STRATEGIES FOR SUSTAINED COLLABORATION BETWEEN ZAMBIAN TEVET INSTITUTIONS AND INDUSTRY: POLICY RECOMMENDATIONS

P. Tembo
Department of Educational Administration and Policy Studies
University of Zambia
Lusaka, Zambia
https://orcid.org/0009-0006-5671-2439

A. Du Plessis
Department Education Management and Policy Studies
University of Pretoria
Pretoria, South Africa
https://orcid.org/0000-0002-2561-5138

ABSTRACT

This article proposes strategies for sustaining collaborative activities between Zambian technical and vocational training (TEVET) institutions and industry. Research has established that collaboration between skills training institutions and industry is crucial in improving the quality of skills development. However, current collaborations lack adequate policy guidelines. As a result, skills training stakeholders describe the collaborations as unmeaningful. Data was collected from three training institutions offering craft certificate-level construction programs in three provinces. The study employed a hermeneutic-phenomenological approach underpinned by the social exchange theory (SET) to analyse collaborative activities. The study revealed factors that render the collaborations unmeaningful, such as a lack of commitment, unfair distribution of benefits and inadequate student funding. The analysis yielded several policy recommendations on sustaining collaborations between training institutions and industry. The study concluded that sustaining these will require mitigating institutional and industrial hindrances through policies. Among other strategies, these policies must include specific details regarding communication channels and procedures, compliance measures and benefits.

Keywords: TEVET institutions; TEVET-industry collaboration; TEVET stakeholders; social exchange theory; skills development

INTRODUCTION

Technical and Vocational Education and Training (TVET) is an educational stream that should produce a skilled workforce for industry (Hassan et al. 2021). TVET involves deliberate interventions to make people more relevant and productive in designated areas of economic and technological activities (Oviawe, Uwameiye and Uddin, 2017). In the Zambian context, TVET is commonly known as technical education, vocational and entrepreneurship training (TEVET). TEVET was coined in 1996 after revising the 1969 policy document on technical education and vocational training (TEVT) (see Ministry of Science Technology and Vocational Training 1996). The document is regarded as Zambia's first national policy document on technical and vocational training. Among the common programmes offered in Zambian TEVET institutions are electrical technology, automotive engineering, heavy equipment engineering, fashion design, music technology, and building technology. Following the practice of multilateral education funders such as the United Nations Educational, Science, and Cultural Organization (UNESCO), International Labour Organization (ILO) and the Organization for Economic Cooperation and Development (OECD) (King and Palmer, 2006), this article uses the term TEVET interchangeably with skills development.

Governments in developing countries are becoming increasingly aware of the potential of skills development in reducing poverty and unemployment (Albashiry, Voogt and Pieters 2015). However, TEVET in such countries, Zambia included, is characterised by a significant lack of practical relevance and responsiveness to labour market needs (Eicker, Haseloff and Lennartz, 2017). Owing to this challenge, several policies and studies have indicated that collaboration among TEVET stakeholders is cardinal (see Arinaitwe, 2021, Ministry of National Development Planning 2017 and Raihan, 2014). To this effect, Zambia has included collaboration between training institutions and industry in most of its national development plans on skills development. However, these policies generally do not explain the procedural aspects of such collaboration.

This study identifies factors that affect successful collaboration and suggests possible solutions to enhance collaboration between TEVET institutions and industry. This is achieved by presenting literature that justifies the need for further research to reduce the skills development gap in TEVET. The literature highlights the various policy documents on TEVET in Zambia. It presents their weaknesses regarding the enhancement of TEVET through collaboration. The literature review is followed by the methodology employed in collecting and analysing the data. The study analysed how fragmented policies on collaboration have led to resistance by some industry partners to collaborate with Zambian institutions. The study further

recommends revising existing policies to enhance the sustainability of collaborations between TEVET institutions and industry partners.

LITERATURE REVIEW

Researchers have argued that governments can support collaborations between TEVET institutions and industry by instituting national policies to address governance issues of such collaborations (see Akanbi 2017, Arinaitwe, 2021 and Raihan, 2014). In the case of Zambia, the country does not lack policies on skills development (Ministry of Higher Education 2020). The Zambian government has since 1964 developed several TEVET policies to enhance the quality of the TEVET provision. It should also be noted that the existing policies highlighted in this article recognise the importance of synergies between TEVET stakeholders in reducing skills scarcity (see Government of the Republic of Zambia 2006, Ministry of National Development Planning 2017, Ministry of Science Technology and Vocational Training 1996 and Mukuni, 2020). However, these policy documents do not sufficiently explain how collaborations between TEVET institutions should be developed and sustained.

The quest to satisfy the technical and vocational skills needs of industry in Zambia dates as far back as the early 1960s (Mwanakatwe, 2013). Since Zambia's independence from its colonial masters in 1964, the following are some of the policies that have been adopted and actions that have been taken to improve the quality of skills development:

- The formation of the Commission for Technical Education and Vocational Training (CTEVT) in 1968;
- The drafting of the Statement of Policy and Intent in 1969;
- The adoption of the TEVET Act of 1970 to guide the provision of TEVET;
- The institutionalisation of the Technical Education, Vocational and Entrepreneurship Training (TEVET) Reforms in 1994;
- The formulation of the TEVET Policy in 1996;
- The drafting of the TEVET Strategy Paper in 1997;
- The enactment of the TEVET Act No. 13 in 1998;
- The formation of the Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA) in 1999;
- The Vision 2030 policy document in 2006;
- The National Development Plans and the
- Technical Education, Vocational, and Entrepreneurship Training (TEVET) Policy in 2020.

It should also be noted that establishing cross-sector collaborative links is a complicated and challenging task with an uncertain outcome (Bryson, Crosby and Middleton Stone, 2015). Many factors influence the task. Among the notable factors are TEVET institutions' geographic and economic location, stakeholder roles and responsibilities, and prior collaboration experience (Johnston and Huggins, 2016). Other factors include the compatibility of organisational objectives, availability of resources, administrative procedures, governmental support, legal restrictions and the market environment (Rybnicek and Königsgruber, 2019). For collaborations to succeed, policies must contain appropriate evaluation strategies (Guyadeen and Seasons, 2018). The strategies must explicitly address most of these highlighted factors. The latest policy document, the 2020 TEVET policy, explains some expected roles of TEVET stakeholders (see Ministry of Higher Education 2020). However, the document does not state how these synergies must be implemented and evaluated. Hence, this study assumed that synergies between TEVET stakeholders have been mostly unsuccessful owing to the policy gap regarding implementation and evaluation.

Remington (2018) argues that the gap between employers' demand for skills and the skill inventory is worsening. Responding to this gap through strong and cohesive linkages between TEVET training institutions and industry is a generally agreed-upon approach in Zambia's TEVET policies (Eicker et al. 2017; Ministry of National Development Planning 2017). Consequently, various initiatives are being introduced to reduce this skills gap through collaboration with the industry. These initiatives include policy formulation and increasing the fund base for TEVET programmes (Mulenga and Chileshe, 2020). However, the efforts to improve collaboration between training institutions and industry have often been confronted with several barriers. These barriers include a lack of shared understanding of collaboration, ineffective communication between partners, bottlenecks when accessing incentives, unavailability of resources, a lack of capacity to offer programmes, and misalignment in expectations (Arinaitwe, 2021 and Jackson et al. 2017).

With vocational education varying across different countries (see Antera, 2021 and Ayonmike, Okwelle and Okeke. 2015), mitigating the barriers mentioned above requires affected countries to develop contextualised solutions. In the case of Zambia, just like in South Africa, TEVET colleges have been encouraged to expand rapidly to respond to the needs of the many students who are not eligible for university education (Van der Bijl and Oosthuizen, 2019). Developing an effective TEVET system that will respond to the ever-changing needs of the economy will thus require that policies consider such complexities. Doing so will ensure that the challenges being faced by all stakeholders are adequately considered. Additionally, acquiring lifelong employable skills calls for effective and efficient teaching methods,

improved and standard instructional equipment, relevant curriculum and good quality teachers (Anindo, Mugambi and Matula, 2016). Ensuring effective collaboration thus requires training institutions to put in place various requirements for acquiring a quality and employable skill set.

METHODOLOGY

The study used a qualitative methodology to collect and analyse data on sustained collaborations between TEVET institutions and the industry. Specifically, the study employed hermeneutic phenomenology. Phenomenological research studies are grounded on the "assumption that each experience and the meaning attributed to it is different and has a unique importance" (Bakanay and Çakir 2016, 1). Hermeneutic phenomenology studies the meanings of an individual's interpretations of his/her experiences and how these influence the individual's choices (Neubauer, Witkop and Varpio 2019). This inquiry strategy allowed the researchers to identify the factors affecting collaboration as described by participating stakeholders. Hermeneutic phenomenology, a humanistic methodology positioning the ontological nature of shared experiences within specific contexts, such as work on integrated learning experiences, brings sustained focus on lived experiences (Stephenson, Giles and Bissaker, 2018).

Phenomenology is commonly viewed as a school of philosophy and methodology that can be applied independently of other theories (see Merriam and Grenier, 2019, Qutoshi, 2018 and Smith, 2016). While this is true for other branches of phenomenology, such as transcendental phenomenology, hermeneutic phenomenology can be jointly applied with other theories (Peoples, 2020). The study combined two theoretical frameworks. These are the social exchange theory (SET) and the trust theory, as advanced by Blau (1964) and Gambetta (2000) respectively. SET refers to the voluntary actions of individuals motivated by the returns they are expected to acquire and typically do receive from others (Blau, 1964). The choice of SET in this study results from SET's regard by other researchers as one of the most prominent conceptual perspectives in management and interrelated fields like sociology and social psychology (Cropanzano et al. 2017). Applying SET during data analysis enabled the researchers to identify factors that were influenced by either the availability or lack of benefits in the collaboration between TEVET institutions and industry partners.

According to Gambetta (2000), trust is the trustor's subjective probability of the trustee performing a particular action to benefit the trustor. Applying this classic sociological definition of trust, the trustor in this study refers to the industry and the trustee as a TEVET institution. Similar to the SET's position that actors in a relationship weigh the benefits of that particular

relationship before they can decide to commit (Zoller and Muldoon, 2019), trust between the trustor and the trustee exists if the probability of the trustee satisfying the trustor exceeds a certain threshold (Choy and Haukka, 2009). Trust was thus viewed as important in enhancing the quality of collaborations because of its capacity to attenuate cultural differences and the potential barriers to collaboration (Nsanzumuhire and Groot, 2020).

The study employed heterogeneity-purposive sampling to select participants (Trochim, Donnelly and Arora 2016). Using this variant of purposive sampling enabled us to select proficient and well-informed individuals about collaboration between Zambian TEVET institutions and the industry. Data was collected from three provinces with varied Human Development Indexes to enhance the transferability of the research findings. The sample size was guided by the research design employed. Data were collected from participants through semi-structured interview guides (10) and focus group discussions (2). The participants included institutional administrators (3), students (3), and graduate employers (3). Also interviewed was a TEVET standards officer from the Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA). TEVETA is a governing body of all public and private TEVET programmes in Zambia. The interview results were then triangulated with results from two focus group discussions, which consisted of five TEVET lecturers and five students each. The students in the focus group discussion did not include those initially selected for interviews. All participants were selected from four construction programmes: plumbing and sheet metal, bricklaying and plastering, carpentry and joinery, and electrical engineering. Data analysis was performed by applying the hermeneutic cycle. The hermeneutic circle emphasises the practice of deliberately considering how the data contribute to the evolving understanding of the phenomena and how each enhances the meaning of the other (Neubauer et al. 2019). Data analysis was performed by reading, reflective writing, and rigorous interpretation (Kafle, 2011).

FINDINGS, DISCUSSION AND RECOMMENDATIONS

Fragmented policies on collaboration

Owing to the significant challenges posed by emerging vocational practices and technological advances, TEVET professionals must develop, adapt or redesign strategies to address the skill needs of the industry (Arinaitwe et al. 2022). Though interventions to increase the number of enrolments in TEVET institutions have yielded some positive results (Needham, 2019), interventions to improve the quality of Vocational Education and Training (VET) still need to be reworked. Improving the quality of skills will, therefore, require meaningful collaborations

between training institutions and industry. Rybnicek and Königsgruber (2019) argue that while the advantages of collaborations in skills development are well recognised, many hindrances and challenges require mitigation. Some hindrances identified in this study include fragmented policy structures, bureaucratic red tape associated with accessing employer-based funds, a lack of incentives, and double taxation. Employers interviewed viewed the TEVET policy by TEVETA to compel the industry to collaborate with TEVET institutions in enhancing skills development as double taxation. They explained that the skills development levy (SDL) they pay should be adequately utilised to enhance the quality of skills development through adequate funding of TEVET programmes. The industry complained that in addition to paying the SDL, they spend more resources retraining TEVET graduates because the institutions do not adequately expose them to practical work.

TEVET stakeholders agree that authentic engagement is fundamental to quality outcomes and must be structured, intentional and resourced (Ferns, Russell and Kay, 2016). While this is true, the fragmented structure of collaboration policies in TEVET is a significant barrier to examining the effectiveness of TEVET systems (Alagaraja, Kotamraju and Kim 2014). The data revealed that most collaborations are conducted through memoranda of understanding (MoUs) signed between training institutions and the industry. However, institutional administrators have no official guidelines for developing and adhering to these MoUs to sustain these collaborations. Policies merely provide broad permission to institutions to allow them to collaborate with industry on their terms and conditions.

Additionally, most TEVET stakeholders seem unaware of existing policies on collaborations. This indicates that there is an urgent need for improved communication among stakeholders. Therefore, the interactions must include information sharing and conflict resolution guidelines (Lubell, 2015). It should also be noted that stakeholders in a collaboration pursue different objectives and face different constraints. While this contrast potentially enhances the value of collaboration through leveraging, it is also a source of complications (Rybnicek and Königsgruber, 2019). Therefore, it is difficult for collaboration actors to resolve issues hindering successful collaboration without awareness of policies or guidelines governing the collaboration.

Recommendations

In the case of Zambia, the collaboration between TEVET institutions and industry is often met with resistance by industry. As a result, the Zambian TEVET 2020 policy suggests that the current TEVET legislation must be reviewed to compel industries to work with TEVET

providers (see Ministry of Higher Education 2020). This study, therefore, analysed different collaborative activities between training institutions and industry to formulate recommendations to revise existing policies so that the sustainability of collaborations between TEVET institutions and industry partners can be enhanced. Twelve collaborative activities were analysed. These included industrial attachments, programme funding, scholarships, continuing professional development programmes, and curriculum development programmes. Other programmes analysed included improving lecturers' academic and pedagogic competence, assessing students on industrial attachments and TEVET facilities and infrastructure. Lastly, programmes on graduate employability, supply of teaching and learning materials and sponsoring employees for further training were also analysed. The analysis yielded the following recommendations:

Generate mutual trust through adequate and appropriate feedback to stakeholders

Generating mutual trust between stakeholders with different goals, such as training institutions and the industry, is essential to a successful collaboration. This is because such collaborations require crossing different boundaries and entail risk (Nsanzumuhire and Groot, 2020). A study by Coll, Rochera and De Gispert (2014) indicated that feedback helps appraise and verify collaborative activities. Similarly, this study established that the unwillingness of some stakeholders to collaborate with TEVET institutions was linked to a lack of feedback from governing bodies such as TEVETA and the Ministry of Higher Education (MHE). Industry employers who participated in the interviews cited a lack of transparency in allocating and using skills development levies paid by industry employers. They indicated that for them to trust the system, it is important that feedback on all collaborative activities should be given. Other research has determined that more egalitarian and universal welfare systems generally promote mutual trust, solidarity, social capital, and broader coalitions of public support (Moynihan and Soss, 2014). Developing trust will require that the industry be given a chance to appraise and verify the joint activities with TEVET institutions. Trust is, therefore, crucial in sustaining collaborations between training institutions and industry. Building a relationship based on mutual trust implies that the parties share a common ground for communication, facilitating understanding of learning needs and constructing a platform for learning activities (see Arinaitwe, 2021). The need for feedback was explained by Participant 8 as follows:

> "We need more collaboration platforms to receive and give feedback on our students. Additionally, these platforms can help us iron out our differences, which might hinder

participation" (P8).

Collaboration policies should encourage collaboration between TEVET institutions and industry.

For any policy to be effective, it must be based on a legal framework with identifiable and measurable strategies and a range of identifiable implementation resources (Akanbi, 2017). These strategies must also include compliance measures. The data revealed that most MoUs signed between TEVET institutions and industry partners were often terminated without formal dialogue or reasons provided. This indicates a need to protect TEVET institutions from such abuse by including compliance measures in collaboration policies. Participant 10, who is a TEVET institutional administrator, articulated this problem in the following manner:

> "We have noticed that we seem to offer much more than we receive. MoUs are terminated at will without even informing us. However, we have often been asked to surrender our infrastructure and furniture to be used by private and public institutions without being rewarded"(P10).

Participating stakeholders also indicated that industry employers are profit-driven. As such, they must be given incentives to motivate them to collaborate. This corresponds with Agrawal and Agrawal's (2017) argument that creating strong links with vocational education and training institutions will require industry employers to be incentivised to commit to such links.

Social exchange theory proposes that using rewards to reinforce behaviour will yield better results than punishment (Cook et al. 2013). Therefore, regarding social exchange theory, incentivising collaboration between TEVET institutions and industry seems to be a better way to ensure commitment. A study by Zoller and Muldoon, (2019) established that key concepts in social exchange, such as reciprocity, group cohesion, and rewards, lead to better compliance with management, increased morale and increased production. Punitive measures to ensure compliance with MoUs, such as high penalties on non-payment of the skills development levy, must be reinforced with incentives. These incentives must solidify commitment to collaboration with TEVET institutions by industry partners.

Improving enrolment and retention of students in some programmes.

The TEVET skills gap is twofold, firstly in terms of quality and secondly in terms of quantity (Pilz, 2016). The data revealed that while institutions were overwhelmed with high numbers of students in some programmes, such as electrical engineering and plumbing, other programmes, such as carpentry and building, had very few or no students. Participating graduate employers

also complained about the need to recruit graduates from outside the country because Zambian institutions could not provide them with the required skilled graduates. Sustained collaborations with unsatisfied employers are thus very difficult. For instance, some employers questioned why they had to continue paying the skills development levy when they needed to attract skilled graduates from outside the country. Participant 4 expressed this frustration:

> "We pay levies, and we again must retrain the graduates. This is not fair. For collaboration to work, such exploitation must end" (P4).

The data further affirmed the social exchange theory critics who argue that this theory focuses on self-interest rather than relationships (Muldoon et al. 2017). Before people decide to collaborate, they weigh the potential benefits of that collaboration. This entails that satisfying the industry must focus on quality and quantity. The failure to enrol and retain students in some programmes suggests that the industry has a very limited pool of graduates to employ. Therefore, sustaining collaborations with the industry will require TEVET institutions to satisfy the demand for appropriately trained graduates.

Participants suggested that the programmes must be revised to help retain students in programmes with high drop-out rates. They further suggested that training institutions must offer shorter but more intensive programmes. This is because the participating industry stakeholders considered time a major contributing factor to high drop-out rates in the affected programmes. It was revealed that students often dropped out of these programmes after learning the basics, which enabled them to secure some employment although they were not fully trained. Participant 2 explained:

> "Students range from 1 to 5 in these programmes. We are calling for these programmes to be revised to reduce the drop-out rate and to encourage people to enrol" (P2).

Provision of start-up tools for graduating students

TEVET has been defined by some researchers as a method of alleviating poverty, especially through pre-technical and vocational education (Akanbi, 2017). TEVET is also recognised as one of the most powerful skill enablers in addressing structural unemployment (Ngubane, Mncube and Olaniran, 2021). However, at the same time, research has indicated that many TEVET graduates in developing countries are unemployable because they lack employability skills (Okolie et al. 2020). It is also true that governments cannot shoulder this enormous task single-handedly; hence, there is a need for TEVET and public/private collaboration (Oviawe, 2018). This study revealed that unemployment among TEVET graduates in TEVET is also linked to the failure of institutions to provide start-up tools to graduating students to enable

them to start their own small to medium-sized enterprises.

Additionally, TEVET provides students with skills to sustain a living without relying on formal employment. Therefore, it is prudent that these graduates are provided with start-up kits through loans or grants. Doing so will reduce unemployment rates and boost the economic sector. Participants 9 and 7 explained the need for start-up tools as follows:

> "There are very few jobs out there. We need help with start-up tool kits and business registration after graduation or cooperatives for the alumni" (P9).

> "Mostly, our students come from very vulnerable backgrounds. So, if they are given some small tools which they can start from, despite having difficulties in finding employment, they can start their small-scale businesses. TEVET's core aim is to empower students to enter the market, fit in, and provide for their livelihood" (P7).

Jointly organise calendars for industrial attachments.

Worldwide technical and vocational education reforms and the adoption of industrial attachment programmes are driven by recognising the value of work-integrated experiences and their benefits to TEVET institutions and industry hosts (Dondofema, Mwenje and Musemwa, 2020). However, effective learning and teaching also depend on providing adequate resources (see Taylor and Van der Bijl, 2018).

The data revealed that although industry partners are generally willing to accept students on industrial attachments for work-integrated learning, they were often overwhelmed by the high numbers of students seeking industrial attachments. This is problematic because many students disrupt their core business of profit-making. Apart from playing a supervisory role, industrial supervisors are tasked with organising tool kits and finding activities for the students on attachment. Participating representatives from industry complained that they have to accommodate large numbers of students and therefore suggested that the industrial calendar for attachments must be jointly organised among industry partners and TEVET institutions. To match the limited space available for work-integrated learning, it was suggested that institutions must find ways of offloading students requiring attachments in separate sessions. A response from Participant 6 articulates the suggestion as follows:

> "Through collaboration with industry, institutions must develop an organised calendar for attachments; that way, all students will be given a chance to be attached to industries" (P6).

Funding must be provided to students on industrial attachments

The data revealed a need for students on industrial attachments to be funded. Failure to provide financial support to students while they are attached to industry partners has contributed to

many students being denied the opportunity to experience work-integrated learning. Other studies have also found that industry partners are generally unwilling to cover expenses such as stipends, travel and accommodation expenses of particularly those students who must travel large distances to urban areas, and if necessary, insurance and communication costs (Eicker et al. 2017, Mulenga and Chileshe, 2020). These obligations are more problematic for industry during periods of economic downturn and when businesses operate on lean financial models (Jackson et al. 2017). To motivate industry partners to accommodate students on internships, the participating stakeholders suggested that a percentage of the skills development levy (SDL) should be channelled towards providing financial support to students on industrial attachments. Participant 2 explained the industry partners views as follows:

> "Companies argue that they pay the skills development levy (SDL) to the government. For them, the SDL must be able to fund the training. In that way, companies feel they shall benefit from the SDL, which they are compelled to pay" (P2).

Use collaboration platforms to create awareness and sell products

A lack of shared understanding of the purpose and advantages of institution-industry collaboration seems to be a major barrier to collaboration. For instance, a study by Jackson et al. (2017) revealed that different motivations for stakeholders to engage in work-based or work-integrated learning (WIL) could create tension and cause disengagement from WIL activities. Likewise, this study revealed that some companies refused to accept students due to a misunderstanding and ignorance of industrial attachments. Some participating students noted that some companies refused to accept their applications for industrial attachments due to an unwillingness to pay students some remunerations. Also, some companies refuse students' applications, fearing that the students will damage their equipment (Mulenga and Chileshe, 2020).

To remedy such misunderstandings, participating stakeholders recommended promoting awareness of the importance of industrial attachments among all stakeholders. Participants further noted that the roles and responsibilities of stakeholders in collaborative activities must be stipulated. To achieve this, (Oparaocha, 2016) contends that social media platforms should be used to create awareness because of their capacity to include individuals in geographically dispersed locations.

TEVET institutions should be equipped with appropriate training equipment.

The importance of TEVET institutions having appropriate equipment to train their students and the lack of funding to purchase such equipment was highlighted by participants 1 and 5, respectively.

> "Skills training is very expensive, yet institutions receive very minimal grants" (P1).

> "Collaboration should address issues such as improving the quality of skills by equipping the institutions with the necessary equipment and other training materials. I urge other companies to reach out to these institutions and help them to create a conducive training environment" (P5).

The number of unemployed graduates and youths in the labour market is alarming, but more alarming and disturbing is the quality of these graduates (Oviawe, 2018). This study revealed that the lack of relevant training equipment in TEVET institutions is one of the factors contributing to the poor quality of TEVET graduates. Participating stakeholders also noted that the employers' dissatisfaction with the collaboration with training institutions was also linked to institutions' inability to adequately expose students to appropriate and relevant practical content due to a failure to provide suitable equipment. This situation means that companies have to spend more time and resources to train or retrain students during their period of work-integrated learning. Unfortunately, this retraining continues even after graduation. TEVET graduates manifest a huge gap in practical skills when they enter the labour market, forcing industries to retrain them upon employment (Anindo et al. 2016).

Encouraging the industry to collaborate must, therefore, focus on reducing the industry's burden of retraining the students who are attached to them. Supporting the findings of Oketch (2014), participating stakeholders suggested that the government must develop and implement policies that encourage greater investment in technical and vocational education training equipment. Such investments would reduce the cost of collaboration incurred by industry partners and motivate them to collaborate with TEVET training institutions.

Development of trending skills

Research in Sub-Saharan Africa has revealed that minimal scholarly effort has been made to empirically identify the exact types and domains of skills in which supply-demand mismatches happen (see Yamada, Otchia, and Taniguchi, 2018). Similarly, this study revealed a need for the Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA) to identify and develop a greater variety of construction skills. That would help the construction industry source labour locally rather than recruiting foreign-trained semi-skilled labour.

However, sustained collaborations between training institutions and industry partners will require that the training institutions develop diverse trending skills. This entails satisfying the skills needs of the industry, which is crucial to maintaining meaningful engagements with the industry. In a study by Khirotdin et al,. (2019), the participating stakeholders suggested that tracer studies must regularly be conducted to determine or verify that TEVET graduates are employable and marketable. Participant 3 explained that TEVETA has not yet captured some skills. The participant further noted that these skills "*need to be brought on board*" because "*the market is there*" (P3). Bringing on board such skills would prevent unemployment caused by importing labour, which can otherwise be developed locally (Afeti, 2018). For instance, most professional rhino board ceiling installers and tilers are sourced from Zambia's neighbouring countries.

CONCLUSION

The purpose of this article was to propose strategies for strengthening and sustaining collaborative activities between Zambian TEVET institutions and industry partners. Using the social exchange and trust theories to analyse the data, the findings suggest that sustained collaborative activities require developing social capital among the collaboration stakeholders. This can be done by improving communication and building mutual trust between TEVET institutions and their industry partners, adding value to the collaboration endeavours, and resolving conflicts. While partners in a collaboration can cooperate due to self-interest or obligation and not trust (Cho, Chan and Adali, 2015), this study established that trust is an important factor in sustaining collaborations. Additionally, since the industry is profit-driven, reducing the cost of the collaboration will make it more likely that industry partners would positively perceive their collaborations with TEVET institutions. Industry partners will, therefore, be more willing to collaborate.

It has been difficult for countries to measure the effectiveness of the implementation of collaborations between training institutions and their industry partners because of the fragmented nature of TEVET policies (see Alagaraja et al. 2014, Johnston and Huggins, 2016 and Rybnicek and Königsgruber, 2019). Nevertheless, this study provides valuable insights to policy developers as it proposes strategies to sustain collaborations in the TEVET sector and to overcome the gaps in the current collaborative activities. Apart from implications for policy formulation in higher education, the study also highlights implications for TEVET curriculum design. The findings suggest that there must also be a joint organisation of industrial attachments for students. Additionally, to reduce the costs incurred by the industry and the

students during industrial attachments, the study suggests that students on industrial attachments must be funded. These findings imply that the industrial attachment calendar and student funding are crucial aspects that must be considered during curriculum development and review. Thus, for an exchange to last, it should have higher benefits than costs to both parties (Zoller and Muldoon, 2019).

This study focused on construction programmes; broader studies on collaboration involving varied TEVET programmes in other TEVET sectors are thus suggested. For instance, this study established that lacking defined stakeholder roles often hinders effective collaboration between TEVET partners. This implies that some stakeholders are not fully sensitised to their roles. Since this study focussed on sustaining effective collaborations, future studies can thus investigate the role of communication in developing effective TEVET collaborative programmes. A countrywide survey design incorporating a wide variety of TEVET programmes is therefore suggested.

BIBLIOGRAPHY

Afeti, George. 2018. "Revitalising Technical and Vocational Education and Training in Africa: Issues Outstanding." *Journal of Vocational, Adult and Continuing Education and Training* 1, no. 1: xi–xviii.

Agrawal, Tunshar and Ankush Agrawal. 2017. "Vocational Education and Training in India: A Labour Market Perspective." *Journal of Vocational Education & Training* 69, no. 2: 246–265. https://doi.org/10.1080/13636820.2017.1303785

Akanbi, Grace Oluremi. 2017. "Prospects for Technical and Vocational Education and Training (TVET) in Nigeria: Bridging the Gap between Policy Document and Implementation." *International Education Journal: Comparative Perspective* 16, no. 2: 1–15.

Alagaraja, Meera, Pradeep Kotamraju, and Sehoon Kim. 2014. "A Conceptual Framework for Examining HRD and NHRD Linkages and Outcomes." *European Journal of Training and Development* 38, no. 4: 265–285. https://doi.org/http://dx.doi.org/10.1108/EJTD-01-2013-0009

Albashiry, N. M., J. M. Voogt, and J. M. Pieters. 2015. "Teacher Collaborative Curriculum Design in Technical Vocational Colleges: A Strategy for Maintaining Curriculum Consistency?" *The Curriculum Journal* 26, no. 4: 601–624.

Anindo, I., M. Mugambi, and D. Matula. 2016. "Training Equipment and Acquisition of Employable Skills by Trainees in Public Technical and Vocational Education and Training Institutions in Nairobi County, Kenya." *Training* 3, no. 4: 103–110.

Antera, Sofia. 2021. "Professional Competence of Vocational Teachers: A Conceptual Review." *Vocations and Learning* 14, no. 3: 459–479.

Arinaitwe, Dinavence. 2021. "Practices and Strategies for Enhancing Learning through Collaboration between Vocational Teacher Training Institutions and Workplaces." *Empirical Research in Vocational Education and Training* 13, no.1: 1–22. https://doi.org/10.1186/s40461-021-00117-z

Arinaitwe, Dinavence, Louise Mifsud, Habib Kato, and Arne R. Sannerud. 2022. "Learning through Collaboration between Vocational Teacher Training Institutions and Workplaces: Barriers and Contradictions." *Nordic Journal of Vocational Education and Training* 12, no.1: 25–50.

Ayonmike, Chinyere Shirley, P. Chijioke Okwelle, and Benjamin Chukwumaijem Okeke. 2015. "Towards Quality Technical Vocational Education and Training (Tvet) Programmes in Nigeria: Challenges and Improvement Strategies." *Journal of Education and Learning* 4, no 1: 25–34.

Bakanay, Çiçek Dilek, and Mustafa Çakır. 2016. "Phenomenology and its Reflections on Science Education Research." *International Online Journal of Educational Sciences* 8, no. 4: 161–177.

Blau, Peter M. 1964. *Exchange and Power in Social Life*. Piscataway, NJ: Transaction Publishers.

Bryson, John M., Barbara C. Crosby, and Middleton Stone, M. 2015. "Designing and Implementing Cross-Sector Collaborations: Needed and Challenging." *Public Administration Review* 75 no. 5: 647–663.

Cho, Jin-Hee, Kevin Chan, and Sibel Adali. 2015. "A Survey on Trust Modelling." *ACM Computing Surveys (CSUR)* 48 no. 2: 1–40.

Choy, Sarojni, and Sandra Haukka. 2009. "Industrial Attachments for Instructors in TVET Delivery." In *International Handbook of Education for the Changing World of Work: Bridging Academic and Vocational Learning*: 1367–1382. Dordrecht: Springer Netherlands.

Coll, Cesar., Maria Jose Rochera, and Inesa de Gispert. 2014. "Supporting Online Collaborative Learning in Small Groups: Teacher Feedback on Learning Content, Academic Task and Social Participation." *Computers & Education* 75: 53–64.

Cook, Karen S., Coye Cheshire, Eric R.W. Rice, and Sandra Nakagawa. 2013. "Social Exchange Theory." In *Handbook of Social Psychology,* edited by DeLamater John and Amanda Ward, 61–81. New York, NY: Springer. https://doi.org/https://doi.org/10.1007/978-94-007-6772-0_3

Cropanzano, Russell, Erica L. Anthony, Shanna R. Daniels, and Alison V. Hall. 2017. "Social Exchange Theory: A Critical Review with Theoretical Remedies." *Academy of Management Annals* 11, no. 1: 479–516.

Dondofema, J., J. Mwenje and L. Musemwa. 2020. "The Industrial Attachment Programme - History, Benefits, Challenges and Its Adoption in Zimbabwe: A Review." *Asian Journal of Education and Training* 6, no.3: 412–420.

Eicker, Friedhelm, Gesine Haseloff, and Bernd Lennartz. 2017. *Vocational Education and Training in Sub-Saharan Africa: Current Situation and Development*. Bielefeld: W. Bertelsmann Verlag.

Ferns, Sonia, Leonie Russell, and Judie Kay. 2016. "Enhancing Industry Engagement With Work-Integrated Learning: Capacity Building for Industry Partners." *Asia-Pacific Journal of Cooperative Education* 17, no 4: 363–375.

Gambetta, Diego. 2000. "Can We Trust Trust?" *Trust: Making and breaking cooperative relations* 13, no. 2: 213–237.

Government of the Republic of Zambia. 2006. *Fifth National Development Plan 2006-2010. Broad-Based Wealth and Job Creation through Citizenry Participation and Technological Advancement.* Lusaka: Government Republic of Zambia.

Guyadeen, Dave, and Mark Seasons. 2018. "Evaluation Theory and Practice: Comparing Program Evaluation and Evaluation in Planning." *Journal of Planning Education and Research* 38, no 1: 98–110.

Hassan, Rana H., Malik T. Hassan, Naseer Sheraz, Zafran Khan, and Moongu Jeon. 2021. "ICT Enabled TVET Education: A Systematic Literature Review." *IEEE Access* 9: 81624–81650. https://doi.org/10.35188/UNU-WIDER/2014/790-5

Jackson, Denise, David Rowbottom, Sonia Ferns, and Diane McLaren. 2017. "Employer Understanding of Work-Integrated Learning and the Challenges of Engaging in Work Placement Opportunities." *Studies in Continuing Education* 39, no. 1: 35–51.

Johnston, Andrew and Robbert Huggins. 2016. "Drivers of University-Industry Links: The Case of Knowledge-Intensive Business Service Firms in Rural Locations." *Regional Studies* 50, no. 8: 1330–1345. https://doi.org/10.1080/00343404.2015.1009028

Kafle, Noragan P. 2011"Hermeneutic Phenomenological Research Method Simplified." *Bodhi: An Interdisciplinary Journal* 5, no. 1: 181–200.

Khirotdin, Khairina, Junita M. Ali, Norhidayati Nordin, and Sheikh Ezamoddin M. Mustaffa. 2019. "Intensifying the Employability Rate of Technical Vocational Education and Training (TVET) Graduates: A Review of Tracer Study Report." *Journal of Industry, Engineering and Innovation* 1, no.1: 1–5.

King, Kenneth J., and Robert Palmer. 2006. "Skills Development and Poverty Reduction: The State of The Art. Post-Basic Education and Training Working Paper Series - No. 9". *Semantic Scholar*.

Lubell, Mark. 2015. "Collaborative Partnerships in Complex Institutional Systems". *Current Opinion in Environmental Sustainability,* 12: 41–47.

Merriam, Sharan B., and Robin S. Grenier, (eds.). 2019. *Qualitative Research in Practice: Examples for Discussion and Analysis*. Hoboken, NY: John Wiley & Sons.

Ministry of Higher Education (MHE). 2020. *National Technical Education, Vocational and Entrepreneurship Training Policy*. Lusaka: Ministry of Higher Education.

Ministry of National Development Planning. 2017. *Seventh National Development Plan 2017–2021*. Lusaka: Ministry of National Development Planning.

Ministry of Science Technology and Vocational Training. 1996. *Technical Education, Vocational And Entrepreneurship Training (TEVET) Policy*. Lusaka: Ministry of Science Technology and Vocational Training.

Moynihan, Donald P., and Soss, Joe. 2014. "Policy Feedback and the Politics of Administration". *Public Administration Review* 74, no. 3: 320–332.

Mukuni, Joseph S. 2020. *The Story of the Technical Education, Vocational and Entrepreneurship Training (TEVET) Reforms in Zambia: 1994–2008.* Virginia: Virginia Tech.

Muldoon, Jeff, Eric Liguori, Josh Bendickson, and Antonina Bauman. 2017. "Revisiting Perspectives on George Homans: Correcting Misconceptions." *Journal of Management History* 24: 57–75. https://doi.org/10.1108/JMH-06-2017-0027

Mulenga, Innocent M., and Edward K. Chileshe. 2020. "Appropriateness and Adequacy of Teaching and Learning Resources and Students' Industrial Attachment in Public Colleges of Technical and Vocational Education in Zambia". *East African Journal of Education and Social Sciences* 1, no. 2: 30–42. https//doi.org/10.46606/eajss2020v01102.0019.

Mwanakatwe, John M. 2013. *The Growth of Education in Zambia Since Independence*. Lusaka: University of Zambia Press.

Needham, Seasmus. 2019. "TVET Policy in South Africa: Caught Between Neo-Liberalism and Privatisation?" *Journal of Vocational, Adult and Continuing Education and Training* 2, no.2: 82–101.

Neubauer, Brian E., Catherine T. Witkop, and Lara Varpio. 2019. "How Phenomenology Can Help Us Learn From the Experiences of Others." *Perspectives on Medical Education* 8: 90–97.

Ngubane, Phiwokuhle, Dumsani W. Mncube, and Sunday O. Olaniran. 2021. "Dynamics and Complexities of Work Based Education in the Context of Technical, Vocational and Training Colleges." *Journal of Human Ecology* 73, nos. 1–3: 116–124. https://doi.org/10.31901/24566608.2021/73.1-3.3291

Nsanzumuhire, Silas U., and Wim Groot. 2020. "Context Perspective on University-Industry Collaboration Processes: A Systematic Review of Literature." *Journal of Cleaner Production* 258: 120861.

Oketch, Moses. 2014. "Education Policy, Vocational Training, and the Youth in Sub-Saharan Africa". *African Youth and the Persistence of Marginalization: Employment, Politics, and Prospects for Change.* WIDER Working Paper no. 2014/069. Helsinki: UNU-WIDER. https://doi.org/10.35188/UNU-WIDER/2014/790-5.

Okolie, Ugochukwo C., Elisha N. Elom, Paul. A. Igwe, Chinyere A. Nwajiuba, Michael O Binuomote, and Ntasiobi Igu. 2020. "How TVET Teachers Foster Employability Skills: Insights from Developing Countries." *International Journal of Training Research* 18, no. 3 (2020): 231–249. https://doi.org/10.1080/14480220.2020.1860301

Oparaocha, Gospel O. 2016. "Towards Building Internal Social Network Architecture that Drives Innovation: A Social Exchange Theory Perspective." *Journal of Knowledge Management* 20, no. 3: 534–556.

Oviawe, Jane I. 2018. "Revamping Technical Vocational Education and Training Through Public-Private Partnerships for Skill Development." *Makerere Journal of Higher Education* 10, no. 1: 73–91.

Oviawe, Jane I., Raymond Uwameiye, and Patrick S Uddin. 2017. "Bridging Skill Gap to Meet Technical, Vocational Education and Training School-Workplace Collaboration in the 21st. Century." *International Journal of Vocational Education and Training Research* 3, no. 1: 7–14.

Peoples, Katarzyna. 2020. *How to Write a Phenomenological Dissertation: A Step-By-Step Guide* 56. Thousand Oaks, CA: Sage Publications.

Pilz, Matthias. 2016. "Introduction: Why India's Focus on Preparation for the World of Work Is Highly Relevant." In *India: Preparation for the World of Work*: 15–23). New York, NY: Springer.

Qutoshi, Sadruddin Bahadur. 2018. "Phenomenology: A Philosophy and Method of Inquiry." *Journal of Education and Educational Development* 5, no. 1: 215–222.

Raihan, Abu. 2014. "Collaboration Between TVET Institutions and Industries in Bangladesh to Enhance Employability Skills." *International Journal of Engineering and Technical Research* 2, no. 10: 50–55.

Remington, Thomas F. 2018. "Public-Private Partnerships in TVET: Adapting the Dual System in the United States." *Journal of Vocational Education & Training* 70*,* no*.* 4: 497–523. https://doi.org/10.1080/13636820.2018.1450776

Rybnicek, Robert, and Roland Königsgruber. 2019. "What Makes Industry-University Collaboration Succeed? A Systematic Review of the Literature." *Journal of Business Economics* 89, no. 2: 221–250.

Smith, Joel. 2016. *Experiencing Phenomenology: An Introduction*. Oxfordshire, UK: Routledge.

Stephenson, Helen, David Giles, and Kerry Bissaker. 2018. *"*The Power of Hermeneutic Phenomenology in Restoring the Centrality of Experiences in Work-Integrated Learning." *International Journal of Work-Integrated Learning* 19, no. 3: 261–271.

Taylor, Vanessa. and Andre van der Bijl. 2018. "Work-Integrated Learning for TVET Lecturers: Articulating Industry and College Practices." *Journal of Vocational, Adult and Continuing Education and Training* 1*,* no.1: 126–145.

Trochim, William M.K., James P. Donnelly, and Kanika Arora. 2016. *Research Methods: The Essential Knowledge Base*. Boston, MA: Cengage Learning.

Van der Bijl, Andre, and L. J. Oosthuizen. 2019. "Deficiencies in Technical and Vocational Education and Training Lecturer Involvement Qualifications and its Implications in the Development of Work-Related Skills." *South African Journal of Higher Education,* 33, no. 3: 205–221.

Yamada, Shoko., Christian S Otchia, and Kyoko Taniguchi. 2018. "Explaining Differing Perceptions of Employees' Skill Needs: The Case of Garment Workers in Ethiopia". *International Journal of Training and Development* 22, no.1: 51–68.

Zoller, Yaron J., and Jeff Muldoon. 2019. "Illuminating the Principles of Social Exchange Theory with Hawthorne Studies." *Journal of Management History* 25, no. 1: 47–66. https://doi.org/http://dx.doi.org/10.1108/JMH-05-2018-0026