The Cooperative Training Delusion in Ethiopia College-Industry Partnership Discrepancy in the TVET System of the Regional State of Amhara

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Received: 21 June 2017; Accepted: 17 January 2018

Abstract: The purpose of this study was to examine the practices of and the challenges faced by cooperative training in the public TVET system of the Regional State of Amhara. The study delivered on the basic issues focusing on the extent of industry commitment for cooperative training, duty accomplishment by the TVET sector and the major challenges on cooperative training in the study area. Quantitative data was collected from 361 teachers and 361 students in six TVET colleges through stratified and simple random sampling techniques. Eight teachers and nine students selected through purposive sampling were also involved in independently conducted focus group interview (FGI). Finally, data analysis using t-test coupled with effect size test in triangulation with qualitative data revealed that the involvement of enterprises in cooperative training was almost nil. The introduction of cooperative training without taking the existing contexts into consideration, reluctance of stakeholders to accomplish their duties and absence of binding legal framework and viable reward and compensation mechanisms impeded the effectiveness of cooperative training. Consequently, it is plausible to conclude that cooperative training is not only a futile and null report exercise but also a hardly executable strategy in the context of the study area. If credible outcomes are sought, it is essential to formulate and properly employ viable reward and motivation systems backed by binding legal framework to propel the interests of enterprises.

Key words: *cooperative/dual training, industry, partnership, TVET.*

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Introduction

Ethiopia is predominantly an agrarian economy. The National Planning Commission (NPC) (2015) of the country asserts that realizing the transformation of the country from a largely agrarian to an industry-based economy requires the development of middle level work force. That is because, according to this source, the majority of the labor force demanded by the entire economy is the middle level. To that effect, NPC emphasizes, all the strategic pillars of the Growth and Transformation Plan II (GTP II) have mostly been grounded on middle level human power, which is basically cultivated by Technical and Vocational Education and Training (TVET). NPC also argues that it would be very difficult to achieve the far-reaching aspirations of the country towards middle-income country by 2025 and thereby meet the sustainable development goals without paying the required attention for TVET. This implies that by the pivotal place it occupied in determining the fate of the country and its society, TVET is conquering the heart of development across the country.

As an increasing number of young people graduate from general education, due to the considerable endeavors and consequent progress towards universal primary education, the government has already recognized two important issues in relation to TVET (Ministry of Education [MoE], 2008). On the one hand, it has sensitized the importance of providing the youth with options for equipping them with necessary competences in order to increase their employability and livelihoods. On the other hand, it has realized the difficulty to unilaterally shoulder the responsibility of investment in TVET. In other words, the realization of equipping all young people who are not able to join higher education (the overwhelming majority among secondary school graduates) and drop outs at any level of the education track with quality and employable skills is hardly possible without the involvement of stakeholders. To that effect, the government has formulated a TVET strategy that pays adequate attention to the involvement of stakeholders in the entire TVET system – policy setting, strategy

development, planning, training delivery, financing, quality assurance as well as in monitoring and evaluation practices.

Literature Review

According to many researchers who focused on modalities of TVET delivery (such as Eichhorst, Rodríguez-Planas, Schmidl, and Zimmermann, 2012; Dustmann and Schönberg, 2012; Horn, 2013; Stockmann, 1999), cooperative training (CT) or dual TVET is one approach of TVET conducted through the amalgamation of the school-based and the functional (enterprise-based training) delivery approaches. These scholars remark that in this approach the knowledge on the general (transferable or generic skills) and occupation-specific skills are acquired through structured classroom instruction in the TVET institutions while the actual work experiences or practical work are exercised in a company or an enterprise. In the same vein, Stockmann (1999) characterizes CT TVET approach by its unique features, which included those described here under, among others. One, it is provided in different settings, the school and a company/enterprise. Two, the administration of the training is shouldered by two parties, government schools and companies. Three, training plans and schedules are designed by two independent bodies, the school and the company. Four, competences are acquired from two separate parties, basic skills and theoretical knowledge from schools and practical skills from companies. Stockmann claims dual TVET is successfully practiced in countries such Germany, Switzerland and Austria.

Other authorities (e.g. King and Palmer, 2010; Rezin and McCaslin, n.d.; Dustmann and Schönberg, 2012; Eichhorst et al., 2012) complement that the dual training delivery approach resolves different problems associated with purely school-based training systems. First, the mismatch problems of the supply and demand for TVET challenge it minimally because besides providing employment opportunities the enterprises or companies that provide training can timely adjust and

adapt their training curricula to the changing demands of the labor market. By creating motivation and engagement in training among trainees, secondly, the dual system is more beneficial in providing a suitable environment for both learning and working. Thirdly, by paving the way for an early contact with the enterprises and working experience, the approach enrolls graduates faster into the labor market in addition to creating a better opportunity of understanding about the types of jobs and occupations that they prefer for their future career. The implementation of the dual approach in general augments the competence and relevance of TVET because it fills the gaps of both the functional and school-based approaches.

After conducting a country wide comparison between school-based and dual TVET systems, Quintini and Manfredi (2009), Quintini, Martin, and Martin (2007) as well as Rezin and McCaslin (n.d.) also assert that those countries which maintained a substantial dual system have better addressed the problems of unemployment more than others who did not do so. Others (e.g. Adda, Dustmann, Meghir and Robin, 2006; Alet and Bonnal, 2011; Eichhorst et al, 2012; Horn, 2013; Stockmann, 1999; Winkelmann, 1996) similarly claim that the dual approach TVET is found to be more relevant and employable than the school-based delivery approach. In countries like Germany, where the dual TVET approach is predominant (takes about 74% of the share), it is also stressed, competence and employability of graduates is better addressed than others which practice the other options of delivery. The justification is that the former approach has pivotal roles in improving early labor market attachments besides creating a faster and more structured integration of the youth into the labor market. In general, cooperative training is a highly valuable practice that has two major edges: training for work and working for training.

Eichhorst et al., (2012), in fact, convey that there are experiences where attempts of the dual system have failed. The reason, they mentioned, is that mainstreaming the dual TVET system has essential preconditions that cannot be easily replicated and effectively practiced

in many countries, no matter they are developed or not. These, basically, include a strong sense of synergy between the government and employers: shared planning, cooperation in the development of OSs and curricula, involvement in competence assessment, commitment of enterprises for CT, etc. A credible cooperation among stakeholders also plays major roles for its effectiveness. Primarily, government commitment and rigor in managing the dual TVET system should be encouraging for both the TVET institutions and the companies to carry out their tasks accordingly. Then, all partners should be determined to deliver training as per the requirements of the standards set. In addition, there should also be consensus among stakeholders on apprenticeship contracts for being paid. Moreover, there must be the willingness of enterprises to provide prospect of credible employment for trainees. Furthermore, the government should implement different incentive mechanisms for the companies involved.

Probably cognizant of the abovementioned experiences, the government of Ethiopia has formulated, a TVET strategy that gives due emphasis for CT accompanied by a system document focusing on CT to change the CT strategy into effect (MoE, 2008; 2010). The national TVET strategy (MoE, 2008, p.19), for instance, claims that …successful TVET systems are built on strong and well-defined partnerships between government and the non-government sector. The system document designed to change the partnership issue into practice specifies TVET delivered in such a type of partnership as dual or cooperative training (MoE, 2010). The document defines cooperative training (CT) as …mode of training delivery of technical and vocational education and training that combines training in enterprise and institution based on a training plan collaboratively designed and implemented by industries and respective TVET institutions (p.6). According to this source, the term dual or cooperative refers to the cooperation between two parties, TVET institutions and enterprises, whereby the former equips trainees with the basic competencies of general and occupation specific concepts and knowledge whereas the latter provides practical training so that trainees will ultimately acquire

the necessary skills, knowledge and attitude in an occupation. According to this source, an enterprise or a company is required to prepare training workshops, machinery, equipment, consumable materials as well as well-equipped trainers to provide CT properly.

The abovementioned source, in addition, remarks both the benefits that the three major partners (training institutions, trainees as well as enterprises) enjoy from the effective implementation of CT and the responsibilities of each partner to address those tri-partite benefits. For example, enterprises can benefit from the opportunity of obtaining more competent labor force sculptured in line with their demand. Such employment procedure more likely addresses the interests of both the enterprise and the employee with far-reaching results of increased productivity and organizational competitiveness. Trainees, on the other hand, benefit from the opportunity enterprises render them with: skills, competences as well as valuable work place experiences for their long-term career development. Trainees may also get motivated and highly encouraged for better competence not only because the training environment may attract their interest but because they may also get a sort of pocket money from the training enterprise. Training institutions are, similarly, expected to benefit from CT in different ways: get the chance to accommodate as much trainees as possible without additional material resource; paves them the way to share the costs of training and save their limited financial resource; improve the competences of their trainers by providing the chance to interact with real workplace exposure and multidimensional experiences thereafter.

Accordingly, the system document cited above has entrusted every partner with different responsibilities. Primarily, training institutions are expected to do at least the following tasks: spearhead CT plan in general and training schedules in particular in cooperation with partners; equip trainees with the necessary conceptual and generic skills and knowledge in their respective occupations; identify enterprises that provide CT; orient both trainees and enterprises about the merits of CT; prepare and sign memorandum of understanding with

enterprises; supervise and register trainee results and so on. Similarly, trainees are responsible to respect organizational disciplines, attentively follow up and effectively accomplish their training and equip themselves with the required competences (knowledge, skills as well as attitude) in their respective occupations. Enterprises, on their part, are expected to watch out for the entire practical training they provide so that not only apprentices are equipped with the required technical skills satisfactorily but also enterprises get more competent and productive labor force fit for their organizational context.

Problem Statement

As denoted by its name, apparently, CT demands the will and cooperation of stakeholders. A successful CT, therefore, demands concern and harmonious relationship among stakeholders, mainly TVET institutions and enterprises/companies. To that effect, the training institutions, trainees as well as enterprises/companies have to have the necessary acquaintance about the rationale and the benefits of CT. According to my personal experiences and the workplace experiences of other colleagues, nonetheless, the TVET institutions and trainees in the area under study are usually observed echoing their complaint widely about the reluctance of enterprises to practically involve in CT. Those parties do not hesitate from criticizing those few companies involved themselves for contributing nothing except dishing out inflated scores of untrained and incompetent students as if they have equipped them with the necessary skills. The purpose of this study is, therefore, to examine the practices and challenges faced by CT in the public TVET system of Ethiopia with particular emphasis to the State of Amhara. Accordingly, this study focusses on the following three basic questions:

- To what extent are enterprises/companies committed to involve in CT?
- How much is the determination of the TVET sector to run CT effectively?

- What are the major challenges that impede the viability of CT in the study area?

Methodology

Design

To examine the status of CT as one means of TVET delivery in the study area, this study tried to analyze the perceptions of key stakeholders. In line with the suggestions by Gray (2004), it employed cross-sectional descriptive survey design, which has been substantiated by the mixed methods approach that triangulated data in terms of both source of data (students, teachers, and company managers) and types of instruments (questionnaire, interview, and document review). According to Creswell (2012), the mixed method approach was sought to create better understanding over the problem under investigation than could have been either through the quantitative or the qualitative approach alone. In congruence with the statements of Cohen, Manion, and Morrison (2007), the quantitative data gathered through questionnaires assisted in elucidating an overall picture of the study whereas the more fine-grained information achieved through interviews or documentary examination has helped to garner a more exhaustive data. Among the different mixed methods, the explanatory sequential design (QUAN- Qual model) was employed according to Creswell (2012) because this model is possibly not only the most popular model in educational research but also the one that actually demonstrates while one filling the data gaps of the other as well. Accordingly, first quantitative data were collected and analyzed based on what the qualitative data required. Then, qualitative data were gathered through interview guides and documentary examinations manipulated through exploratory thematic analysis. Finally, in line with the advice of research methods such as by Blaikie (2003), Cozby (2004), and Kothari (2004), data consolidation (interpretation) method was utilized to integrate (triangulate) the quantitative and qualitative data because the approach enables to

easily perceive the influence of the independent variable in a more authentic picture.

Sampling and Sample Size

Since one of the purposes of the mixed methods design is data triangulation, Onwuegbuzie and Collins (2007) and Patton (2002) recommend that the mixed methods sampling design is so essential for studies that seek to triangulate data. That is, both the information-rich and the representative sampling paradigms are essential in such designs. Among about 79 public TVET colleges organized into ten clusters, accordingly, six colleges were involved in the study through a two-stage sampling procedure. That was because Creswell (2012) as well as Dattalo (2008) criticize that extracting participants through a mere probability sampling technique from a hierarchically structured population environment may nest some segments of the population unnecessarily and affect the relevance of the conclusion thereafter. They advise that the multistage cluster (or stratified) sampling technique, which enables to recruit different levels of sites and then draw respondents from each site, is an appropriate method in such situations. Among ten cluster centers, primarily, two (Bahir Dar and Injibara polytechnic colleges) were drawn through a simple random sampling technique. Then after four satellite colleges (Merawi and Durbete from Bahir Dar Cluster Center and Dangila and Addis Kidam TVET institutions from Injibara Cluster Center) organized under the two cluster centers were also selected through the same sampling technique.

Although the best answer to the question of sample size is to use as large sample size as possible, many scholars (e.g. Cohen, Manion, and Morrison, 2007; Creswell, 2012; Dattalo, 2008; Scott and Morrison, 2006) suggest 350 to 400 individuals may suffice to fairly estimate the characteristic of any large population size in carrying out a survey study. Sampling methods of survey studies that utilize sample size formulas alike match with this estimation. Cohen, Manion, and

Morrison (2007), Creswell (2012), Gray, Williamson, Karp, and Dalhpin (2007), Cozby (2004), O'Leary (2004) as well as Scott and Morrison (2006), for instance, recommend applying the formula at 5% margins of error and 95% confidence level provides 384 sample size for as much population size as possible. Accordingly, regardless of population size, 384 are considered as an optimum sample size for a survey design research in education.

The next activity in the sampling procedure was the drawing of individual participants from the colleges. The drawing of teachers and the students was implemented using the simple random sampling technique. Nevertheless, an attempt was made to address as different occupations as possible for an exhaustive understanding of the phenomenon across occupations. Therefore, the cluster and stratified sampling methods were implemented for securing occupational diversity. To that effect, both teachers and students were selected after categorizing them into clusters of sectors and then participants were drawn proportionally from each sector and the occupations incorporated under each sector through a stratified technique. For securing better information by an effective utilization of their long stay and experience in the colleges, additionally, the selection of students was limited to the senior year ones of levels V, IV, and III sequentially. It was implemented in such a way that Level IV students were involved only when Level V students were not found representative enough in terms of occupational diversity. The same held true to involve Level III students. Among 3,749 teachers and 65,704 students (Technical Vocational and Enterprises' Development Bureau [TVEDB], 2009 E. C.) the maximum size, 384, were, therefore, involved to fill out the questionnaires from each of the two groups. The sample size was maximized intentionally to avoid the risks of losing questionnaires due to problems springing from different sources (Cohen, Manion, and Morrison, 2007).

To minimize the sampling error that stems from the disproportionality of population size (Gay, Mills, and Airasian, 2009), 96 teachers and 96

students filled out the questionnaires from the cluster centers whereas 48 teachers and 48 students did it from the four satellite colleges. Among them eight teachers and nine students those found to be more assertive and conversant were selected through purposive sampling technique and interviewed independently. To select more outspoken, articulate, conversant and assertive participants for the focus group interview (FGI) the assistance of the deans, the teachers, and the students was so essential.

The collection of qualitative data from teachers and the students was limited only to Bahir Dar Polytechnic College (BDPC). That was because conducting an in-depth interview in all the six study colleges might have been not only unmanageable but unnecessarily time taking and laborious as well. BDPC was preferred to Injibara or other cluster centers for two reasons. One, to create suitable conditions for triangulating the quantitative data with the qualitative one obtained from participants in the college. Two, among the two sample cluster centers BDPC is located in an area where industries that provided qualitative data are available to ultimately triangulate the data obtained from the colleges about CT.

For gathering data from the industry, two companies were selected from the catchment area of BDPC through purposive sampling method. According to Onwuegbuzie and Collins (2007) and Teddlie and Yu (2007), this is the possible method of sampling for such population contexts. The managers of two private companies, companies that not only provide employment opportunities for graduates but also often involved in providing cooperative training, were interviewed.

Instruments

Primary data for this study was collected through self-prepared instruments: questionnaires, one-to-one interviews, and FGI. The instruments were designed based on the literature reviewed as well as the national TVET strategy. Data sources for the study largely

depended on the perceptions of participants as a result of which the study focused on gathering the views or attitudes of study participants. All the instruments were translated and/or administered in Amharic for enhancing communication and validity. Documentary review that included TVET guidelines and manuals (policy and strategy) as well as regional annual and strategic plans and performance reports were conducted to complement the primary data gathered through questionnaires and interviews. A multiple data collection (data triangulation) method was applied to crosscheck or complement the data to each other. According to Finnegan (2006), Patton (2002) as well as Wilson and Sapsford (2006) that is because the approach assists not only to minimize errors but also to confirm the trustworthiness of the data collected and give the study a complete picture ultimately. As per Cohen, Manion, and Morrison (2007) and Gay, Mills, and Airasian (2009), in addition, the heterogeneity of the instruments and the participants was required to refine personal perceptions further and tap the advantages of data triangulation.

Five level attitude scales (1 = very low to 5 = very high) were designed for all the sub-scales of the questionnaires categorized into three packages: seven items emphasizing on industry involvement; eight on partnership management; and 10 on industry commitment. Teachers were involved in all the three packages whereas students filled out only items on industry commitment on which they are expected to have adequate information. The questionnaires were piloted at Debre-Birhan Polytechnic College by involving 50 participants (25 teachers and 25 students). The college has a similar setting with those colleges included in the study later to ascertain reliability and validity functions. Although the questionnaires have demonstrated good internal consistency and homogeneity among the sub-scales in each package, some items were excluded based on the feedbacks from the participants and on the inter-item correlations indicated by the pilot data analysis. The reliability coefficients (Cronbach Alpha) of the sub-scales in each package after improvement were 0.932, 0.889 and 0.912 respectively. These alpha values were 0.658, 0.669 and 0.884

consecutively after the questionnaires were fully implemented. These values were considered suitable for the purpose of the current study because Creswell (2012) and Larson-Hall (2010) suggest that α = 0.70 is often taken as the lowest acceptable value for a questionnaire with items less than 20 in number.

Table 1: *Scale Reliability, Skewness and Kurtosis Ratios of Items after Data Collection*

Participants	Variables	Number of items	Cronbach's alpha	Skewness	Kurtosis
Students (N = 361)	Industry involvement	7	.658	.323	.341
	Partnership management	8	.669	-.342	-.235
Teachers & Students (N = 722)	Industry commitment	10	.884	.634	1.893

According to Table 1, the values (neglecting the negative signs) of skewness and kurtosis for all the items utilized are in an acceptable range of normality. That is because normality is not violated as far as the absolute value of skewness ratio is below 2.0 according to Larson-Hall (2010) or even below 3.0 according to other more liberal interpretations (e.g. Blaikie, 2003; Kline, 2005). Similarly, Kline (2005) suggests that a kurtosis level below 10 does not indicate a significant departure from normality and hence is it utilized as a cut point in this study. As illustrated by Table 1, the scores of both skewness and kurtosis for all the items were within the acceptable range of values, which approves that the values are suitable enough to avoid the effects of outliers and implement the envisaged parametric test in the study.

Data Analysis

A thematic data analysis that implemented the descriptive (mean and standard deviation) and inferential (between group and within group *t*-

test) statistics was manipulated by using the Statistical Package for Social Sciences (SPSS-20) computer software. Five percent (α = 0.05) level of significance was applied to determine whether groups of scores are significantly different because according to Creswell (2012) as well as Gay, Mills, and Airasian (2009) it is often a conventional standard degree of significance for educational and behavioral studies. *Cohn's d* has also been implemented to measure effect sizes index because Cohen, Manion, and Morrison (2007) and Muijs (2004) suggest that it is not affected by sample size besides demonstrating the strength of mean score differences more effectively. To help refine (triangulate or complement) the quantitative data results, qualitative data gathered through interview guides and documentary examination were analyzed thematically by embedding them in the quantitative data. In response to Creswell (2012) as well as Creswell, Clark, Gutman, and Hanson (2003) the qualitative data were helpful to substantiate and tie up the loose ends of the quantitative data. Finally, the entire data was discussed (interpreted) by integrating the two data types.

Results

Industry involvement

With respect to industry involvement in CT this study examined the success of the TVET sector in mobilizing the industry to accomplish the responsibilities entrusted to it. The composite mean score for the seven items set to examine the state of involvement was 13.53 (SD = 2.92) across the study colleges. This is a very low score when compared with the intentions. To understand whether it is the availability of an enterprise (or a company) that made a difference in the involvement in TVET, moreover, the study tried to compare and contrast the state of industry involvement between the cluster centers (colleges founded in urbanized areas and have more access to enterprises) and their satellites (colleges in rural areas or townships with no access to enterprises). The comparison was made not only to understand whether industry involvement is determined by the availability of enterprises in a specific locality but also to test whether there is lack of interest among enterprises to take part in CT.

As can be seen in Table 2 below, data sources reveal that in both situations the mean scores regarding the involvement of the industry are very low, 13.83 (SD = 2.96) in cluster centers and 13.22 (SD = 2.85) in satellite colleges. Within group t-test also demonstrates a weak difference between the two teacher groups (t = 1.98, df = 358, p = .049, d = 0.21), implying that industry involvement in CT is generally very low no matter how a college is a cluster center or a remotely founded satellite college.

Table 2: *Within Group t-test Comparing Teachers regarding Industry Involvement in TVET*

Variable	Levene's Test for Equality of Variances		t-test for Equality of Means					Cohn's *d*
	F	Sig.	*t*	*df*	Sig. (2-tailed)	Mean Difference	Std. Error Difference	
Industry participation	.067	.796	1.978	358	.049	.606	.306	0.21
			1.978	357.555	.049	.606	.306	

For a successful industry mobilization and involvement, apparently, partnership management plays essential roles. The items incorporated to measure partnership management have included all the responsibilities stipulated by the TVET strategy and the system document with respect to all stakeholders. The analysis of data in this respect revealed low composite mean score (M = 19.19, SD = 4.17). That means partnership management in the TVET system of the region is very weak as a whole. Mean scores between teachers of cluster centers (perceived to have better experienced and competent leaders) and satellites (with less experienced, junior, less qualified and less competent leaders than cluster centers) were also compared to learn about differences in the effectiveness of managing partnership. The mean scores of both cluster centers and their satellites were found very low and almost similar, 19.06 (SD = 4.43) and 19.32 (SD = 3.90) respectively. As can be learnt from Table 3 below, the mean score difference between the two teacher groups were not statistically significant. It all indicates that partnership management is so weak in the system notwithstanding a college is a cluster center or a satellite.

Table 3: *Within Group Samples t-test Comparing Teachers regarding Partnership Management*

Variable	Levene's Test for Equality of Variances		t-test for Equality of Means					Cohn's *d*
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	
Partnership management	3.821	.051	-.600	357	.549	-.264	.440	-0.06
			-.600	349.834	.549	-.264	.441	

Qualitative data collected from implementers also corroborate the findings of quantitative data. All participants of both training institutions and employers commented that in most parts of the State there are no industries that can shoulder the task of CT effectively. According to deans and the teachers interviewed the available few enterprises themselves are not willing to take part in training delivery as well as in competence assessment. TP4, for instance, furiously pronounced that *…cooperative training… is fake and outrageous.* All other teachers involved in the FGI have favored TP4 and assertively reiterated the existence of a fallacy in CT. These participants, in addition, blamed that even public organizations that have law enforcements behind to involve in CT are not willing to take part. According to the observation of those participants public development organizations such as Ethiopian Electricity Corporation and different construction and manufacturing companies, too, refrain from taking part in CT with the excuse that keeping their limited budget for CT is wastage of resources for their organization.

According to the participants from both the TVET sector (TVEDB as well as colleges) and private enterprises the reasons for the reluctance of the industry to involve in CT and competence assessment are diverse. Nonetheless, these can be sorted out into the following fundamental impediments: absence of adequate number of industries both in type and number; lack of interest and commitment from the industry; fear of the industry for costs of resources incurred during

training; the cost that they may face due to the possible damage on machinery and equipment; absence of binding rules or regulations and accountabilities in the TVET system in general; absence of reward and motivation mechanisms from the government side; high number of trainees sent to enterprises; the cost of insurance required for the trainees for the possible injuries they may face during practice.

Participants of both the TVET sector and the industry replied that those few enterprises or companies that admit trainees for CT allow trainees only to visit their workshops, machinery and work set up in the name of CT. Such companies and enterprises themselves complain that the number of apprentices sent to them is beyond their accommodation capacity. For them, accommodation of all those sent is suspending their business. Consequently, they simply allow trainees a limited chance to visit their work places and then evaluate haphazardly and grade them as if they have delivered CT. Finally, they send them back with flawed training completion certificate. All students involved in the FGI consistently approved the situation.

In general, all participants across all discussion sessions have thoughtfully mentioned that poor partnership management and the unwillingness of both public and private enterprises to take part in TVET are the major challenges entangled against the realization of the strategy goals with respect to CT. Notwithstanding such a situation where all participant groups, including TVEDB authorities, have reprimanded the practice regarding CT, the 2008 E. C. annual report of TVEDB disgracefully informs that almost 99.2% trainees have got the chance of CT. To make it more tangible, TVEDB (2008 E. C., P.26) claims that "…after planning to involve 100% of the trainees in CT, it has succeeded to provide CT for 73,014 (99.16%) out of 73,596 trainees". Similarly, Ministry of Education (2016) reports that after planning to deliver for 48,467 trainees the State of Amhara has successfully provided CT for 58,311(120.3%) trainees. These are official reports produced by TVEDB and Ministry of Education respectively, both of which completely contrast with the reality on the

ground. Both reports disclose the degree of hypocrisy applied to conceal the reality where there are abundant sources that inform the CT system is tied up with intricate problems. This has resulted in far-reaching consequences that impeded the effectiveness and employability of TVET in general because both teachers and the students involved in the FGI have unveiled that the practice of CT has satisfied neither of them. An overwhelming majority of them highly criticized the attention paid by the industry to CT, which they feel was not much. The students, particularly, looked down on CT for denying them the access to the machineries and equipment let alone to equip them with the required skills and real work life experiences.

Consistent with the qualitative data, the composite mean score of the sub-scales that measured industry commitment was found 22.50 (SD = 6.73) for teachers and 21.98 (SD = 6.73) for students, both of which are low when gauged against expectations. As can be observed from Table 3 below the comparison of the composite mean scores between teachers and the students regarding the commitment of the industry in CT shows no statistically significant difference, which informs that both teachers and students are highly dissatisfied with the commitment of the industry.

Table 4: *Independent Samples t-test Comparing Teachers and Students on Industry Commitment*

Variable	Levene's Test for Equality of Variances		t-test for Equality of Means					Cohn's *d*
	F	Sig.	*t*	*df*	Sig. (2-tailed)	Mean Difference	Std. Error Difference	
Industry commitment	7.162	.008	1.141	718	.254	.526	.461	0.08
			1.141	693.459	.254	.526	.461	

According to the results of documentary examination, TVEDB did not succeed in mobilizing the industry although it had planned to involve all trainees in CT as of 2006 E. C. By 2007 E. C., for instance, TVET trainees that took part in CT with all its defects described above were only 42.1% (TVEDB, 2007 E C.). This by itself unveils poor performance because in the same report TVEDB criticizes that the achievement in the involvement of students in CT is not only low but those involved themselves did not get the proper service too. The annual reports of TVEDB throughout the years 2003 E. C. to 2008 E. C. consistently informs that the unwillingness of enterprises and lack of ownership by teachers and deans have been the formidable hurdles against the effectiveness of CT.

The two TVEDB authorities involved (TVP1 and TVP2) in the interview discussion critically condemned colleges for lack of conviction and motivation towards CT and establishing the ground for industry ownership of CT. They also accused both deans and teachers for their reluctance to convince and mobilize the companies and enterprises to take part actively in CT. The 2008 report, for instance, pinpoints the following factors as the key challenges faced against the practice of CT throughout the last five consecutive years. One, there were problems of awareness and commitment among the deans and the teachers. Two, identifying appropriate enterprises equipped with adequate human and material resources was formidable for the colleges. Three, there was no bipartite planning between colleges and enterprises. In most cases, four, colleges try to flaunt by simple memorandum

agreements and shiny reports instead of practical actions. Five, colleges focused more on the means than the ends and lacked the willingness and ability to change the agreement into practice. Six, there was lack of enthusiasm from the industry side apart from signing the memorandum of agreement with the respective colleges. Data from documentary examination (TVEDB, 2003 through 2008 E C.), in general, demonstrate that the bureau has been externalizing all the flaws and pointing its fingers at TVET colleges and enterprises regarding the defects on CT.

All the deans interviewed (DP1, DP2, DP3, and DP4), on the other hand, solidly defended that the argument of the bureau did not take the contextual factors into consideration. With the exception of few towns in the region, according to them, most TVET colleges are located in rural places where there are no enterprises to deliver CT. Second, most of the available few enterprises or industries found in the catchment areas of colleges lack enthusiasm to deliver training because they perceive CT as a cost for their organization. Third, enterprises want to protect their machinery from unskilled trainees who may damage them due to ineptitude. Fourth, companies or enterprises hardly get any return or benefit from CT and hence shy away from CT. Fifth, there is not any enforcing law that imposes the industry to get involved in TVET. In general, they condemn the introduction of CT into the TVET system by taking the culture of industry-TVET partnership context in our country into consideration.

Teachers, too, shared the above concerns of the deans on CT with a similar tone and dimension during the FGI session. One of them (TP7), for instance, forwarded the following observation:

> In our context, cooperative training is somewhat troublesome. …enterprises are highly pessimistic [towards it] …no matter how much awareness they do have or not. We admit many students by… the assumption of delivering the practical training through the cooperative approach. I do not know why we don't stop this

> …because we know that there are no… relevant and willing enterprises to deliver training on occupations we admitted students.
>
> TP2, consistently, described the following:
>
> It is a common practice for us to rove around for adjusting cooperative training. We rarely… get some enterprises that admit few trainees after lots of lobbying and exhaustion. Still they do not provide the intended training properly…instead, most of them utilize apprentices for their own routines and dish out grades for everybody generously and irresponsibly at the end of the day. Finally …we report as if cooperative training has been undertaken with no defect… We do this willy-nilly… Otherwise, we know how TVEDB ridicules and disgraces us. That is the practice of what we call cooperative training carried out by most of the colleges in the region. If there is any who claims practicing it properly, as to me …s/he is a liar.

Student interviewees have mixed experiences on their perception of the underlying CT. Their responses provide trends, which have four major features. The first group incorporates those with adequate access and practice of CT. Some occupations from building construction sector could be mentioned as examples in this respect. The second group, which is the characteristic of most occupations and trainees, involves those who are deployed for CT but are not trained properly by the companies. In line with the perception of TP2, most of the students have complained that in the name of CT they are often assigned on labor activities that are not related to their occupation but simply serve the host company without any payment. Two students (SP7 and SP8), for instance, complained that they are often engaged in worthless practices for their occupation. SP6, consistently, accuses that in the name of CT they are highly exploited because they are engaged in unpaid labor work (e.g. …handing *over a sheet of metal and hand tools for the technicians of the enterprises*).

Another one (SP5) from information technology sector mockingly appreciated CT as follows: *I have acquired a lot from an office clerk (a secretary typist) whose technical competence is not only limited to writing letters drafted by the heads of the office [word processing] but also much less than myself.* According to SP3 and SP4, in addition, others are not trained completely for lack of resources and trainers in the enterprises they were assigned to. Sometimes, to make challenges worse, participants inform that some attempts made to orient students about some issues end up without effective communication between company trainers and apprentices due to language barriers. A student from automotive servicing management occupation (SP2), for instance, has an experience of miscommunication with his trainer in a car maintenance garage who often uses Italian terminologies for the same objects that the apprentice knows only in their English name. Because of this, according to this interviewee, apprentices often end up without communication and understanding but are provided with generous grade points ultimately.

The third group encompasses those who do not want to go for CT due to the intricate problems that CT is faced with. For instance, it may require going far away from permanent residences for a month or more and costs a lot to cover expenses of transportation and accommodation. In such cases where expenses are unaffordable, colleges are discouraged to carry out CT and students from such occupations often graduate without acquiring necessary practical skills.

Not only do the TVET sector and their graduates but also companies themselves too were not reserved to reveal their reluctance for CT. Two industry managers were interviewed to further verify the challenges faced against effective industry commitment in TVET delivery. Their responses in most cases matched with those of the deans' and the teachers' responses. Both participants (IP1 and IP2) have strong concerns, particularly, for the second, third and fourth elements stressed by deans and the teachers above. The following description has been quoted from the words of IP1as an instance:

> TVET colleges often insist on us to sign a memorandum of agreement for delivering training in our companies. …we sign the agreements for fear of the anticipation of any danger we may face if we refuse to do so. …. practically we know cooperative training has nothing to do for our organization except exposing us to additional costs. Since most students do not have the knowledge and skills about our machines, we may face a risk of property lose from… unskilled individuals. Our major concern is, therefore …who takes the accountability if they [apprentices] damage our machines and equipment? Who is going to compensate our company for the time and material resources to be wasted during training delivery? …there is no any article emphasizing on such issues in the memorandum of agreement. ….to be honest, as it seems, most of us sign the agreement only to avoid any danger that may follow in one form or another if we decline to sign it… for example, taxes, business operations, or license renewal, etc.

IP1, in addition, has put forward the position of his company with respect to CT and suggested a sort of advice he feels for TVEDB:

> … in our company apprentices admitted for cooperative training are often limited to exercise on tasks such as tyre changing services, greasing and other related minor activities. Since the context of government policy on cooperative training is inconvenient for our company, I advise the government shall equip its training institutions with necessary workshops than sending trainees for a futile apprenticeship to private companies and enterprises.

IP2, similarly, demonstrated not only the reluctance of his company for CT but how nonsense the entire procedure of CT is as well:

> Except the theoretical orientation we deliver them about our workshops in our company they [apprentices] are not allowed to get practical training as per the requirements. … As far as I know in most other companies [too] the practice is only for show purpose… Otherwise, involving apprentices in practical training has the risk of damaging machines and hand tools, interrupting production as well as wasting production time.

Both IP1 and IP2 have also stated that trainees sent to their company for CT are with serious gaps of generic or basic skills and theoretical knowledge besides lack of motivation, enthusiasm as well as interest for the training. Before sending students for CT, they suggested, TVET institutions should give adequate counseling service and equip them with the necessary conceptual knowledge and basic skills in their respective occupations, which may probably ease the collaboration and confidence of companies to take part. Both participants still feel that TVET trainees are costs and potential causes of damages for their machinery and profitability. The unmanageable number of trainees particularly discouraged the involvement of enterprises due to cost implications. According to both participants, in addition, CT has unnecessarily required from them new costs because their trainers often request remunerations for providing training by considering the task as an extra responsibility.

Consistent to their perceptions for CT, the involvement of the industry in competence assessment is very little. TVP1 and TVP2 sense that the reasons behind industry reluctance to take part in competence assessment are not different from those mentioned for CT. The two participants from the industry (IP1 and IP2) ascertained the feelings of TVP1 and TVP2. That is, both industry participants unveil that wastage of production time, the additional costs it may incur on the company, the damage that may probably follow due to operating with unskilled personnel are some of the major factors that discouraged the participation of the industry in competence assessment. Besides, both IP1 and IP2 advised the government that it better carry out both the

practical training (instead of CT) and occupational competence assessment in its training institutions by capacitating them with necessary facilities and equipments than the futile attempt to persuade the industry.

Discussion

Management of industry involvement

Both quantitative and qualitative data sources reveal that irrespective of the availability of enterprises in the catchment areas of TVET institutions, the actual industry involvement in CT is almost none. This implies that it is not only the scarcity of enterprises but the unwillingness of the available enterprises to participate that denied the utility of CT in the study area, notwithstanding the TVET strategy (Ministry of Education, 2008) statement that considers industry involvement as the bedrock of maintaining the cost-effectiveness and employability of TVET. Neither did the TVET sector effectively mobilize the industry in favor of CT despite TVEDB's responsibility to *develop appropriate strategies to involve employers into the state TVET system* (p. 49). Although the TVET strategy specifies that *public private partnership needs to be further strengthened and roles therein defined* (Ministry of Education, 2008, p.19), all study participants unanimously comment that the introduction of CT has missed to take the context of the country into account. In general, all participants of both TVET colleges and enterprises feel that enterprises are not willing to take part in CT and hence CT is applicable only on paper.

Particularly, deans and the teachers interviewed independently are highly concerned about the situation of CT. Both commend that CT is in no way feasible unless relevant and motivating binding legal frameworks (rules and regulations) are formulated and employed. On the other hand, they criticized a statement (Federal Democratic Republic of Ethiopia [FDRE], 2016, P.9081) of the proclamation that announces *the basis for … cooperation shall be voluntarism and*

mutual interest for lacking the power to activate and enforce the industry towards CT. The motivation mechanism suggested by the proclamation that reads as *the Agency, regional authorities and training institutions shall… disseminate and publicize the names and addresses of enterprises which have been participating in cooperative training* is also being criticized by those participants for being very loose, and gives low weight for reward and motivation. They assumed it to have been stated for the sake of stating. Otherwise, according to the participants, how much this statement attracts the interest of companies and enterprises towards CT is subject to question, if not more of an irony than sincerity.

The abovementioned situation triggers some questions that require examining the management of TVET-industry partnership. The analysis of both quantitative and qualitative data alike indicate that partnership management is so weak in the TVET system of the study area whether a college is a cluster center, probably, where there may be relatively senior and better-experienced deans or a satellite college where there are junior and less experienced deans. In contrast to the intentions of the TVET strategy (Ministry of Education, 2008) and the proclamation (FDRE, 2016), the findings of the current study as regards the status of TVET-industry partnership disclose that the system was highly influenced by the deficiency of industry involvement. That is, TVET colleges in the study area kept themselves away from establishing strong and sustainable relationship with the labor market (the industry) and hence missed the indispensable chance of utilizing the available enterprises and companies effectively. This, in turn, has disabled the industry the opportunity to relieve the challenges of trained unemployment among the youth and eventually keep their effectiveness and efficiency to adjust their training delivery along with the demands of the market.

A report by TVEDB (November, 2009 E. C, p. 41), for instance, mentions that *…among the registered TVET graduates that are unemployed only 17% in urban areas and 11% in rural areas have got*

job opportunities in the year specified. The reason behind the high unemployment rate is more likely absence of TVET-industry partnership or CT because research findings across the world (e.g. Adda et al. 2006; Alet and Bonnal, 2011; Eichhorst et al., 2012; Horn, 2013; Quintini and Manfredi, 2009; Quintini, Martin, and Martin, 2007; Stockmann, 1999; Winkelmann, 1996) inform that the CT is the most relevant approach in ascertaining employment opportunity in TVET.

Besides lacking to solidify the strategy targets of quality and employability, deficiency of involving the industry in TVET effectively is one of the excuses for the widespread unemployment, which in turn might have disabled to keep the optimism of the youth towards TVET. That is because different authorities (e.g. Atchoarena, 1999; Lannert, 1999; Maclean and Wilson, 2009; Mitchell, 1998; Munbodh, 1999; Winch, 2013; Wolf, 2011) have revealed that the absence of establishing effective partnership among TVET colleges and the industry is one of the major factors that discourage public demand for TVET. Bhanugopan and Fish (2009) in particular alert that failure in TVET employability due to lack of effectively managing the communication between TVET colleges and the labor market can be compensated neither by the volume of government investment on TVET enhancement nor by the career choices of trainees.

A system document designed to effectively involve the industry (Ministry of Education, 2010) in CT in particular specified the responsibilities of each stakeholder whereby the industry (labor market) is expected to cooperate with TVET colleges in different dimensions. The analysis of qualitative data gathered through interviews and documentary review, however, clearly discloses that CT is entangled with diverse managerial problems that can be summarized in seven different fringes. One, the government and employers lacked a strong sense of cooperation. Two, there is no practice of shared planning between TVET colleges and local enterprises. Three, TVET colleges and companies do not fully carry out the tasks specified in the system document. Four, companies or enterprises partially involved are

reluctant to support CT with the required human and material resources. Five, companies and enterprises are not committed to deliver training as per the requirements of the standards set. Six, probably due to lack of binding rules and regulations to enforce accountability companies and enterprises cannot play credible roles that they are entrusted with. Seven, there are no incentive mechanisms from the government to motivate and pull companies and enterprises towards CT. These altogether inform that irrespective of the introduction of new policy and strategy accompanied by a revised proclamation, the availability of CT in the study area is empty rhetoric.

Ministry of Education (2008) has stipulated that all the above mentioned problems were understood as the major obstacles that are to be tackled by implementing the TVET strategy properly. But the problems continued to challenge the system throughout the past ten years that the strategy has been implemented. As the findings of the current study pinpoint the wide gap between the inspiring strategy intentions and the practices in the existing TVET-industry partnership is, largely, a managerial defect of lacking to take the initiative and to establish favorable ground that motivates and mobilizes the industry towards partnership. Although the TVET strategy (Ministry of Education, 2008, p.7) states that “the main thrust of the strategy is that TVET development relies on an outcome-based system and dedicated and trusting cooperation among stakeholders”, lack of employing context oriented and problem-solving management practice has denied changing the strategy intentions of CT into practice effectively and addressing the intended goals set from the outset properly. TVEDB and TVET colleges are, in particular, accountable in this respect. That is because the government is vested with the accountability and takes the initiative of realizing the entire TVET-industry partnership, which ultimately generates mutual benefits. In other words, while TVET colleges benefit from the synergy to deliver the required services and maintain their survival and improved TVET employability, the labor market also acquires the required labor force easily and without any cost of retraining.

According to the TVET strategy, CT is the fundamental aspect of TVET-industry partnership because it plays key roles in maintaining efficiency and employability in the system. The strategy, to that effect, states that “usually, the bulk of practical training takes place in an enterprise, while theory and initial practical exposure is provided by the TVET institution” (MoE, 2008, p. 30). With this intention in mind, the current study has tried to evaluate the commitment and effectiveness of the industry in boosting the quality and employability of TVET by actively taking part in CT. The findings of the study, however, denoted industry commitment to participate in CT is not only very low but also created high dissatisfaction among teachers and the students. Although the TVET proclamation (FDRE, 2016) stipulates that public enterprises and development programmes shall have the duty to engage in cooperative training, in practice government enterprises that have been established to fill such gaps created by private organizations shy away practically, leave alone private companies and enterprises.

As rightly argued by a number of authors (e.g. Dustmann and Schönberg, 2012; Quintini and Manfredi, 2009; Quintini, Martin, and Martin, 2007; Rezin and McCaslin, n.d.) countries that implemented CT effectively have better addressed the problems of TVET unemployment than others which did not do. The TVET strategy (Ministry of Education, 2008; 2010), likewise, appreciates CT for fostering the chance of employability. Nonetheless, the current study reveals that the practice is ineffective. The results of qualitative data analysis have provided more vivid illustrations about the overall defects of CT. Both students and teachers have observed that the attention paid by enterprises for CT is generally very low. In line with Eichhorst et al., 2012 as well as Watts (2013), stated that consequently the inappropriate practice of CT is one of the major hurdles that debilitated the effectiveness and quality of TVET and thereby its employability in the study area.

Above all, it is observable that stakeholders are overwhelmed by widespread blame games of pointing fingers at one another. Polarized blame games are surfaced particularly between the TVET sector and enterprises as well as between TVEDB and TVET colleges (deans and the teachers). The industry shares some of the concerns of the colleges (e.g. incentive issues and sheer enrolment maximization practices) and hence more or less backs the colleges. TVEDB authorities blame the colleges for their deficiency to mobilize the industry. Deans and the teachers, in contrast, counter argued the suggestions of TVEDB by downplaying the critics of the latter as mere judgments that lacked to consider the contexts on the ground. Moreover, they blamed TVEDB for lacking to take measures specified by the TVET strategy for fostering industry involvement. Nevertheless, neither of TVEDB reports have evaluated and commented whether TVEDB has accomplished its responsibilities bestowed by the manual formulated to implement CT. For instance, it was not courageous enough to confess its shortcomings on introducing remedial mechanisms and enforcing laws that encourage the industry towards CT, which were some of its fundamental responsibilities stipulated both in the strategy as well as the system document (Ministry of Education, 2008; 2010) among others that are missed in the evaluation exercise.

Conclusion

From this study, it is possible to learn that CT is available only on report papers. All participant groups certainly agree that trainees are not getting the right sort of CT, if any they are not engaged on relevant tasks that could equip them with the required skills. Industry involvement is very low in all TVET institutions, no matter how enterprises are available or absent in the locality. Industry involvement in CT has been more of a matter of interest than availability in the surrounding. Legal frameworks were loosely framed in such a way that they were able neither to enforce responsibilities and accountabilities nor to reward and motivate the companies involved. The practice of partnership management was very weak across all study areas

because not only did the enterprises/companies but also TVEDB and its training institutions who introduced CT itself were capable to carry out the responsibilities entrusted by the government. Instead, CT has been widely susceptible for intricate blame games among TVEDB, training institutions, trainees as well as enterprises, which more likely implies the prevailing weakness in the practices of CT management. The introduction of CT lacked to consider the overall context of the study area in general and the individual institutions in particular, i.e. it lacked to consider feasibility factors from the outset. Since most TVET centers are located in places where there is not even a single company or enterprise to take part in CT the exercise remained feasible only on paper. In view of the general socio-economic and legal contexts of the study area, therefore, it is plausible to conclude that CT is almost a futile and an impossible exercise in the context of the study area.

Recommendations

In CT the industry is considered as a place where trainees not only learn to work but learn from work as well. In the area under study, however, it has been found that neither of these services was delivered by the industry. Consequently, the following measures may resolve the puzzles behind CT and ensure TVET effectiveness by the end of the day:

- Since the key challenge to address the strategy intention of CT is lack of effective involvement and commitment by the industry, companies and enterprises need to be stimulated through the integration of incentive mechanisms and enforcing legislations because worldwide experiences show that the success of TVET-industry partnership is dependent upon the power of the incentive mechanisms employed to attract industry enthusiasm towards partnership.
- Under the current situation, obviously, CT cannot deliver the intended service stated in the strategy. The alternative that can

replace the role of CT in producing graduates that fit market demands may be reorganizing public TVET colleges to operate as business enterprises in such a way that they can freely compete in the business environment, just like the different government business enterprises do. Streamlining the TVET colleges with their own specializations and providing the necessary autonomy may empower the fund generating opportunity and effective utilization of the fund by the colleges to enhance the quality and employability of TVET eventually. Expanding the capacity of the existing small production units that are currently underutilization as simulation centers by the colleges may help as springboards to establish such a training environment where there would be not only training for work but also working for training.

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