

# Evaluating the Employability and Entrepreneurial Skills and the Impact on Employment of Public TVET Graduates

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**Abstract:** This study examined perceived employability & entrepreneurial skills of TVET graduates and the impact of these skills on gainful employment (self/paid) of the graduates. Data was collected from 317 (133 unemployed and 184 employed) TVET graduates that were selected from two randomly selected departments of the three randomly (Bahir-Dar, Gondar and Debreabor) selected TVET colleges. For both data collection and analysis the study utilized Concurrent embedded mixed research method (that encompasses the pragmatic philosophical world view). A questionnaire having Close ended and open-ended items as well as document analysis were the instruments used together data. For the analysis of the quantitative data, one sample t-test, independent sample t-test and multiple regression analysis were employed and the qualitative data was analyzed by embedding on the quantitative data. The results revealed that the mean perceived graduates' employability skills were significantly lower than the expected value. Similarly, the mean perceived entrepreneurial skills of TVET graduates were significantly lower than the expected mean. Moreover, graduates job related satisfaction was found to be significantly low. Regression Analysis also revealed a lower contribution of the combined skills on job related satisfaction. Finally, the Beta value under standard coefficient designated that total employability skills was the largest value that makes the strongest and significant unique contribution to explain the lower Job satisfaction which was followed by entrepreneurial skills as the second unique significant predictor.

**Keywords:** Employability Skills, Entrepreneurial Skills, Job Satisfaction, Personal Qualities, Risk Taking, Ethiopia

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## 1. Introduction

Ethiopia, a sub-Sahara African country is suffered from youth unemployment that gives rise to private & social problems in the society and significantly negatively affects the growth and development of the country. Hence, like all other developing countries Ethiopia is forced to devise and implement different counter active actions to alleviate if not possible to eradicate the problem of youth unemployment and steering towards technological advancement. One of the mechanisms is preparing youngsters technically for gainful employment via competence based TVET program. However, researches on the issue [43, 36] show that becoming technically skilled alone cannot be a grant for employment (self/paid). In addition of being technically skilled TVET graduates need to develop the necessary soft (employability) and entrepreneurial skills to be employed (self/paid). Ethiopia, one of the Sub-Saharan poorest and

highly populated African countries cannot be free from youth unemployment problem. Reports of the two randomly selected sample years (2016, 2018) of Ethiopian Central Statistical Agency show that, the rate of unemployed people in 2016 was 16.9% where as the youth unemployment rate was 22% and the rate of unemployment in 2018 was 19.1% while the youth unemployment rate was 25.3%. Hence, as all developing countries Ethiopia implemented competence based TVET education to prepare youngsters with the necessary soft, hard and entrepreneurial skills for gainful employment (self/paid) and tackle youth unemployment [30] Accordingly, Youngsters besides work relevant technical skills should have sufficient non-technical (employability and entrepreneurial skills) to be employed or to create their own jobs. Research conducted on the issue [36] shows that although both technical and employability skills are necessary for any position employers peculiarly look for soft (employability) skills' among job applicants than technical

skills. They even prefer employees who are flexible, take initiatives, able to work in team and those that can perform a range of activities in diversified situations [44]. Surprisingly employers are heard saying that “the challenge of new employees at work is not highly related to the technical side of their jobs, instead on fitting in”. As to employers it is easier to train new employees in hard skills instead of training them in soft skills [43]. TVET graduates are also expected to be effective entrepreneurs that have the skills of looking societal problems as opportunities of creating new ideas and the ability to change ideas in to action. This implies that TVET graduates employment (self/paid) and the reduction of youth unemployment depends on the extent of employability and entrepreneurial skills they developed in their colleges [28, 6]. This calls the need to conduct continuous research in order to examine to what extent graduates of competence based education developed employability and entrepreneurial skills and the impact of these skills on their employment (self/paid). The purpose of this study was then to assess TVET graduates perceived employability and entrepreneurial skills and the impacts on graduates’ employment.

To this end the following leading questions were posed:

- 1) What is the perceived employability skill of TVET graduates? Is there a significant mean perceived score difference between Employed and Unemployed TVET graduates in employability skills?
- 2) What is the perceived entrepreneurial skill of TVET graduates? Is there a significant mean perceived score difference in entrepreneurial skills between Employed and Unemployed TVET graduates?
- 3) How well do the employability and entrepreneurial skills in combination predict perceived job related satisfaction? Which one of the two skills more predict perceived job related satisfaction?

## 2. Theoretical Underpinning

The theoretical base of the present study is human capital theory and development which encompasses the importance of human development for effective work performance. Human capital theory states that besides other necessary inputs the productivity and economic value of a certain organization (Industry, Business and the like) depends on the abilities and qualities of labor force [18, 37]. That is, the economic value of a person depends on the sum of his/her personal ability to perform work which in turn depends on his/her knowledge, skills, experience and social qualities. Thus, it is the theory that emphasizes the belief explaining formal education as highly instrumental and necessary to improve the productive capacity of a population by accepting educated population as productive population [2]. That is, since education increases the productivity of workers, formal education is seen as an investment in human capital, which proponents of the theory have considered as equally or even more worthwhile than that of physical capital [2]. It is this distinctive nature of the theory that recognized education as a

primary and cornerstone of economic and social development [3] as well as its emphasis on the importance of formal education in developing both employability and entrepreneurial skills that it is used as a theoretical base of employability and entrepreneurial skills acquisition and the impact on employment of TVET graduates.

Although, learning employability and entrepreneurial skills should start at the primary school level and more precisely in the family; TVET graduates should formally learn these important skills in their institutions to prepare themselves for employment. Analyzing employability and entrepreneurial skills development via human capital as a theoretical frame, TVET curriculum reviews, competence development through TVET industry partnerships, strengthened quality assurance systems, and the alignment of TVET with the country’s development plans are important aspects of shaping and improving a person’s employment [30]. As a result, the quality of soft and hard skills, knowledge, training, experiences, abilities, talent, and intelligence developed through TVET forms the human capital for obtaining employment.

### 2.1. Employability Skills

In the development of human capital, graduates should develop both soft skills and hard skills for effective work performance [2]. That is, in addition to hard skills employability skills enable graduates to be competent for employment both in the domestic and global market. The research result of [16] designated the importance of developing employability skills by graduates through the lens of employers. Hence, authorities of education in situations designed mechanisms that help students to enhance their employability skills either through the professional development of lecturers, curriculum and co-curriculum [51, 23, and 41]. Research conducted by [3] also shows the important attributes that should be included in the curriculum of Employability skills such as positive thinking, efficient expertise, problem solving, decision making, socialization, interpersonal and effective leadership skills. Since, Employers are looking for these set of nontechnical (employability/soft) skills from TVET graduates as measurement of marketability, graduates expected to demonstrate these broader skills and attributes [8, 41]. More precisely, the model adapted from a Secretary’s Commission on Achieving Necessary Skill [43] categorize Employability skills with the following components; personal qualities, critical thinking skills, informational skills, resource management skills, interpersonal skills, system management skills and technological skills.

#### 2.1.1. Personal Qualities

Personal qualities are essential components of employability skills that include, values, beliefs and the mindset that are important for the success of job performance. The research result of [49] explicitly shows the significant impact of all dimensions of personality traits on job performance that depicted it as an essential component of

employability skills. Although personal qualities seem start at early childhood in the family, the diverse range of personal traits that serve to handle daily work place environments such as maintaining positive energy and attitude that motivate others so that they can optimize their performance, ability to handle pressure, work independently, and accept professional criticisms [43] should be included in TVET curriculum. Since, employers are looking for these qualities from TVET graduates during competition for employment and to allow sustain in the organization as employee graduates should develop these skills.

### **2.1.2. Critical Thinking Skills**

Even if, much of the literature on critical thinking skills has originated from the fields of philosophy and psychology, it however permeates all area of teaching and learning as a core processes in education [38]. Thus, TVET graduates via competence based education should develop these skills. According to [38] these skills incorporate self-correcting, trustful reasoning, flexibility and open-mindedness that use as assets to perform complete tasks at the hard times.

### **2.1.3. Information Skills**

Are the skills that enable TVET graduates to acquire, organize, evaluate, interpret and communicate information as well as using computers to process information [1, 25]. Moreover, as to [25] it is an essential skill in building and maintaining relationships between and among human capital in the workplace. Since, TVET graduates are expected to have such skills employers are critically examining from graduates at the time when graduates are competing for employment.

### **2.1.4. Resource Management Skills**

These are other components of employability skills that focus on identifying, organizing, planning, and allocating resources including managing time, money, materials or facilities and human resources [14, 13]. If employees have these skills they may be able to select goal-relevant activities, ranking them, allocate time, prepare and follow schedules. Employers are searching for those employees who are planned, utilizing the limited time given equally for everyone in a day appropriately and be successful in completing tasks. Research results support this action of employers. For instance the study conducted by [4] reported that the more employees and managers demonstrated time planning behavior the more they were effective in using time and were successful in job performance. Graduates that have the skills of organizing time and accomplish personal & professional tasks as well as that have sufficient awareness on financial management, make effective decisions regarding the use and management of money and other assets are needed to be employed and sustain in jobs. Since illiteracy of financial management and more importantly negative attitudes towards and behavior concerning financial issues causes deficiencies of funding to various tasks and brings about the overall crises of an organization employers are looking these skills from competitors to employment and to allow them sustain in the

organization. The research conducted by [19] found that without financial management practices, the financial performance would be miserable. Finally, the skills of human and facilities resource management skills that refers to the management of people within organizations, focusing on policies and systems as well as a company's physical buildings furnished with necessary furniture, materials and other important inputs used for the effectiveness of any organization are essential employability skills that are expected from TVET graduates by employers.

### **2.1.5. Interpersonal Skills**

Interpersonal skills are the skill of building close relationships with other people and work closely with their teams. The relationship should go beyond their teams to customers, suppliers and more for the effectiveness of the organization. The research conducted by [20] reported that improving interpersonal skills through job training programs may improve worker's performance and lead to future promotion. Hence, TVET graduates should have improved interpersonal skills and build great relationships with their teams and employers are looking for these skills from graduates to employ and allow them to sustain in a job.

### **2.1.6. System Management Skills**

System management skills are the skills of understanding complex inter-relationships that include understanding of the Systems; social, organizational, and technological work and the how of effective operation for the success of every organization [38]. It is an essential skill to ensure efficiency and effectiveness of organizational activities [1]. The study conducted by [25] reported as continuous communication within organization and personnel development impact significantly and positively on employee performance. It also depicted that performance management system has a positive relationship with employee performance.

### **2.1.7. Technological Skills**

Technological skills are the skills of working with a variety of technologies following the necessary procedures. It also includes applying technology to task or to solve problem such as using the Internet [39]. Hence, TVET graduates should have these skills to be employed and those already employed to sustain in job. The study conducted on the impact of technological advancement on employees' performance [31] reported that there is a significant relationship between them.

## **2.2. Entrepreneurial Skills**

Although, there is no one universally agreed upon explanation on how two equally knowledgeable persons are not equally able to change similar challenges of the community into profitable job. However, the research results of different researchers [15, 32] show that entrepreneurs have certain similar traits such as focusing on innovation and open to risk. More specifically [5] identified certain specific traits including, creating new ideas, converting the ideas into action, risk taking, planning and managing that help them to

create job and be self-employed. This was supported by the research result of Waidi (2021) that reported the significant positive impact of entrepreneurial skills on job creation and self-employment. Thus, TVET graduates who are intentionally prepared to create new ideas from societal problems and convert into profitable ventures [5] should develop the five specific entrepreneurial skills cited in [5] shown below.

#### **2.2.1. Creating New Ideas**

Entrepreneurs are those that see situations from a variety of perspectives, synthesize and redefine previous thoughts and create new ideas that help them to change a problem into profitable ventures [7]. Hence, creating new ideas includes the skills of being sensitive to problems, insufficiencies, nonexistent elements, challenges and seeking for solutions by estimating, hypothesizing, modifying and drawing conclusions [27]. TVET graduates should develop these entrepreneurial skills and become effective problem solver and creators of new ideas.

#### **2.2.2. Turning Ideas in to Action**

Although, creating new ideas is the primary and novel skill, if not however, changed into practice it will be more of hypothetical and nothing to do in job creation and reduction of unemployment. As one component of entrepreneurial skills the ability of converting new ideas into action is essential for those who are expected to create their own jobs [21]. Hence, TVET graduates should develop the skills of converting the created ideas into profitable commercial ventures for gainful employment to be effective entrepreneurs and self-employed.

#### **2.2.3. Risk Taking Skills**

Entrepreneurs are able to take risks, and make decisions when facts are uncertain that other persons cannot. Risk taking as a peculiar characteristic of entrepreneurs encompasses taking reasonable job-related risks by noticing the other options to achieve the objectives and taking into account the possible consequences [29]. Then TVET graduates should have such skills.

#### **2.2.4. Planning Skills**

Entrepreneurs have the talents, skills and abilities to set plans and coordinating others to achieve the goal. They also have the skills to identify the tasks to be done towards accomplishing the target, organizing the tasks in terms of assigning part of it to others, supervising the progress made against the plan and reviewing a plan to take in new information [38]. Hence, TVET graduates should have these skills for effective implementation of once own project.

#### **2.2.5. Project Management Skills**

Project management skills are the ability to manage and administer projects and enterprises effectively and efficiently including: the skills of coordinating, decision making, leadership, managing conflicts planning and organizing skills [22]. Thus, TVET graduates should have these skills to lead their projects effectively.

### **3. Methodology**

#### **3.1. Research Design and Methods**

Concurrent embedded mixed research method elucidate in the pragmatic paradigm was the method employed in this study. Mixed-research method particularly concurrent embedded mixed research method was preferred since it allows the researchers to capture wide spectrum of participants, participants, to get in depth explanation of the pragmatics association of the qualitative and quantitative study and to analyze one type of data embedding on the other. That is, in quantitative approach data were collected from large number of participants as possible. However, the quantitative data analysis alone is inefficient to explain why the skill acquisition is or is not successful. It needs the pragmatics association with the qualitative method to add depth to quantitative study.

Hence, the underlying principle to use this design was first to gauge the extent of the perceived employability & entrepreneurial skills as well as job related satisfaction from both quantitative and qualitative data and second, we could have an in-depth view on why the acquired skills and the impact of the acquired skills on employment were high or low. To be more precise it is because the aim of our inquiry was in alignment with “the goal of mixed method research to draw on the strengths, and minimize the weaknesses of both research methods. In this study, the quantitative segment comprised of a close ended questionnaire, while the qualitative segment comprised open-ended questionnaire and document analysis to produce data. Participation in the study was voluntary and the survey for the data was conducted at the same time as the method is concurrent embedded.

#### **3.2. Participants of the Study**

Participants of this study were unemployed and employed TVET graduates of two randomly selected academic years (2018 and 2019). Representative sample of graduates were selected from the three randomly selected TVET (Bahir-Dar, Gondar and Debretabor Poly-technique) colleges of Ethiopia. These three sample colleges (30%) were randomly selected from the 10 target population colleges of the Amhara region, Ethiopia. In every of these sample colleges there were twelve functional departments among which two (16.67%) were randomly selected sample departments of the study. 317 (133 unemployed and 184 employed) which is 23.89% representative samples were selected as participants of the study. The Employed graduates were selected using random sampling method where as snow ball sampling method was employed to select unemployed graduates.

#### **3.3. Instruments of the Study**

Instruments used together both quantitative and qualitative data were questionnaire having both close ended and open ended items as well as document analysis. For the survey of employability skills the researchers adapted the instrument

from the Secretary's Commission on Achieving Necessary Skills [46]. The Commission categorized employability skills into seven components: personal qualities, critical thinking skills, resource management skills, information skills, interpersonal skills, system management skills and technological skills. In gathering data using close ended questionnaire from each construct different number (4, 6, 3, 5, 7, 5 and 4) of items respectively were used so that the total number of items was 34. In addition 3 open ended questions were included so that respondents were able to write their responses to the corresponding items and about their perceived employability skills freely with their own words. Similarly for the survey of entrepreneurial skills the instrument developed by [5] was adapted. Entrepreneurial skills were categorized into five specific skills namely the skills of creating new ideas, skills of turning new ideas into action, risk taking skills, project planning skills and project management skills. Each adapted construct of entrepreneurship skills was assessed by different number of (3, 3, 4, 5 and 3 respectively) items so that 18 close ended and 3 open ended items were used to gauge graduates' perceived entrepreneurial skills. The scale used to measure TVET graduates level of job related satisfaction involving the adequacy of the training to employment (corresponding and matching perfectly), access to employment, the way of developing competencies (Integrating knowledge, skills and attitude), their satisfaction in job, the job searching events including their acceptance and respect by their employers as well as their confidence in adapting with the recent technologies was developed by the researcher based on literature review. The questionnaire was consisted of 15 close ended and 5 open ended items. All the survey scales used to measure employability skills, entrepreneurial skills and job related satisfaction were of a four point Likert scale ranged from 1=strongly disagree to 4=strongly agree for positively worded items while the score of negatively worded items were reversed. Moreover, in order to ensure the reliability for use of the scales with the selected samples, the researchers conducted pilot test and the results are depicted in the pilot study part of the study. Before both piloting and data gathering for the study, the items were evaluated by different colleagues of PhD candidates in addition to the constructive comments of the supervisor. Finally, in order to visualize the actual conditions in the ground and to enrich the results of this study Document analysis was conducted. The document that contains the number of trainees, who were registered to CoC assessment, assessed, certified as competent or leveled not yet competent, was found from the registrar offices of each sample college. Then comparison was made between employed and unemployed competent graduates by the researchers.

### 3.4. Pilot Study

A pilot study was conducted on 103 (67 employed and 36 unemployed) TVET graduates of Gondar TVET college that were not included on the main study to assess the reliability of each instrument. Cronbach's alpha ( $\alpha$ ) reliability coefficient was calculated to determine the reliability of each instrument as shown in table 1 below. As shown in the table the reliability coefficient of each instrument measuring each construct was above .7 designating the suitability to make accurate enough inferences [11].

*Table 1. Reliability coefficients of the variables.*

Variable	Measurement	Cronbach's alpha ( $\alpha$ )
Employability skills	Personal qualities	0.790
	Critical Thinking skills	0.823
	Resource/manage/skills	0.721
	Informational skills	0.831
	Interpersonal skills	0.750
	System/manage/skill	0.800
	Technological skills	0.871
	Total employability skills	0.796
Entrepreneurial skills	Creating new ideas	0.831
	Turning ideas to actions	0.860
	Risk taking skills	0.743
	Planning skills	0.752
	Project//manage//kills	0.700
Job satisfaction	Tot/entrepreneurial skills	0.804
	Total job satisfaction	0.71

### 3.5. Data Analysis Method

The data analysis techniques employed to analyze the quantitative data in this research were one sample t-test and multiple regressions and the qualitative data was analyzed by embedding on the quantitative data.

## 4. Results of the Study

### 4.1. Employability Skills of TVET Graduates

Results of one sample and independent sample t-tests on perceived employability skills of technical and vocational college graduates are shown in tables 2 and 3. Table 2 revealed that; the mean perceived scores of total employability skills ( $M=65.60$ ,  $SD=5.27$ ), Personal qualities ( $M=7.78$ ,  $SD=1.89$ ), critical thinking skills ( $M=11.47$ ,  $SD=1.95$ ), resource management skills ( $M=5.74$ ,  $SD=1.38$ ), Information skills ( $M=9.61$ ,  $SD=1.72$ ), interpersonal skills ( $M=13.42$ ,  $SD=2.28$ ) and system management Skills ( $M=9.75$ ,  $SD=1.89$ ) were significantly lower than their respective expected ( $M=85$ ,  $M=10$ ,  $M=15$ ,  $M=7.5$ ,  $M=12.5$ ,  $M=17.5$ ,  $M=12.5$ ) means while technological skills ( $M=11.86$ ,  $SD=1.71$ ), was above the expected mean  $M=10$ ).

*Table 2. Employability skills of TVET graduates.*

Constructs	Observed Mean	Std. deviation	Test-value	t-obtained	Mean difference	Sig.
TOTPERSQUALITES	7.780	1.894	10	-24.248	-2.219	P<.05
TOTCRTHINKSKILLS	11.474	1.947	15	-37.462	-3.526	P<.05
TOTRESOURSMANAG	5.743	1.385	7.5	-26.235	-1.757	p<.05

Constructs	Observed Mean	Std. deviation	Test-value	t-obtained	Mean difference	Sig.
TOTINFORSKILLS	9.611	1.719	12.5	-34.717	-2.889	P<.05
TOTINTERPERSKILLS	13.421	2.279	17.5	-37.028	-4.079	P<.05
TOTSYSMANASKILLS	9.750	1.887	12.5	-30.632	-2.794	P<.05
TOTTECHNOSKILLS	11.857	1.708	10	25.945	2.5142	P<.05
TOTEMPLOYABSKILL	65.600	5.272	85	-76.125	-19.399	P<.05

Table 3. Independent Sample t-test comparing perceived employability scores of TVET graduates.

Group statistics				Levine's test for equality of variance		t-test for equality of means	
Respondents	N	Mean	Std. deviation	F	Sig.	t	Sig.
Unemployed	133	66.022	4.978	.949	.330	1.112	P = .252
employed	184	65.140	5.397				

Results of qualitative data analysis also show that the perceived employability skills of TVET graduates were very low. For instance two unemployed participants in responding to the open ended items reported as they were in shortage of soft skills. They further reported as they even heard about some components of employability skills during the moment of searching for jobs. Some employed graduates also reported as they are usually criticized in lacking: experience sharing and time management skills while they are good in selecting and using different technological devices. Some unemployed and employed graduates also reported the difficulty of making decisions and solving problems as major scarcity of TVET graduates. Results of independent sample t-test (table 3) revealed that there was no significant difference in the mean scores of unemployed (M=66.022, SD=4.978)

and employed (M=65.140, SD=5.397):  $t(315) = 1.112$ ,  $p = .252$ ) graduates designating that there was no difference between them in perceiving their low employability skills.

#### 4.2. Entrepreneurial Skills of TVET Graduates

Table 4 unveiled that the mean perceived scores of; total entrepreneurial skills (M=43.56, SD=6.078), creating new ideas (M=9.783, SD=1.967), turning new ideas into action (M=6.376, SD=1.899), risk taking (M=11.869, SD=2.384), planning (M=7.93,

SD=1.806) and project management (M=7.605, SD=1.789) were significantly lower than their respective expected (M=55, M=12.5, M =7.5, M=15, M=10, and M=10) means.

Table 4. TVET graduates Entrepreneurial skills.

Construct	Observed mean	Std. deviation	Test-value	t-obtained	Mean difference	Sig
TOTCREANEWIDEAS	9.783	1.967	12.5	-28.673	-2.717	P<.05
TOTTURIDEASACTIN	6.376	1.899	7.5	-12.241	-1.124	p<.05
TOTRISK TAKING	11.869	2.384	15	-11.484	-1.673	P<.05
TOTABILITYPLANN	7.930	1.806	10	-30.549	-2.245	P<.05
TOTPROJMANAGSKIL	7.605	1.789	10	-27.698	-2.245	P<.05
TOTENTREPRESKILLS	43.563	6.078	55	-38.925	-11.437	P<.05

In order to examine whether there is a difference between unemployed and employed TVET graduates in their perceived entrepreneurial skills independent sample t-test was computed. The result as shown in table 5 revealed that there is a mean perceived score difference between unemployed (M=46.098, SD = 6.541) and

employed (M=44.495, SD= 4.963):  $t(315) = 3.263$ ,  $p < .05$ ) TVET graduates. However, the magnitude of the calculated effect size (.0327) was lower than the moderating effect size (.06) designating the lower perceived entrepreneurial skills of both unemployed and employed graduates.

Table 5. Independent Sample t-test comparing perceived entrepreneurial skills scores between employed and unemployed TVET graduates.

Group statistics				Levine's test for equality of variance		t-test for equality of means	
Respondents	N	Mean	Std. deviation	F	Sig.	t	Sig.
unemployed	133	46.098	6.541	10.811	.001	2.840	P<.05
employed	295	44.495	4.963				

This result discovered from quantitative analysis was also in line with the results of qualitative data analysis. For instance some unemployed TVET graduates in their response for the open ended questions described that they are in efficient in exhibiting flexibility and innovation as well as creation of jobs. Similarly three employed and five unemployed graduates have even reported that they do not have any initiative to create new ideas in response to any

societal challenge. Most of the unemployed and employed respondents described as they do not learn entrepreneurship education hence, have no entrepreneurial skills. However, few respondents reported as they have heard the importance of entrepreneurship education from their major course teachers. But said the respondents the attention of major course teachers is teaching only technical skills. Hence, graduates do not have the skills of creating their own jobs in

their field and are seen to waste so many years in searching for jobs.

#### 4.3. Impact of Employability and Entrepreneurial Skills of Graduates' on Employment

To examine the impact of employability and

entrepreneurial skills on employment, Job related satisfaction of graduates was assessed and the results as shown in table 6 revealed that the observed mean ( $M=31.797$ ,  $SD=2.729$ ) was significantly lower than the expected mean ( $M=37.5$ ) designating the low level of graduates' job related satisfaction.

**Table 6.** Graduates job related satisfaction.

Observed mean	Std.deviation	Test value	t-obtained	Mean difference	Sig.
31.797	2.729	37.5	-43.227	-5.703	P<.05

To scrutinize if there is a difference between unemployed and employed respondents in their perceived job related satisfaction t-test was computed. The result shown in table 7 revealed that there was no any significant difference in the mean scores of unemployed ( $M=31.488$ ,  $SD=2.509$ ) and

employed ( $M=31.935$ ,  $SD=2.816$ ):  $t(315) = -1.51$ ,  $p = .117$ ) TVET graduates implying that there was no significant difference in their lower job-related satisfaction between them. That is, the job related satisfaction of both unemployed and employed graduates was significantly low.

**Table 7.** Independent Sample t-test comparing perceived scores of TVET graduates job related satisfaction.

Group statistics				Levine's test for equality of variance		t-test for equality of means	
Respondents	N	Mean	Std. deviation	F	Sig.	t	Sig.
Unemployed	133	31.488	2.509				
Employed	184	31.935	2.816	1.559	.212	-1.510	.117

**Table 8.** Rate of employment after leveled competent in CoC assessment.

Department	Level	Academic Year	Assessed	Competent	Not yet competent	Number of TVET graduates					Total employed	
						Public	Private	NGOs	Self-employed Organized in SMI	Self-employed Organized in S MI	No	%
Surveying	L <sub>2</sub>	2018/2019	322	160	162	3	7	0	15	38	63	39.38
		2019/2020	276	135	141	12	5	0	8	19	44	32.59
	L <sub>3</sub>	2018/2019	242	90	152	4	8	0	13	10	35	38.87
		2019/2020	162	85	77	10	6	0	6	16	38	48.23
	L <sub>4</sub>	2018/2019	157	53	104	5	10	0	10	16	41	47.17
		2019/2020	194	75	119	7	5	0	14	16	42	47.27
Construction	L <sub>2</sub>	2018/2019	334	163	171	8	5	0	8	18	39	47.91
		2019/2020	318	161	157	8	9	0	8	18	43	52.79
	L <sub>3</sub>	2018/2019	274	83	191	7	10	0	12	20	49	55.76
		2019/2020	353	137	216	5	10	0	5	18	38	47.21
	L <sub>4</sub>	2018/2019	250	105	145	7	8	0	6	22	43	56.00
		2019/2020	205	80	125	6	9	0	8	18	41	48.69

Source registrar offices of the sample colleges and Own calculated.

**Table 9.** Summary of employed and unemployed status of TVET graduates included in the study.

Academic year	Total						Employed		Unemployed	
	Assessed	Competent	Not yet competent	Self-employed	Paid employed		No	%	No	%
2018/2019	1579	654	925	64	206		270	41.28	384	58.72
2019/2020	1508	673	835	49	197		246	36.55	427	63.45

Results of the qualitative data analysis also show the job related dissatisfactions of both employed and unemployed TVET graduates. For instance three unemployed respondents marked that they were dissatisfied in life and do not consider themselves as vocational because of a long hardship they experienced in searching for job. Other unemployed graduates also pointed out that besides job searching hardship, continuous competitions and failures as well as hard-core unemployment they are dissatisfied in life. Some employed respondents on the other hand reported that although they are employed they do not have a comfortable

feeling in their jobs due to the deficiency of working in teams and sharing of experiences, communication problems and weakness in decision making. Moreover, some unemployed TVET graduates suggested that although they were told as they would be "job creators" since they didn't learn entrepreneurship education by professionals they do not have even basic entrepreneurial skills thus were unable to create their own jobs implying the low positive impact of TVET graduate employability and entrepreneurial skills on their employment. Results of document analysis conducted on two randomly selected years' graduates statistics of the sample

colleges and departments (table 8 and table 9) revealed that among 1579 TVET graduates that took CoC assessment in 2018/2019 only 654 were competent and among these competent graduates only 270 (41.28%) were employed whereas 384 (58.72%) were unemployed (both self and paid). Similarly, among 1508 graduates that took CoC assessment in 2019/2020 only 673 were competent and among these only 246 (36.55%) were employed while 427 (63.45%) were unemployed (self/paid) designating again the lower positive impact of employability and entrepreneurial skills on employment of TVET graduates.

Finally, results of regression analysis shown in table 10 revealed that the model (that includes total perceived employability and entrepreneurial skills) explains 49.8 percent of variances in job satisfaction. Moreover table 11 clearly depicted that total perceived employability (Beta = .816) skills was the largest Beta coefficient. Hence, total employability skill makes the strongest unique contribution to explain the job related satisfaction, when the variance explained by entrepreneurial skills in the model is controlled which is followed by entrepreneurial skills. The table also shows that all are statistically significant.

Table 10. Regression Analysis.

Model	R	R Square	Adjusted R Square	Std. Error of the estimate
1	.706 <sup>a</sup>	.498	.494	2.25454

a. Predictors : ( Constant), TOTEMPLABSKILLS &TOTENTERSKILLS

b. Dependent Variable: TOTJOBSATISFUCT.

Table 11. Model coefficient.

Model	Unstandardized Coefficients		Standardized Coefficients		Co linearity Statistics		
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	8.730	2.014		4.334	P<.05		
TOTEMPSKI	.897	.045	.816	20.028	P<.05	.714	1.401
TOTENTPRSKS	-.703	.049	-.698	-14.209	P<.05	.491	2.035

a. Dependent Variable : TOTJOBSATIS

b. Predictors (Constant). TOTEMPLOABSKILLS&TOTENTERPRESKLIIS.

## 5. Discussion

### 5.1. Employability Skills of TVET Graduates

The results of this study revealed that total mean perceived employability skills of public TVET graduates was significantly lower than the expected mean. This result was different from the research result of [10] that reported the moderate level of employability skills of Technical Vocational Training students in Malaysia. Closer examination also revealed that TVET graduates perceived scores of personal qualities was lower than the expected mean indicating the lower self-esteem, lower self-confidence, low motivation and less energy to handle work place environment [34, 23]. The mean perceived graduates' critical thinking was also lower than the expected mean designating graduate 'lower ability to see things in different angles and complete tasks at the hardest times [38]. This result was different from the study result of [5] that reported moderate level of critical thinking skills of physics students while it was in line to the research result of [45] that revealed the low critical thinking skills of senior secondary Biology students of Indonesia. Graduates mean perceived resource management skills was significantly lower than the expected mean showing low ability of graduates to select goal relevant activities, ranking them, allocate times, prepares and follow schedules [12-14]. The results also portrayed that the mean perceived score of graduates 'informational skills was lower than the expected mean depicting lower graduates 'skill to acquire, evaluate,

organize, and maintain problems [51]. The mean perceived interpersonal skills of graduates was also lower than the expected mean showing their lower skills of building close relationship with their counterparts & customers as well as problem of working closely with their teams, customers, suppliers, shareholders and investors [25, 26]. The mean perceived system management score was lower than the expected mean illustrating lower skills to understand complex interrelationships that include the lower skills of: monitoring and correcting performance, distinguishing trends and predicting impacts on the system operations [38]. Finally, the mean perceived score of technological skills was above the expected mean designating better skills of graduates to work with diversified technologies following appropriate procedures including computers [39]. Hence, although employers are looking for various soft skills besides hard skills in a new hire, the results of the current study shows that TVET graduates were inferior in the soft skills without significant difference between those employed and unemployed graduates. This result designates the existence of a mismatch in skills needed by employers and the skills of graduates. This mismatch can be taken as one serious factor for youth unemployment and poverty.

### 5.2. Entrepreneurial Skills of TVET Graduates

Results of one sample t-test revealed that total mean perceived score of TVET graduates entrepreneurial skills was significantly lower than the Expected mean designating lower entrepreneurial skills for job creation [27]. Results of further examination on each components of entrepreneurial



skills demonstrates that graduates perceived mean score of creating new ideas was significantly lower than the expected mean signifying their lower ability to see things from a variety of perspectives and deficiency of synthesizing & redefining previous thoughts to come across with new ideas and create their own job. The research result of this study was different from the research result of [48] that revealed the moderate skills of TVET graduates and show significant positive effect of creativity and innovations on self-employment of TVET graduates in Kenya. The mean perceived score of changing new ideas into actions was also lower than the expected mean indicating that TVET graduates were weak in changing new ideas into profitable commercial ventures [15]. The mean perceived risk taking skill score was lower than the expected mean demonstrating the low ability of TVET graduates to make decisions when facts are uncertain and the inability to take reasonable job-related risks by noticing the other options to achieve the objectives and taking into account the possible consequences [29]. Moreover, the mean perceived project management score was significantly lower than the expected mean indicating the low ability of TVET graduates to manage and administer projects or enterprises effectively and efficiently [35, 41]. And the mean perceived ability to plan was significantly lower than the expected mean designating that TVET graduates were weak in planning or have low talents and skills to achieve the goals and low ability to identify the tasks to be done towards accomplishing the targets [22]. Finally, although the result of independent sample t-test shows a difference in the mean scores between unemployed and employed graduates, the calculated effect size was below the moderating effect size set by Cohen. This implies a lower effect of the difference in the perceived entrepreneurial skill between employed and unemployed graduates and the similarity in the weaker skills of creating their own jobs.

### 5.3. Impacts of Employability and Entrepreneurial Skills on Employment

In this study impacts of employability and entrepreneurial skills on employment was examined using Job related satisfaction that encompasses satisfaction level of graduates on their jobs and access to employment as well as their satisfaction on job creation and self-employment. The quantitative data analysis as shown in table 6 revealed that the job related satisfaction was below the expected value. Graduates were dissatisfied due to the challenges in searching and access of relevant job as well as in job creation to be self-employed. The open-ended questions respondents also revealed that they were dissatisfied because of the hardship they faced in job searching, hard unemployment, the difficulty of job creation and the mismatch between the need of the employers (more of the soft skills) and the graduates skills (more of technical skills). Moreover the document analysis shows that the impact of TVET graduates employability and entrepreneurial skills on their employment were significantly low.

## 6. Conclusion

Examining the perceived employability and entrepreneurial skills of TVET graduates and their impacts on employment (self/paid) of graduates was the major objective of this study. Accordingly the following conclusions were drawn from the findings. The employability skills with all its constructs except technological skills of both employed and unemployed TVET graduates were significantly low. This implies that graduates ability to: see things in different angles and complete tasks at the hardest times, select goal relevant activities, ranking them, allocating times, preparing and following schedules were significantly low. In addition graduates' skill of acquiring, evaluating, and organizing, problems was low. Furthermore, graduates skills to understand complex interrelationships including the skills of: monitoring and correcting performance, distinguishing trends and predicting impacts on the system operations was very low and have low positive attitude towards their job have low motivation and less energy to handle work place environment.

Moreover, the entrepreneurial skills with all constructs of both employed and unemployed TVET graduates were significantly low. That's, they have found to be lower in the skills of: creating new ideas change the created ideas in to action, plan, taking risk, and manage projects that designates graduates lower ability to see things from a variety of perspectives and come up with original ideas. Finally, the impact of employability and entrepreneurial skills of graduates on their employment (self/paid) was low. The results of this study show not green light to the program. Hence, the researchers recommend other researchers to deal on the issue by considering the results of this study as spring board.

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