVET institutions equally. **Recognition of prior learning:** recognise prior learning methods, create validation mechanisms, integrate of formal and informal trainings and addressing numerous certificates and training levels. **Funding TVET:** Offer training loans to TVET students, introduce a training levy to businesses Getting value for money. Analyse all training inputs and judge whether the training is worthwhile. Enhancing the status of TVET. Enhance workplace competencies for survival in self-employment and communicate the benefits and successes of TVET training.

Key words: human resource development; technical vocational education and training; evaluation, Kirkpatrick, Kenya

INTRODUCTION

Education and training are two intertwined mechanisms through which economies nurture their labour forces with the view to producing necessary technical and generic skills required nationally, regionally and even globally. Authors Wargonhurst (2002) and Wallenborn (2009) have observed that skills acquisition (such as basic literacy, technical and interpersonal skills) is the ultimate aim of any training system. Further in Kenya, skills development is recognized as important for economic development, poverty mitigation, and social inclusion. It contributes to equity and access to training, and social responsibility by stimulating competitiveness and entrepreneurship to realise life-long learning concepts (Masson & Fretwell, 2009). Translating skills development into skills utilization, and therefore economic growth and poverty reduction, is dependent on such factors as quality of education, supportive environment, facilitative infrastructure and a conducive work environment (Tikly, 2010).

A major aim of training is to improve and maintain workers' productivity. This requires continuous updating of competencies to enable the workers adapt and take advantage of emerging opportunities and global trends (Ngure, 2003). In addition, there is need to ensure that the skills developed are actually utilized at the workplace (Buchanan, 2006). Employers do not see the need to raise salaries for employees who have trained in skills that do not raise productivity (Cooney, 2002). However, it is vital to acknowledge sociopolitical dynamics of different regions as they affect employee participation. Employability depends not only on skills quality, but also on the economic and social dynamism, as well as the environment in which they can be supplied and applied to the workplace (Kingombe, 2008). Formation of skills is an aspect of the development of democracy. Hence, it requires an examination of the interrelationship between the social capacity for learning and innovation within the state, regional and global levels (Tikly, 2003).

Technical, vocational education and training (TVET) can be broadly interpreted as the development of ways of learning and the acquisition of attitudes that facilitate success at the workplace (Munro, 2007). TVET plays an important role in supplying skills requisite for improved workers' productivity, improving economic competitiveness, enhancing occupational integration, raising income levels and expanding opportunities for employment (Bennett, 2000; Budría and Telhado-Pereira, 2009). In addition, formal education and work experience in formal business sectors enable employers and business owners to improve methods of production, enhance product quality, convey product standards information to the users, identify markets, and manage human and other resources, all of which offer graduates a competitive edge (Sonobe, Akoten, & Otsuka, 2011).

Some countries, including Kenya, attach great importance to TVET. Hence, an evaluation of the training and development process by stakeholders, who are the major consumers, is vital. There are three basic reasons for evaluating a training program: to find out how to improve the program, to determine the viability of the program and to justify the existence of the training program to providers (Kirkpatrick & Kirkpatrick, 2005). A sound evaluation system enquires into the feasibility of the training system and assesses the overall impact. Fretwell (2003) observes that the results of an evaluation are vital in informing public decision-making and stimulating debate, improving employer decisions about the training, informing clients about training options and quality, and improving the quality of training systems. He further adds that evaluation aids in avoiding the possibility of wasting valuable resources by selecting optimum options, continuing with plans that are likely to produce intended results and detecting factors that may negatively impact on the training strategy.

JUSTIFICATION OF THE RESEARCH

The Kenyan government and multiple stakeholders and leaders have consistently pointed out that the skills that are being produced by the TVET institutions do not address the demands of the industry and are unable to respond to changing global challenges. This is embodied in the Kenya Educational Support Sector Programme (KESSP) (GoK, 2005) and the Kenya Vision 2030. The latter was deemed the vehicle that would fast track the transformation of the country into an industrialized middle-income economy by the target year of 2030 (GoK, 2007). The weaknesses of TVET identified in these documents and the need to voice the opinion of the stakeholders are the focus of this research paper. By scientifically evaluating the TVET programme through the eyes of major stakeholders, this study can form ways to develop a more demand-driven curriculum. Indeed, various documents such as KESSP highlighted the "low participation of private sector in curriculum design and implementation" (GoK, 2005 p. 24) as one of the constraints in need of attention; this study is part of addressing this important call.

While researchers and scholars have made great effort in advancing the understanding of training in MSE through empirical evidence, there is still more to be known about the acquisition of skills. This is apparent in government documents such as the KESSP (GoK, 2005) and Kenya Vision 2030 (GoK, 2007), which expose skill shortages across industry. For the purpose of a comprehensive study, the research is limited to the motor vehicle repair and industry (automotive industry), which is a skill-based industry that includes mechanics, tuners, welders, electricians and tailors.

EVALUATION

Evaluation is the means by which a training program's outcomes are compared to set objectives with the aim of finding out the extent to which the training process has achieved its purpose (Armstrong, 2009). A particular training is tailored to suit the needs of a specific time (Staley, 2008). Evaluation examines the level at which the training program meets the set targets through activities such as organisational performance changes, training content and design evaluation, and changes in learners (Alvarez, Garofano & Salas, 2004).

The effectiveness of the training program should be a major concern for training providers and policy makers as it acts as a guide when considering the relevance and suitability of an activity. The accurate definition of goals and objectives of the training program determine the evaluation procedures and constructs that form the basis of a comprehensive assessment. This varies depending on different target groups' emphasis, and between different countries. For instance, a major TVET goal of different governments is to empower young people to adapt to a dynamic environment through life-long training; for the workers, however, the emphasis could be wage increases; to the employer, improved productivity; to the trainee, employment and wages; while from a policy-maker's view it may be to decrease societal expenses (Fretwell, 2003). Interest in evaluation of training programs has led different researchers to develop models of training evaluations, four of which are discussed in the section below this.

MODELS OF TRAINING EVALUATIONS

First, in 1959, Kirkpatrick published a four-dimensional evaluation method that tests reactions, learning, behaviour and results—a simple measurement method for comprehending training evaluation, and the most quoted procedure (Kirkpatrick & Kirkpatrick, 2005). In this model,

...learning is measured during training and refers to attitudinal, cognitive, and behavioral learning. Behavior refers to “on-the-job” performance and, thus, is measured after training. Additionally, reactions to training are related to learning, learning is related to behavior, and behavior is related to results. (Alvarez et al., 2004, p. 388)

The Kirkpatrick model has stood the test of time and is widely used to evaluate training and development programs in different fields. For example, van Eerde et al. (2008) used the four levels to measure the effect of training programs to organisational effectiveness, while Piyali et al. (2011) used only the reaction level. The four dimensions measure different aspects of the training program because they progress from the stage of simply getting a reaction to the training to the more complex processes of measuring results.

The second model was developed by Tannenbaum, Mathieu and Martineau, (1993) who added post-training attributes to Kirkpatrick's model and separated evaluation outcomes into transfer and training performances. This model was tested by Alvarez et al. (2004) when construct-

ing “An integrated model of training evaluation and effectiveness”. The authors used evaluation measures such as training and transfer performance, and cognitive learning; and effectiveness variables such as pre-training experience and self-efficacy, and post training interventions, such as mastery orientation and learning principles.

In the third model, Holton (1996) incorporated three evaluation objects: transfer, learning and results. He did not consider reactions as a main outcome of training; he regarded them as an intervening or regulating outcome between trainees' learning drive and the actual learning. Thus, learning is linked to transfer, which in turn is associated with the outcomes.

Finally, in the fourth model, Kraiger (2002) provided a model that emphasises three objectives for an evaluation program: learning material and design (i.e. delivery, strategy, and rationality of training), learners' behavioural modifications (i.e. emotional, intellectual, and developmental) and structural benefits (i.e. transferability, work performance, and outcomes). This fourth model advances the measurement of the learners' behaviour changes as a result of the training. These measurements can be quite challenging given how difficult it is to tell if the learners' emotion or intellect have changed as a result of training.

A different perspective in training evaluation was advanced by Kearns and Miller (1997) who advocated for a 'return on investment' (ROI). They opine that ROI is a means of assessing the overall impact of training in organisational performance, further arguing that particular measures should be used to evaluate specific training, for example customer satisfaction or return on sales, which should improve by some percentage (Alvarez et al., 2004). Armstrong (2009) adds that besides concentrating on the traditional levels of evaluation there is need to “concentrate more on the validation of the total learning process and on the outcomes of learning, which means focusing on the return on expectation” (p. 696). This could be achieved through attributes such as increased customer satisfaction, volume of sales and increased production.

The models of evaluation discussed above assist in conceptualising how, where and why evaluation measures can be used. The Kirkpatrick model that was first published in 1959 and composed of four levels reactions, learning, behaviour and results is simple and most comprehensive for use in a training, because the other models components can be integrated into its four levels. For instance: post-training attitudes proposed by Tannenbaum (1993) and transfer of learning proposed by Holton (1996) can be integrated in the behaviour phase; learning material and design, learners' behavioural modifications and structural benefits learning materials proposed by Kraiger and Kearns (1997).

RESEARCH FOCUS

The KESSP document highlights the low participation of the private sector and other stakeholders in training needs analysis, curriculum design and implementation (GoK, 2005). In response to this assertion and the concerns expressed in the Kenya Vision 2030, this study involved key stakeholders in the industry, training institutions as well as technocrats in the relevant Ministry in examining the training processes. The TVET training process has been identified as a problem by key stakeholders in the industry (Kenya Private Sector Alliance [KEPSA], 2010), and by the government in its review of TVET (GoK, 2008), necessitating research on key components of a training system, to discern issues that may hinder effectiveness in that particular sector.

Despite this important role that TVET plays in addressing labour challenges, major policy documents lack an explicit approach by which this role can be achieved (Nyerere, 2009). This failure to fully embrace the role of skill training is particularly baffling given that most African governments and development partners are consistent in emphasising the need for intensive structures that shape the human capital of the marginalised (UNESCO-UNEVOC, 2008). Bennell (2000) observed that since the late 1980s, most African governments have accorded limited significance to donor financing systems and dialogue, leading to limited inclusion of TVET in mainstream education systems. However, funding has to go hand in hand with other strategies such as building trainers capacity as there is a challenge of ensuring that once resources are available in training institutions, they are used effectively to promote skills acquisition (Tinkly, 2010).

Furthermore, translating skills development into skills utilisation, and therefore economic growth and poverty reduction, is dependent on various factors like quality of education, supportive environment, facilitative infrastructure and a conducive work environment (Tikly, 2010). This study therefore, looks at the TVET processes from the stakeholders' perspective by addressing the following question:

How do key stakeholders in TVET evaluate its responsiveness to emerging global trends?

METHODOLOGY

To examine the research question, the researcher sought the views on training processes from a sample of major stakeholders: 19 business employers and 57 of their workers, four training institutional managers, four trainers, 32 trainees and four government officers responsible for curriculum design, implementation and supervision.

This study employed the use of semi-structured interviews that were carried out with the education officers, employers, employees and trainers. Although semi-structured interviews rely on pre-formulated questions for guidance, they allow respondents to talk about those things that are of interest and importance to them (Baker & Foy, 2008). Four focus group discussions (F2) of eight students each were used to gather data from final year learners of each training institution under study. F2s allow shared opinions of a particular defined subject that is of interest to a group of individuals who have had certain shared experiences (Myers, 2009). They attempt to answer the "how" and "why" questions that produce rich, multifaceted, nuanced and even challenging interpretations of how people attribute meaning to and construe their understandings (Kamberelis & Dimitriadis, 2011).

Observation was used in the institutions and businesses under study to discern the day-to-day processes and activities. In the businesses observations were made on working conditions, relationships among employee, employer and customers, equipment in use and occupational health and safety issues; and in the training institutions, equipment, other facilities, relationships and documents mounted on walls. Baker and Foy (2008) noted that observations "...avoid the possibility of distortion that may arise when people are asked to report their own behaviour" (p. 147). In addition, the researcher gathered data from government documents, and archival records in line with the six types of information recommended by Yin (2004): archival records, direct observations, documentation, interviews, and physical artefacts that bring a contextual understanding by relying on multiple sources. Content analysis, a systematic method of qualitative data analysis that seeks structures and consistencies (Myers, 2009), was used to deal with the enormous amount of data. This involved coding data using thematic areas

and then further segregating them to smaller groups. To easily identify the participants in analysing and reporting the findings for this study, the following codes were used.

Study respondents

study respondents	Number	code
Education Officers	4	ED1-ED4
Trainers	8	TR1-TR8
Trainees	4 focus group discussions	F1-F4
Employers	19	ES1-ES19
Employers	57	S1-S57

DISCUSSION

The following section discusses the findings of this paper and they are classified according to Kirkpatrick's four levels of evaluation.

Reactions: At this level of evaluation, trainees react to the program through completing a post-course evaluation of their opinions of the training. The reactions level therefore measures the participants' interest, motivation, and attention levels (Smidt, Balandin, Sigafos, & Reed, 2009). This level is important for the future of the program because the motivation to learn, and changes in behaviour, are greatly influenced by the participants' positive reactions (Kirkpatrick & Kirkpatrick, 2005).

Employees who had been trained in the formal TVET institutions in Kenya expressed varied levels of satisfaction with the program. Although they faced challenges with the level of practical skills imparted, they valued their theoretical knowledge as it enabled them to diagnose car problems—an exercise their counterparts with informal training found challenging. Education officers and the MSE employers felt that the program was essential to the workplace and that with some improvements it would be satisfactory. Trainees evaluated the program as satisfactory, but they suggested numerous ideas on how to make it better.

The reasons for the mixed reactions of the stakeholders are based on their experiences, both at the workplace and in the training institutions. Most of the negative reactions were concerned with the quality of training, which was influenced by the insufficient equipment, the competency of the trainers and the content of the curriculum. Further, the poor perception of TVET as a last choice for those who are academically challenged, coupled with the knowledge that they did not receive adequate practical know-how in their institutions, led the graduates to suffer from low self-esteem when they entered the workplace.

Learning: Evaluation at the learning level is measured during training (using written or practical assessments and role-playing) and refers to attitudinal, cognitive, and behavioural learning; it aims at understanding the learners' grasp of instruction, ideologies, knowledge, ideas and skills (Kay, et al., 2004). It seeks to obtain information on the extent to which learning objectives have been attained, knowledge acquired, skills developed or improved, and attitude changed to desired levels (Armstrong, 2009; Kirkpatrick & Kirkpatrick, 2005; Smidt, et al., 2009).

Literature gathered showed that there were numerous examination providers that measure learning levels, such as the Kenya National Examination Council (KNEC), the Kenya Accountants and Secretaries Examination Board (KASEB), City and Guild, The Directorate of Industrial Training (DIT) and many other foreign bodies. Despite these numerous examination bodies, there lacks an examination national qualifications framework that would standardise the certificates, thus making the learning level difficult to measure in Kenya.

Employers commended TVET for producing graduates with special interpersonal attributes of communication skills, innovation, professionalism, teamwork, respect to others and work safety consciousness. Graduates, however, faced challenges in practical and technological skills practice when they entered the workplace. This was because the appropriate equipment was missing at the MSE, while at the large garages the graduates were confronted with technology that was too advanced for them to operate.

Employees cited another problem whereby some of them were conducting tasks that they were not trained in. In these instances, their pay was reduced because they were considered untrained. This problem was also confirmed by Groot and van den Brink (2000) who noted that a significant proportion of the workforce in western economies works in jobs that are not commensurate with the skills acquired in training. This results in employees receiving less pay, being less productive and having reported lower levels of job satisfaction compared to those who are utilising skills in which they were trained (McGuinness, 2006).

Data gathered for this study identified four factors that influence TVET learning, and which are discussed below.

Inappropriate materials and equipment: Training institutions used aluminium and plastic for their training, while a large number of firms were still using traditional materials such as steel and timber for training and production of goods. The TVET graduates' unfamiliarity with the materials found in the industry was confusing because they had to re-learn their skills in order to be proficient with the new materials. Furthermore, the MSE industry in Kenya lacks most of the equipment needed to comprehensively carry out tasks in its jurisdiction.

Employment: The proportion of all graduates of youth polytechnics and vocational centres who either work in the MSE industry or opt for self-employment in similar situations is 80 per cent (UNDP, 2010). The government has recognised the vital contribution of the MSE sector to the employment of TVET graduates in its economic survey which observed that the ease of entry into the MSE sector had made it a fall-back option for those who left the training institutions because they waited to join the larger industries, and for those leaving their regular jobs through attrition (GoK, 2010). The survey therefore suggested various ways of equipping the MSE, for example with the provision of low interest loans or establishing a tool library.

Curriculum: The TVET curriculum emphasises science, technological knowledge and measuring proficiency rather than practical knowledge. While this kind of program is good for progression to the next level of training, it does not support immediate employment. This could explain why graduates need extra training to transfer the skills to the workplace. In addition the curriculum tends to confine itself to the Kenyan industrial needs, while global integration is not emphasised despite the opportunity of exporting middle level skills to other countries.

Accreditation: The poor collaboration and linkages in TVET hinder the mobility of trainees wanting to transfer their credit from one institution to another and, furthermore, most institutions are not in touch with the industry that absorbs their graduates for employment. In this area there needs to be an appropriate scale of equivalence by which the knowledge and skills acquired can be externally vetted. Without this equivalence, the competence of the graduate is difficult to evaluate in terms of their level achieved (Wachira, et al., 2009). In addition, the lack of standardised training and independent testing make it difficult to control the quality of training, meaning that the consumer of the services has no guarantee as to what they are purchasing.

Ongoing quality monitoring and assessment present an opportunity to correct any flaws observed during the process of training instead of waiting until a comprehensive evaluation is done, which may be too late for the correction to have any real impact. In 2008, the Kenya government admitted that inadequate quality assurance mechanisms in TVET contributed a great deal to the poor curriculum delivery and the production of graduates who are insufficiently equipped for the labour market (GoK, 2008a). To correct this situation, the government published the National TVET Strategy (GoK, 2008a), which identified four impact indicators of relevance, efficiency, effectiveness and sustainability that would be measured during monitoring and evaluation.

Behaviour: Evaluation at this level measures the ability of the trainees to use their newly acquired knowledge or competencies at the workplace (Smidt, et al., 2009). Kirkpatrick and Kirkpatrick (2005) observed that most organisations bypassed reactions and learning levels to measure behaviour. They noted that this was a serious mistake because failure to transfer skills and knowledge may be due to other exogenous factors of the training, which can be traced by measuring reactions and learning. Changes in behaviour require an environment that involves four conditions: knowledge and skills, the right climate, adequate rewards and the desire to change (Kirkpatrick & Kirkpatrick, 2005) which are discussed in the following paragraphs.

Knowledge and skills: The acquisition of skills and knowledge in the institutions is important, but they must be applicable to the workplace. Employers indicated they invested a further 6–12 months of training for those they recruited from TVET institutions because their skill levels were too low. This is a wasteful practice in terms of time, finances and personal growth. Furthermore these graduates cannot be expected to actively compete in the international markets.

Right climate: Employees complained that although they had been taught important skills and competencies in the training institutions, the MSE were not adequately equipped to offer them an opportunity to apply their skills, while safety instructions were largely ignored. Most Kenyan workers do not have the essential awareness, technical know-how and resources to implement health and safety processes, making them vulnerable to environmental hazards, occupational accidents and diseases (Theuri, 2012). The circumstance of inadequate equipment at the workplace resonates well with findings made by Kaskustas et al. (2010) in the United States, where apprentices reported that the institutional-based training they had received was safety-focused, but that the methods taught did not correspond to methods actually employed on their worksites. In cases like these the employees had to unlearn what they had learned and re-learn other short cuts to employ at work, leading to frustration and confusion. This was exacerbated by the employers and other employees who may never have learnt the correct procedures for particular tasks, since they may never have received formal

training, or were lacking the capacity to follow guidelines, thereby creating environments that did not provide opportunities for the learned competences.

Adequate rewards: The formally trained TVET employees complained of very poor pay, whereby their employers did not recognise their level of education. Employers did not feel that the graduates deserved more pay than the informally trained graduates. The lack of recognition of their certificates through salary awards was a demotivating factor for effective work. In addition, some of them had secured student loans from financial organisations to pay for their training. Although employees value adequate compensation, there are other constructs that consolidate their job satisfaction. Szamosi (2006) described these as “tangible and intangible benefits, empowerment and respect, workplace involvement, concern for employee welfare, supportive management, and the workplace environment” (p. 662). These factors create an enabling environment for skills transfer because, as Kirkpatrick and Kirkpatrick (2005) observed, there is a very minimal chance that training will transfer to job behaviour if the climate is discouraging.

Desire to change: The motivation and drive to change behaviour plays a big role in the success of transferring skills gained at the training institutions to the workplace. The desire to change is enhanced by the creation of a positive attitude through acquisition of the necessary skills and knowledge from the institution (Kirkpatrick & Kirkpatrick, 2005). Individuals who possess skills that are transferable to the labour market, tend to have higher motivation levels, and are more productive in their work, fostering social wellbeing and intellectual growth (Ehrenberg & Smith, 2003).

Informal and workplace training is conducted largely for the firm-specific skills since the manager does not see the need to train for transferable skills that may lead to the loss of an employee who has been trained and large sums of money invested in the training (Walker & Redmond, 2008). In addition, employees who attain more training will usually demand pay rises, which the employers are keen to avoid (Cooney, 2002). Further, in spite of the gains that would add to their individual, professional and business growth, small business owner managers seldom participate in formal administration competencies development because of the time and monetary costs involved (Bowen, et al., 2009). However, the resistance to training is dependent on the level of education attainment of employers—those with higher education qualifications are more likely to accept skill upgrading (Bishop, 2008), probably because they have experienced its benefits.

The Kenya government lacks the capability or willingness to follow the graduates' work pathways to find out how well they are coping in the job market. This is partly due to inadequate evaluation mechanisms and partly due to insufficient staff. In 2008, government officers numbered only 365 instead of the required 861, with the technical department having a deficit of 308 (GoK, 2008b). The inability of the training institutions to track the employment destinations of their graduates denies them valuable feedback from past trainees on the quality of the training they have received and the opportunity for their experience-based inputs to be factored into the review of curricula (African Union [AU], 2007). UNESCO adds that in most developing economies, there lacks a systematic evaluation, graduate tracer systems, and effective two-way linkages between the industry and TVET (UNESCO, 2009). Comprehensive behavioural evaluations are not implemented in a systematic manner by either the public or private sector in many developed or developing countries (Fretwell, 2003).

Fretwell therefore recommends an evaluation involving both the inputs (policy and programs) and the outputs (economic and social factors). He illustrated thus:

If the clientele of a training program is highly disadvantaged or residing in an area of high unemployment, the impact of training will be less than if conditions were otherwise. Hence, poor employment of graduates may not necessarily mean that a training program was of poor quality. On the other hand, there may be problems with the quality and quantity of inputs, thus the reason and need for evaluation of both inputs and out-puts. (Fretwell, 2003, p. 180)

The Ministry of Higher Education Science and Technology (MoHEST) Strategic Plan 2008–2012 (2008b) recommended that sound monitoring and assessment were required to make decisions aimed at improving performance, determining whether the program is likely to achieve the intended objectives, assess the use and delivery of the resources in accordance with the implementation plan and monitor the achievement of the intended outputs in a timely manner. From the data gathered from the stakeholders, in particular the employers, there were various suggestions for improving the transfer climate from the training institutions to the work-place. Two of those that stood out were more meaningful work experiences for TVET trainees and improved entrepreneurship education. This is consistent with Halpern and Hakel's (2003) advice that training institutions need to go beyond just training and skills acquisition to teaching students in such a way that they will be prepared for unpredictable future workplace challenges outside the classroom.

In TVET training, the level of technology in the institutions in comparison to that found in the industry has a big effect on the transfer of skills. Kitainge (2003) found that Australian TVET graduates were more prepared for the workplace than their Kenyan counterparts due to the high level of sophisticated equipment found at the Australian training institutions compared to the Kenyan training facilities. Subsequently, the Kenyan graduates required more workplace training compared to those trained in Australian facilities. It is for this reason that Munro (2007) observed:

... that individuals need a range of competencies that allow them to deal with and manipulate growing amounts of increasingly diverse information, use their knowledge selectively and strategically, cope with increasingly rapid change, take greater responsibility for their own learning and direction and think more laterally at the workplace (p.77).

RESULTS

Evaluation at the results level measures the overall financial expenditure impact, production increase, reduced turnover and morale impacts (Kirkpatrick & Kirkpatrick, 2005; Smidt, et al., 2009). In a formal training structure, results criteria in education include a wide variety of results, such as graduates' employment and increased workplace productivity, service to marginalised groups, social inclusion, improving literacy, personal and family economic stability, and responsible social conscience (Praslova, 2010). This level therefore assesses the benefits of training to an organisation against its costs, with the objective being to determine the added value of learning and development. Data gathered from the automotive industry stakeholders gave mixed results in relation to their views or opinions of TVET graduates. On the one hand it was thought that the graduates bring professionalism that enhances production, customer satisfaction and a positive outlook to the MSE sector; on the other hand stakeholders felt that, due to obsolete facilities in training institutions, the graduates need a longer induction, which is wasteful and time consuming. Stakeholders felt that the country does not get value for the

money used in the training program because the curriculum, trainers and the institutions fail to address emerging sector issues.

A key feature that a sound TVET evaluation would achieve is the linkage between the training and the industry. Many employers lamented that the government has not recognised their training contribution despite their role in the provision of services to the country. A major observation during the research was the informal type of operation in the businesses visited. Many of them did not have adequate documentation of their operations, marketing or finances. Human resources inputs such as job descriptions, job contracts, performance appraisals and trade union representation were also missing in the businesses.

Possible reasons for the kind of results observed in the automotive industry are suggested from this study. Results in this sector are difficult to quantify because they are largely influenced by other variables, such as workplace conditions, the country's economic conditions, societal factors, owner-manager's managerial attributes and rapidly changing global trends. Arthur, et al. (2003) observe that results are realised through increased productivity, better customer satisfaction, improved employee morale and an increase in profits—aspects that are very difficult to measure or attribute to a single factor like training. Furthermore, organisational, economic and social limitations highly influence not only data gathering, but outcomes as well (Praslova, 2010).

Since the development of entrepreneurship in MSE contributes significantly to job creation, social stability, and economic welfare (Ladzani & Vuuren, 2002), there is an urgent need for a policy change that would create an enabling environment that supports Kenyan businesses to improve their profitability and competitiveness, and facilitates their advance into more modern enterprises that can actively compete in the global arena (GoK, 2010). This is especially critical in Africa where employment is scarce because of structural adjustment programs, insufficient educational opportunities, and the impact of globalisation on labour (Mndebele & Mkhweli, 2007).

RECOMMENDATIONS

In light of the findings of this study and the analysis thereof, this study recommends the following:

Addressing the mismatch of skills in TVET institutions. To address the issues of skills' mismatch, a current skills' inventory is vital because information is required on the courses that TVET should train, the existing job openings, and the emerging skills demanded by the industry. In addition there is need to enhance tracer studies of TVET graduates, which would give valuable feedback to gauge the efficacy of the program. The tracer studies would gather data on the percentage of graduates who gain employment, how well the skills acquired are utilised at the workplace and areas of improvement. Further, program evaluation will point out areas that have been successful, those that require revision, and priority areas of future programs.

Creating linkages with the industry will enable the training institutions to open up more industrial attachments for the learners and encourage the industry to provide instructional equipment and materials. Furthermore, communicating to the employers the advantages of taking up trainees for industrial attachments will help bridge the perception of learners as an added burden.

Making the TVET curriculum flexible. Most stakeholders who took part in this study were concerned about the inflexible curriculum offered by TVET. Online, holiday and evening courses would cater for mature learners and those already at the workplace who need to improve their skills and make them aware of emerging trends.

Quality of training: Business owners interested in offering training should be accredited as providers of training. In addition, more quality private training providers should be encouraged to offer TVET, thereby streamlining the private sector by weeding out institutions that offer poor services. The efficiency of trainers could be enhanced by introducing short training-competency courses that would allow industry trainers to acquire a certificate in pedagogy.

Most TVET institutions are concentrated in major towns and high economic-potential areas of the country. More equitable distribution of institutions to all regions of the country would make them accessible to all segments of society including people with disabilities, the poor and women.

Recognition of prior learning: The formal TVET systems ought to develop ways of recognising prior learning, whether this was acquired formally or informally, through the creation of validation mechanisms. Weaknesses in informal training such as the level of theoretical base and poor technology are best addressed through the integration of formal and informal trainings to address the shortages and inadequacies in skills and to increase the levels of skill certification.

Further, the government needs to address the issue of numerous certificates and training levels that are found in the market and which confuse employers. A national qualification framework or body would be particularly useful in gauging different levels against an agreed standard. In addition, as Bishop (2008) advises, information concerning national qualifications frameworks need to be disseminated in a high quality and well-publicised manner.

Funding TVET: Vocational training is an expensive venture, which requires massive inputs in terms of finances as well as equipment. Already there is a move to offer training loans to TVET students in the same system as that of the university. In addition fees is waived for female students who wish to study in the engineering and science courses.

Getting value for money. Evaluating a training program involves measuring its outcomes against its set targets either in terms of outcomes or resources. All inputs of a training program ought to be analysed, costs calculated and judgments made on whether the venture meets the perceived benefits. Areas of concern should include: technology levels, teaching methods, trainers' remuneration, duration of training programs, student attrition and under-utilisation of available resources (Mun, 1997).

Enhancing the status of TVET. The acquisition of workplace skills such as book keeping, interpersonal, and entrepreneurial competencies by entrepreneurs is vital to surviving in self-employment.

Transfer of skills. More collaboration between the training providers and the industry is needed to address the issues pertaining to transferability, such as the level of training attainment, the expectations of both the employee and the employer, and safe work practices.

Furthermore, there are added benefits that employers involved in training would reap by cooperating amongst themselves (Cooney & Long, 2008).

The creation of industrial incubators would provide workplace experiences for trainees and ease transferability of practical skills. In addition, training providers ought to guide potential trainees in their course choices by taking cognisance of their abilities and academic qualifications to ease transfer of skills.

LIMITATIONS OF THE STUDY

There are several limitations to this study. The first one relates to the number of respondents that took part. Only 19 MSE in the automotive industry (out of an approximate 4500), four training institutions (out of a possible 1,500); 32 trainees (the total is about 60,000) and four education officers were involved in this study. Due to this small sample, generalising these results should be done with caution.

The second limitation arises from the rapid political and departmental changes taking place in the country in the TVET sector that has been occasioned by the passing of the TVETA bill. However, the findings of this study are still relevant because although departments may change rapidly, pertinent issues in training and business industries take a much longer time to evolve.

AREAS FOR FUTURE RESEARCH

This research focussed on only one context where TVET is undertaken: the automotive industry. There is need to examine other sectors to find out how the skills and competencies gained from TVET are aligned to the workplace. For example, one education official intimated that the quality of skills that TVET offered for the hotel industry was more appropriate than that for the automotive industry. In addition, courses for the trade industries such as marketing and finance, which do not require massive resources, would most likely offer a different perspective of the training process.

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