ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES
DEPARTMENT OF EDUCATIONAL PLANNING AND
MANAGEMENT

ASSESSMENT OF EMPLOYABILITY OF ADAMA UNIVERSITY GRADUATES OF INDUSTRIAL DEPARTMENT IN THE YEARS 2000-2006

By: Mulugeta Asfaw

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Approval of board of examiners

Chairman department of graduate committee

Signature

Dr. Tiaye Kassahun

Advisor

Signature

Dr. Yekunoamlak Alemu

Internal Examiner

Signature

Dr. Sentayehu Tadesse

External Examiner

Signature

February, 2008

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Abstract

The main purpose of the study was to assess the employability of Adama University graduates of the Industrial Department in the years 2000-2006.To this end, the study employed a descriptive survey method and a purposive sampling technique to select 142 employed graduates currently working in Addis Ababa city Administration, three DepartmentHeads,27 Instructors and 10 Assistant Instructors out of 60 staff members of the University in the Industrial Department .Moreover, a snow ball sampling technique was used to select20 unemployed graduates in Addis Ababa. Accordingly, the study involved a total of 202 samples. The data were gathered through three sets of questionnaires .The first set was administered to the employed graduates, the second set to the University staff members ,and the third set was filled by the unemployed graduates.The data were analyzed quantitavely, using frequency distribution,percentages,spearman rankorder,and chi-square procedurally. The analysis revealed that the employment rate of the graduates had been decreasing from the year 2000 to2006, the relation between the University and employing agencies was ranked first among the factors determining employability of the graduates, the training is relevant to the existing labour market only to some extent .And finally it was observed that there was a mismatch between the syllabus of the University and that of the National TVETs resulting in the occurrence of a skill gap among most of the graduates.

From the analysis, it was recommended that the university should strengthen its relation with employing agencies, its syllabus should be revised to match with that of the National TEVEs ,and conduct a tracer study on the actual labour market condition to improve the employability of the graduates. .

Abbreviations

AAU- Addis Ababa University

AU - Adama University

B.Ed - Bachelor of Education Degree

CAD - Computer Aided Designing

CAM - Computer Aided Manufacturing

CAP - Certificated Aptitude Professional (French Vocational Training Certificate)

CSA- Central Statistics Agency

ECBP-Engineering Capacity Building Program

IDRC- International Development Research Center

MoE - Ministry of Education

NACVET- National Council for Technical and Vocational Education and Training

NETP - New Education and Training Policy

NGO- Non Government Organizations

NVTIs- National Vocational Training Institutes

OIC- Opportunities Industrialization Center

SSS- Senior Secondary School

TTE- Technical Teachers Education

TVE- Technical Vocational Education

TVET- Technical and Vocational Education and Training

UNDP- United Nations Development Programme

UNESCO - United Nations, Educational, Scientific and Cultural Organization

CHAPTER ONE

THE PROBLEM AND ITS APPROACH

1.1 BACKGROUND OF THE SUTDY

Technical and vocational education and training takes many forms. In the past employers for their own workers provided the bulk of all vocational education on the job. The cost of these educations and trainings were shared between the employers, who provided personnel, equipment, and other facilities, and the trainees, who received low wage during the period of the training. For many workers, the period of the vocational education and training was long and it consisted largely of observation and imitation of a skilled worker, as part of the training. However, as the skill requirements of the jobs become more complex, the need for more formal types of vocational education and training was widely accepted. As a result, vocational schools were established and new types of combined on the job and off the job training were created (Psacharopoulos, 1987:439).

He also explained that throughout the world, governments have become increasingly involved in the provision and financing of vocational education and training, because of both its importance of economic and manpower requirement and increasing concern about the need to share the costs and benefits of educational and training equitably.

In Africa, Kenya is the only country that offers a wide range of TVE subjects at the primary school level. These include: Agriculture, Art, Art and Craft, Business Education, Home Science and Music. Ghana offers Agriculture and life skills at the basic education level. Other countries do not focus on TVE at the basic education level .At the secondary school

level, a wide range of technical vocational education subjects is offered in most countries. Whilst Kenya has the subjects singled out and offered as electives (only one out of 8 subjects) for the final examination, Ghana offers clusters of what is referred to as basic technical skills and vocational skills. Nigeria offers what it is described as technical, vocational and business programmes. The TVE subjects in the school curriculum in most Africa countries still reflect the traditional courses that are geared toward imparting skills in a particular trade without much regard for technological changes that have impacted the world of work (UNESCO, 1996:22).

In Ethiopia until the early 1970s of the 20thc, technical and vocational education, whether in specialized schools or in the slowly developing systems of comprehensive education was regarded as second class by the younger generation, in spite of the reward available to those with technical and vocational skill and knowledge. At that time the secret of success attached to the result that entry at the top with a university degree (MoE, 2002:49).

With the introduction of NETP, the issue of TVET development came to be one of the priority areas in the education system. In compliance with this, in 1997 twenty-five skill development centers have been opened in four regional states, with the ultimate aim of training the largest number of secondary school leavers with various technical skills, mainly for self-employment in private sector.

The demand of employers for appropriately trained skilled labor is high. Therefore, reform and reorganization and expansion of TVET system are found to be necessary. Among the aims of such measures, the major ones are:

⇒ To increase the relevance of the TVET system,

⇒ Improve the access in general; and that of girls in particular,

⇒ Improve the efficiency of the system in general, and

⇒ Promote vocational skill training in collaboration with private and public employers in order to foster economic development, (MoE, 2002: 50)

To this end, currently TVET is provided at different levels and by different agencies both public and private, within the formal education system and out of it.

The above literature in the Ethiopia context focuses on the TVET programmes at different levels, but the concern of the researcher is on the TVE program at the tertiary level in concern to Adama University graduates employability and relevance of the training to employment. The then Nazareth College of Technical Teachers Education whose primary objective to train qualified technical teachers for the TVET programs.

Adama University was established as Nazareth Technical College (NTC) in 1993 to train skilled manpower at diploma and degree levels to meet the need of trained manpower with some technical knowledge (skill) of the country. The college had started training some students from different regions of the country in diploma in Automotive, Construction, Electricity -electronics and Manufacturing Technologies. In line with the declaration of NETP, to fill the gap /lack/ of trainers /teachers/ at TVETs, extended its scope by opening new departments and its name was changed to Nazareth College of Technical Teachers Education in 1999.

1.2 Statement of the Problem

Efficiency is the comparison of inputs to the results or outputs related to the inputs, other things being equal. The more a system becomes efficient, the higher is the output for a given set of inputs. The application of the concept of efficiency to education can be viewed from two perspectives; internal and external efficiencies. Internal efficiency of an education system is concerned with the relationship between the inputs and outputs of the education system (MoE, 2003:21).

External efficiency refers to the attainment of social goals or objectives. It measures not the immediate output but the ultimate benefits that are gained by passing through the system. External efficiency of an education system is realized through the relevance of education to social economic conditions of a country. The ability of graduates to enter the labor market following the completion of education is also indicator of education efficiency (external). With the intention of expanding the College to a university level, the number of graduates has been increasing from year to year. For example, in 2005, the number of graduates was only 94, but this has grown to 339 (by more than three folds) in the year 2006.Although the intake capacity of the university is rising from year to year, the employment rate of it's graduates may not match with the intake trend. Therefore, the study was launched to test whether this increment is simply demographic or economic. Hence, the study was intended to address the following basic questions. .

1. How is the university's syllabus related to the national TVETs' syllabus?
2. How relevant is the training to employment?
3. Is the labor market absorbing the graduates efficiently?
4. What are the factors affecting employability of graduates?

1.3 Objective of the study

The main objective of the study is to assess the employability of Adama University graduates of Industrial Department. The specific objectives are:

- To investigate the extent of relation ship between Adama University's Syllabus with that of the National TVETs.
- To examine the relevance of the training to employment.
- To assess the degree of labor market responsiveness to the training program and to the graduates.
- To identify factors those affecting employability of graduates.

1.4 Significance of the Study

To meet the need of trained manpower of the country and the economy Vocational Education programmes should be relevant to the labor market. With this respect the match between the labor market and training provided is the vital issue in the economic contribution of the programmes. Hence the study is significant on the basis of the following:

1. It provides information and clear image of labor market response of the university's graduates, that is extent of the external efficiency of the university.
2. It provides some recommendations on how to solve problems of employment irrelevance.
3. It will add literature on vocational training and can serve as a corner stone for further research conducted on Vocational Education programmes.

1. 5 Delimitation of the Study

This research is delimited to the graduates of Adama University, particularly of Industrial department (Automotive, Electricity-electronics and Manufacturing) in the years 2000-2006. Because these fields of study have been graduating number of students both in degree and diploma levels since 1995. Considering their availability, the researcher wanted to focus on the employability of these graduates in Addis Ababa city. Addis Ababa is chosen as a sample area, of all regions, because it is where the graduates are found in a large number.

Because of the above-mentioned reasons, the focus of this paper is delimited to both employed and unemployed graduates of Adama University in the years2000-2006 in Addis Ababa City Administration. Employed graduates working in different private companies, in government, non-government and private TVETs were included in the study.

1.6 Research Methodology

To describe the current status of a situation in scientific way and since the study is an assessment of employability of Adama University graduates; a descriptive survey research method has been employed. This method was selected for the reason that the intention of the research has been to examine the University's graduates' employability by gathering adequate and more reliable information from the graduates and the University's staff members. Moreover, the researcher has aimed to cover large number of sample population.

1.6.1 Data sources

Both primary and secondary sources of data have been treated in the study. Primary data has been obtained from the subjects i. e from employed graduates working in various institutions, Department heads, Instructors and Assistant Instructors in the university and unemployed graduates in Addis Ababa through the administered questionnaires. The questionnaires have been used because many respondents can be reached at a time through them. To obtain secondary data, the university's office documents which reveal the number of graduates in respective to their fields of study and the university's and TVET's syllabuses were used.

1.6.2 Population and Sampling Techniques

The total population of the study is graduates of Adama University from the Industrial Department in the years 2000-2006 whose aggregate number is 733 and 60 staff members of the university in the Department. Accordingly, a sample of 142 employed graduates working in Addis Ababa City Administration, three Department heads, 27 Instructors, 10 Assistant Instructors, and 20 unemployed graduates found in Addis Ababa City were reached.

Considering their accessibility and convenience of the technique, a non-probability purposive sampling technique was employed to select the employed graduates and Department heads, Instructors and Assistant Instructors of the University. Snow ball sampling technique is a kind of purposive sampling that requires selection of samples with a judgment as to who or what should be included in the sample. It is a technique by

which individuals initially selected suggest the name of other who might be appropriate for the sample, (Wiersma and Stephen, 2005:314). The technique enables the researcher to extend the number of subjects with similar characteristics. Accordingly, unemployed graduates were traced through the employed graduates.

Concerning the rate of return of the distributed questionnaires' copies, out of 142 copies distributed among the employed graduates, 130 (91.54%), 40 copies among the university's staff members 29 (72.5) and 20 (100%) among the unemployed graduates were returned. The overall rate of return was 179 (88.61%) out of 202 questionnaire copies distributed. Therefore, 130 employed graduates, 20 unemployed graduates, 2 Department heads, 20 instructors, and 7 assistant instructors of the university directly responded to the questionnaires.

Since the number of graduates was increasing from year to year, to identify their employability, the study focused on Adama University. Industrial Department was selected among others, because it is the Department that existed since the inauguration of the university as a college. Addis Ababa was selected with presupposition that much cluster of the university's graduates were deemed to be found in the city.

1.6.3 Data Collection Instruments

To gather reliable and valid data from the respondents, three sets of questionnaires were the main instruments through which the data was obtained. These questionnaires are composed of both close ended and open-ended items. One set of the questionnaire was administered to the employed graduates of the university working in Addis Ababa. The second set of the questionnaire was administered to the university's staff

i.e Department heads, Instructors and Assistant Instructors. The unemployed graduates in the city filled the third set of the questionnaire. In addition, documents were reviewed to obtain secondary data.

The questionnaires had been developed by the researcher and checked and approved by the advisor. Moreover, they had passed through a pilot test in order to enrich their validity. The pilot test had been conducted on graduates of Adama University of the Industrial department who are currently working in Adama town. Three graduates from non-educational institutions and eight trainers from TVET institutes (found in Adama town) had been the subjects of pilot study selected with availability sampling technique. Procedurally the questionnaires had been administered to these subjects with the assumption and confidence that they would not have any impact on the subsequent questionnaires administration. Accordingly, the content of certain question items were improved.

1.6.4 Data Analysis and Statistical Treatment

The data collected by all the questionnaires were analyzed quantitatively using frequency of responses, percentages, mean scores and Likert scale. Statistical tools like Spearman rank order, and chi-square were used to analyze the data.

1.7 Operational Definition of Terms

The following terms are defined according to their usage in the study.

Employability:- refers to factors which make a person eligible for employment i.e qualification, (ILO,1986:24).

Employment:- any work/job out of which an individual makes money

Labor market: the process through which the relation between supply and demand for labor is determined, (UNESCO, 1978:18).

Relevance: the extent to which the training or curriculum is related to the real life situation in which the learners/graduates/ may apply the training, (Psacharopoulos, 1987:307).

Unemployment: is a situation in which individuals could not get job to make living.

Vocational training: training designed to teach the skills and knowledge required for particular kind of work, (UNESCO, 1978:32).

1.8 Organization of the Study

This thesis consists of four chapters. Chapter one deals with introduction of the study. The review of related literature is treated under the second chapter. Chapter three deals with the characteristics of respondents, analyses and interpretations. The last chapter contained summary, conclusion and recommendations of the study. Furthermore, in appendices section, questionnaire copies were attached.

CHAPTER TWO

2. REVIEW OF THE RELATED LITERATURE

2.1 Development of Vocational Education

Education is designed to improve the living standard of the society in general and that of an individual in particular by enabling him/her to think of the best alternative way of tackling problems. It also helps an individual to understand his/her environment and involve in the political, economic, and cultural affairs of the country. In this respect the contribution of Technical and Vocational Education and Training is significant.

Vocational Education is defined as education designed to develop skills, abilities, understandings, attitudes, work habits and appreciation including knowledge and information required by workers to enter and bring development in employment on a useful and productive basis. It is subset of the total educational program and contributes towards the development of good citizens by developing their physical, social, civic, cultural and economic competencies, American Vocational Association 1954 (in Girma and others, 1994:2).

> *Vocational education in its informal form has its origin when man began to live together and started to produce for his basic needs. The primitive people probably used the digging stick, stones, axes and fire to clear the vegetation for hunting and gathering their food supply. Knowledge continued to pass from father to son verbally and was meager in quality. At this period the process of learning was spontaneous imitations of skills(* Abramson and others 1979 and Brembeck1972 in Yekunoamlak 2000:11).

At testing this scholars like Abramson and others in 1979 (in Yekunoamlak 2000:11) explained that as time passed by, the society

began to use fire not only for cooking but also for producing tools by melting metals with it. As a result, division of lobour, which had not existed before came to being. Moreover, people who specialized in particular skills: metal work (smiths), woodworks (carpenters), cloth production (weavers) among others; formed social groups. Thus, this new societal development, observed in the middle age, encouraged these different craftsmen to establish their own associations.

Much of vocational education and training takes place off the-job, as well as on the- job. In the past employers for their own workers provided the bulk of vocational education on the job. However; as the skill requirements of the jobs become more complex, the need for more formal types of vocational education and training was widely accepted. As a result, vocational schools were established and new types of combined on the job and off-the-job training was created (Psachoropoulos,1987:439).

2.2 Objectives of Vocational Education

Technical and vocational education and training can be used to resolve the problem of unemployment, which is a more critical problem of labor market in developing countries. Some writers tended to argue that the provision of such education and training not only enable trainees to acquire skills in specific occupation that lead to employment in the economic sectors but also enable them to prepare themselves for "self-employment" (ILO, 1995:59).

In favor of the above ILO's statement Ronald in 1996 (in Gatachew, 2004:23), on his part asserts that training should be based on learning by doing. The purpose is to prepare effective working force that benefits the society rather than producing highly qualified professionals. From this, one can easily understand that the primary objective of Vocational

education is to train a skilled labor force that can adapt to the requirements of the labor market.

Imported models of technical and vocational education, which were developed in a context of economic growth, proved incapable of supplying skilled labor that met the highly varied requirements of African production systems, as a result numerous criticisms of vocational education have been of voiced. They may be summarized as follows:

- Poor quality
- Very high cost
- Training not suited to actual socio-economic conditions
- Disregarded of the informal sector's needs and,
- Disregard of the labor market and of the high unemployment rate among graduates (Atchoarena, 2002:38).

In view of the changes in the labor market, the objectives of technical and vocational education have become more diverse; they are no longer simply economic but also social, including fight against poverty and the integration of young people into the working world.

Two other major objectives must now be pursued:

- To train the workforce for self-employment;
- To raise the productivity of the informal sector.

2.3 Vocational Education at Tertiary level

Models of technical and vocational education vary from country to country, and TVE programmes are provided by different institutions; technical and vocational schools offering short programmes, apprenticeship centers, polytechnics, university-level institutes of technology are some.

Various approaches have been adopted around the world to provide technical and vocational education within school systems. In Sub-Saharan Africa, both the mode of functioning and the content of TVE systems are in most cases based on those of the former colonial power.

The ILO's World Employment Report for 1998/1999 describes the technical and vocational education sector in these countries as "school based", since pupils who wish to continue their schooling may remain in longer educational programmes, while others may attend vocational schools. Some countries have 'pathways' to give the latter group access to higher education. However, in most countries, pupils who opt for vocational schools will arrive at a dead-end as far as higher education are concerned (Atchoarena, 2002:35).

At the tertiary level Vocation education is usually offered to those who have completed Secondary level education. Universities and Technical training Institutes comprise abroad range of courses offered at higher technical and vocational in most African countries. The technical institutes offer craft and technician courses while polytechnics often offer technician and diploma programmes at a higher level. Teacher preparation for TVE is carried out at both Technical Colleges and Universities even though TVE programmes in universities are relatively newer. Trainers of TVE teachers in most African counties usually go to universities over seas for training. The lack of qualified teachers or instructors has contributed to the growing gap between education and the world of work (UNESCO, 1996:2)

The Development of Technical and Vocation Education at tertiary level in Ethiopia do not have such a long History. According to Girma and others,(1994:15) the Department of Technical Teacher Education (TTE) of the Faculty of Education, AAU was established to train teachers of Business Education, Industrial Education and Home Economics in 1976

in collaboration with United States Agency for International Development. A similar department was later (in 1976) established in the Kotebe Teacher Training College. These were the only institutions of TVET at tertiary level training TVET teachers at diploma level. Even though number of attempts was made to raise the department to a degree program both in Business and Vocational education, it was not implemented until 1986 when the first-degree program in vocation teacher education in Ethiopia was launched in the area of business education.

In Africa some of the universities offering vocation education at tertiary level are Moi University in Kenya, university of Malawi, which offered B.Ed in technology education for secondary school teachers of technical subjects technical institute of Cameroon in three national universities (UNESCO, 1996:24). Adama University, Addis Ababa University and others are some institutions offering technical vocation education at the above-mentioned level in Ethiopia.

2.4 Vocational Training and Employment

2.4.1 Vocational Education and Economic Development

Expansion in the Education system of the country is one dimension of the overall development. The development in the economy of the country should consider educational system expansion at all levels. The mismatch between the development of the two will result in high rate of unemployed school leavers, which in turn can result in stress among the politicians (Yekunoamlak, 2000:13).

Massive expansion of TVET programmes without appropriate growth of the economy can't satisfy the needs of the society. Ward in (Adane, 2006:14) suggested that, government in under developed countries

should consciously allocate relatively larger share of their budget to produce job-creating activities as opposed to education.

As UNDP cited in Adane (2006:14) explains that TVE obviously benefit the individuals by imparting knowledge, skills and attitudes that will enable them to secure gainful employment. Society can also equally benefits from graduates of skilled manpower through their contribution in different sectors of the economy.

The other contribution of education to the economy is that:- it is generally accepted that education increases the volume of employment in the short run, in the sense that education itself is a labor intensive investment, in another words, expansion of education increases the number of people go to school, that in turn reduces the number of unemployed walking along the streets due to lack of schooling.

In strengthening the above discussion, (Aggarwal, 2004:413) states that, education system must lend support to the overall strategy of development of a country. A major support that education can give to the overall strategy of development is to improve the technology of existing crafts without destroying their intensive employment character and to impart population education at all appropriate stages.

2.4.2 Vocational Education and the Labor Market

According to ECBP, 2006:36 labor market information comprises information on the supply side of the labor market i.e. demographic developments, number of school leavers at different levels, number of employed by region and qualification profile etc, and information from which the present and future demand for skills and TVET qualifications

in the labor market can be derived i.e. skill gap, employment trends by sectors and occupations, emerging markets, new investments, economic opportunities in ruler areas etc.

The principal problem of external efficiency of Vocational education is essentially the mismatch between the job expectations generated by the traditional education system and the job opportunities provided by the labor market, (Blaug, 1973:10).

Although some information about the number of TVE pupil is available, most African countries have no statistics on graduates' level of integration into the labor market. The assessment of the external efficiency of TVE is very much dependent on country specific and contextual variables (Atchoarena, 2002:48). With this regard, substantial relevant labor market information and forecasting is already available in Ethiopia, in particular through the Ministry of Labor and Social Affairs, the National Statistics Office, and others. Such labor market assessments will not be replicated within the TVE system ,(ECBP, 2006:37).

However; analyzing the labor market for TVE purpose must be a continuous process in order to trace changes in the market and subsequently changes in the skills and qualification requirements at a stage early enough to allow the TVET system to react to it, i.e. to change training plans and curricula, to review occupational standards and to develop new standards, and to build appropriate teaching capacities.

In conclusion, of all the above discussed labor market Vocational education linkage and facilities are possible to be practiced in a real term, hopefully, there will be a reduced mismatch (imbalance) between

the graduates number and occupations in the labor market to utilize the graduates, which in turn reduces the rate of unemployed graduates over the country.

2.4.3 Vocational Education and Work

The curriculum of Vocational education in most African countries still reflect the traditional courses that are geared toward imparting kills in a particular trade without much regard for technological changes that have impacted the world of work (UNESCO 1996:22). Vocational training and education is not adequately geared to the needs of agriculture, industry and commerce because of inadequate linkages with employment system.

Apart from the question of insufficient and distorted priorities in education it is very insufficient attention paid to the building up of those basic attitudes, skills and personality traits, which are essential pre-requisites for employment creation. These basic qualities are industriousness, respect for manual work, initiative resourcefulness, an enquiring mind and an adventurous sprit and power of observation, an eye for detail and manipulative skill (Aggarwal, 2004:412).

Among many others, one of the leading factors that affect the tie between vocational training and work, as Ward in (Yekunoamlak, 2000:15) is due to 'the wrong premises of viewing training as a passport for entry in the world of work' not taking into considerations whether the educational requirements are relevant to the job intended or not. Moreover, Dore 1975 (in Yekunoamlak, 2000:15) has also argued that education (training) should not be taken as entry ticket to get job, but it must be considered as learning to carry out a job. Thus whenever an education system pays due attention to qualification rather than marketable skills, it may end up with producing examination oriented, shallow and unproductive individuals.

Education has the function of training individuals in the "skills" of life. In general, it is a multi dimensional affair, qualifying people professionally, socially and morally not only to work, but to live, not only to adapt to situations, but to create new ones (Kluczynski, 1985:145).

2.4.4 Vocational Training for Self-Employment

The principal distinction between the modern and informal sectors of the economy is the largely unregulated nature of activity in the informal sector. Moreover, most informal sector activity takes place through self-employment or in very small firms. The modern sector labor market is characterized by factors, such as minimum wages, protection of workers against dismissal, and collective bargaining on wages and conditions of employment that can lead to considerable rigidity. The informal sector can be highly flexible, with wages and conditions of employment determined through market forces (World Bank, 1993:72).

Self-employment represents an important route in to the labor market, especially in peri-urban and ruler areas; however, self-employment requires more than being technically competent in a certain occupational field. In order to become successful entrepreneurs people need self confidence, creativity, a realistic assessment of the market, basic business, further more, requires access to finance, access to land or structures to operate from (ECBP, 2006; 25).

Self-employment came into existence to complement the formal sector of employment. Simply providing training for informal sector employment has been less effective than providing as a complementary service in more complex programs that give clients access to credit and market device. The most successful such programs help carefully selected and

well-educated entrepreneurs to establish or expand very small enterprises. The largest share of employees in the informal sector is self-employed. Productivity in such employment depends heavily on the availability of markets and credits and on comparatively high levels of entrepreneurial skill. Therefore, attention should be given to this sector of the economy considering its contribution to unemployment and poverty reduction (World Bank, 1993:73).

2.4.5 Relevant and Irrelevant Employment

The degree to which qualifications are utilized is defined by the name of a position. Where qualifications are managed rationally each member of the work force is employed relevantly to his/her profession. The employee may be engaged in simple work that does not stimulate any real use of his/her knowledge, the time may be utilized inefficiently and so on. A very long period of time spent doing work that is irrelevant to the acquired profession does not have to be considered a waste of qualifications either. People in this case may have lost part of their original qualification but acquired training on the job for another profession (Kluczynski, 1985:131).

Thus, mismatches between the profession acquired through school and through practice are often of a formal nature than practical one. This gauge is only useful in identifying workers whose current job is completely irrelevant to their training (education). Irrelevant employment is, where people are doing jobs for which they are over qualified or under qualified. This situation has a negative effect on labor economically, socially and morally.

The phenomena of irrelevant employment have been quite noticeable in developing countries, and in Ethiopia as one of the developing countries.

2.4.6 School-Leaver Unemployment

Education is in no way responsible for the problem of over all imbalances (i.e. between labor supply and demand). Changes in the educational system will not change the number of job opportunities in the economy. However; education is definitely responsible for one of the problems of structural imbalance: that of matching employment of opportunities and expectations, (ILO in Blaug 1973:8).

Unemployment is one of the issues given much attention since 1970s in developing countries. Surveys of open unemployment (as opposed to under employment) in these countries have generally shown that it is greater in urban than ruler areas and that within urban areas it is more serious for female than males for the 15 to 24 years age group than other age groups, and for the more educated at least up to post secondary education, (Psacharopoulos, 1987:145).

Foster 1966 has criticized the idea that the expansion of vocational education could solve the problem of unemployment among school leavers, by changing their career aspirations. He argues that, far from being unrealistic, school pupils' perceptions of actual job opportunities, and the relative salaries to be expected in different jobs are often very accurate. Though graduates were trained with the appropriate skills, vocational education could not determine the occupational aspirations and destination of the students because parents and students consider education as the only means to get employed, (Foster, inIDRC, 1981:38).

In conclusion, the above discussion shows that, the relationship between unemployment and education (training) in developing countries, however appears to be a straightforward negative one.

2.5 Relevance of Vocational Education

Schools will be most relevant when students acquire the tools of life long learning. Anything learnt at primary level is relevant for a child's development in preparation for a wide range of future roles. The greatest relevance in general education at all levels, and for all futures, will be attained where peoples are encouraged to reason and to exercise their imaginations, whatever the subject matter of lessons or texts may be (Psacharopoulos, 1987:307).

Relevant training system in vocational education is the one through which trainees are systematically exposed to the world of work and learn the occupational practice in a real life situation. Experience shows that this leads to significantly better training outcomes, practical skills, work attitudes and theoretical comprehension on the occupational requirements (ECBP, 2006:24).

Many difficult problems with respect to preparation for work arise at the time when training does become appropriate, Whether in short or long-term programs and whether in schools and training institutes or on the job. The problems are more severe in developing countries, to deal with these problems, some of the general principles are stated below.

a) An initial fundamental distinction must be made between training in specialized skills that will have wide and enduring applications in the world of work and those that have limited use or will become more quickly obsolete.

b) The need to consider just which types of skills are relevant in a given country, which skills would be better hired as needed on international markets than produced at home. This is because; all countries turn to international labor market for some rare skills.

c) Of vital importance in assuring and fostering relevance of training in all levels skill is that learning from the start, is closely associated with work. This includes participation of large employers in training schemes and their development (Psacharopoulos, 1987:306)

In general, Vocational curriculum should not be water tight, rather flexible that can be changed in response to the labor market skills requirement to sustain its relevance.

2.5.1 Vocationalization of Curriculum

UNESCO in Aggarwal (2004:200) defined vocationalization as a "comprehensive term embracing those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences and the acquisition of practical skills, attitudes, undertaking and knowledge relating to occupations in the various sectors of economic and social life".

Accordingly, merits of vocationalization of curriculum are discussed here under.

1. **Education related to productivity:** vocational education fosters the achievement of society's goal of self sufficiency in agriculture and industry by developing suitable skills.

2. **Preparation of individuals for jobs:** it helps the individual to use her/ his own potential to contribute to the economic development.
3. **Employment potentialities:-** Education does not produce jobs but vocationalized education prepares an individual to get employed or self-employed early in time to satisfy the need of the community.
4. **Broadening of horizon:-** it will result in a better understanding of the modern technologies in such away that they can understand their environment critically and constructively.
5. **Dignity of labor:-** it gives useful experience for the development of dignity of labor.
6. **Maximum utilization of the material resources of the country:-** Vocationalization of education provides suitable opportunities of how to use our scarce resources.

2.6 Determining the Training needed by the labour market

Manpower requirement planning and training needs assessment are important inputs to identify vital training areas and necessary knowledge and skills that enable to bring about economic progress of a nation (MoE, 2003:21).

It is generally accepted that, vocational education and training programs of most developing countries are copies of other countries, especially in Africa, their vocational training programs followed the route of their former colonial countries. Provision of the same trades in most of their TVET institutes is a common phenomenon in these countries. As a result, wastage of skilled manpower and educated unemployment are critical problems.The development of partnerships should help technical and vocational education to adjust to the requirements of the labor market in both the formal and informal sectors. The state can play an

important role here by introducing incentive measures and mechanisms enabling training to adjust to demand and by developing an appropriate legal frame work(Fluitman in 1999,(in Atchoarena, 2002:64).

In strengthening the above Fluitman's idea, (ECBP, 2006:25-29). Stipulates that:

- As a rule, TVE providers will have the freedom to develop cooperative TVET programmes in accordance with specific needs and potentials standards and will enable trainees to achieve the necessary competencies of a qualification.
- Each TVE provider may and should develop its own curricula based on the specific needs of its target groups.

Therefore, before determining the training need of the TVE institution, careful analysis of the labor market trade demand should be made.

2.6.1 Vocational Teachers Training

The quality and competence of vocational trainers or teachers is as important as the quality, quantity and relevance of training materials to ensure the significant quality of TVET program.

Hence, priority should be given to the training of the trainers, through short-term training that can introduce him/her to the new technology that may not be covered during the formal training, throughout their career to enable them to function effectively.

UNESCO and ILO in 2002 (in Adane, 2006:20) suggest on their part that, technical and vocational education trainers should possess the appropriate personal, ethical, professional and instructional qualities, and strong initial preparation that will enable them to operate in and adapt to a dynamically changing scientific, technological, and social environment.

Highly skilled, qualified, motivated, flexible and creative teachers and instructors are the backbone of any TVET system, capable of adjusting to changing technological environments and creating conducive learning environments for different target groups. To this end, the Government of Ethiopia is in the process of fundamentally overhauling the system and provision of TVET teacher /instructor training and further training. The aim of this process is to create a corps of TVET teachers/instructors capable of preparing trainees from different target groups and with different learning requirements to develop relevant occupational competencies. Systematic training, education and further training will be provided for teachers and instructors in the TVET at all levels; at higher education level for technical teachers in the formal TVET programmes as well as at lower levels for instructors in the non-formal TVET schemes (ECBP, 2006:31).

2.7 Vocational Guidance

Vocational guidance is an integral part of the school program from the primary school in particular, as from the 5th year onward (UNESCO, 1963:15). During school activities, students are given initial training in work, learn to know the various trades and vocations and, when the times comes from taking a decision regarding the future, make a choice with full knowledge of relevant factors.

Increased attention must be given to vocational guidance to enable trainees, in particular youth, to choose the right career and make full use initial and life-long learning opportunities provided by the TVET system. While emphasizing the needs of individual, guidance should be accompanied by information that gives them a realistic view of opportunities available including trends in the labor market and various occupations,(Adane,2006:21).

In strengthening the above idea (ECBP, 2006:26) stipulates that, vocational guidance has to start at the school level. However, TVE institutions will also assign and train vocational guidance staff. They will coordinate with schools for early orientation of school leavers and with NGOs, community organizations and other relevant organization guidance staff at TVE institutions will be instrumental in facilitating apprenticeships and preparing youth for apprenticeship training. They will also be focal points in organizing self-employment support for the graduates.

Therefore, particular attention must be given to vocational guidance, of industrial needs, while preparing students and adults, which could include periods of unemployment and employment in the formal sector.

2.8 Technical and Vocational Education in some selected countries

2.8.1 Vocational Education in France

Throughout the Ancient Regime up to the French Revolution, apprenticeship was the only vocational training path for qualified workers. The abolition of the guilds in the wake of the French Revolution led to a decline in the apprenticeship system. Employers considered apprenticeship unnecessary and too expensive for the purposes of labor in the manufacturing industries, (Richard, 1989:7).

The industrial age characterized by mechanization and a marked division of labor, initially generated a demand for engineers and workers capable of supervising others. Apart from a few large enterprises in which factory schools were established, it was not industry but the state which met this new need for vocational training by introducing a higher level of school-based vocational training, quite distinct from the apprenticeship

system. The basis for a vocational training school system was thus established.

According to Richard, 1989; 12 the apprenticeship training system was reformed by the law of 16 July 1971. This law introduced, a compulsory sandwich, course at apprenticeship training centers, continued inspection of training in these centers and enterprises and the imposition of an apprenticeship tax equivalent to 0.5% of employer's total wage bill. Vocational Education in France is characterized by in firm /in school sandwich courses. During their two-year course pupils complete between 12 and 24 of the total number of 69 weeks of learning time. The training companies must commit themselves to the learning target of the in-firm phases, which are laid down in the curriculum.

The in-firm training phases are assigned the following functions:-

- Completion of the theoretical and technological skills acquired at school, in particular concerning the operation of technical equipment, which is not at the school's disposal.
- Familiarization with and understanding of corporate organization and the most important manufacturing process of the chemical industry.

More over besides the above major functions the document(Richard, 1989;13) further depicts that the following learning targets are set for the in-firm training phases:

the following learning targets are set for the in-firm training phases:

Year 1

- Knowledge of the corporate organizational chart and departments.
- Use of documents on products and equipment.

- Development of an awareness of quality requirements and costs,
- Acquisition of the behavioral patterns necessary for industrial safety and health,
- Participation in the establishment and implementation of manufacturing and control processes.

Year 2

- Participation in the operation in installations and control of the flow of production,
- Participation in the diagnosis of functional problems in the field of production and maintenance operations,
- Evaluation and revision of production documents,
- Participation in departmental meetings and other working groups.

2.8.2 Technical and vocational Education in Kenya

In the early seventies, technical and vocational was offered in separate secondary technical school. Vocational training was mainly offered in vocational training centers and village polytechnics for primary school leavers, while Harambee institutes of science and technology and the national polytechnics absorbed the secondary school leavers.

The ILO report of 1972 identified the plight of rising unemployment among youth and the emergence of the informal (Jaukoli) sector in Kenya. In response to this revelation a National Review of Education was conducted in 1975 and its findings published in 1976 (Kenya 1976). The above report recommended the strengthening of TVET and the vocationalization of the school curriculum. In 1981 a further review (Mackay Report, 1981) recommended the overall of the education system and the vocationalization of the curriculum.

In 1985, the changes were effected. The old 7-4-2-3 (primary, secondary, a level and university respectively) system of education was replaced by

the 8-4-4 (primary, secondary and university system. All technical secondary schools became technical training institutes offering a variety of artisan and craft programmes (Atchoarena 2002:236).

In 1998, the administration of TVET was further changed, when some of the TVET institutions were taken back to the Ministry of Education, science and Technology, while others went to a new Ministry of Labor and Human Resource Development.

TVET at primary and secondary school level lies with the Ministry of Education, science and technology. National polytechnics and technical institutes are also administered from the Ministry of Education, Science and Technology. However institutes of technology youth polytechnics and National industrial training centers fall under the Ministry of Labor and Human Resource Development.

Currently, because of the inevitable confusion that arises with so many stakeholders to TVET without some co-ordination, there is a move to introduce legislation to empower the commission for Higher Education to take on responsibility for co-ordination and accreditation of the post secondary institutions (Atchoarena, 2002:236).

More recently, universities have also started providing a variety of certificates and diploma programmes in TVET besides the degree programmes that are normally offered. They are responsible for developing their own curricula and setting the relevant examination.

Provision

Prior to TVET, students are exposed to industrial subjects from the primary level, where children are offered art, art and crafts, home science, agriculture, business education and music classes. At this level

the intent is to create some occupational awareness in order to create a positive attitude towards work. It is not to train specialists.

At the secondary school level the following subjects are offered; home science, art and design, agriculture, wood work, metal work, building construction, power mechanics, electricity, drawing and design, accounting, commerce, economics, typing with office practice, and aviation technology. At this level, the subjects are given an opportunity to explore in the third year of study and if possible take some early specialization in an area of their linking in the fourth year before learning secondary school. After students graduated from secondary schools, to continue their education both in the polytechnic institutes or universities, the courses they took at the secondary level will be considered as an added courses to continue with the relevant programmes to their training either in the institutes or universities, (Atchoarena, 2002:237).

2.8.3 Technical and Vocational Education in Ghana

TVET is not a recent concern in Ghana. The need to establish educational facilities for training artisans and technicians was already recognized during the pre independence period, in the early 1950s. The document entitled 'Fundamental principles of education policy" recommended the provision trade schools with "Technical and literary education that will fit young men to become skilled craftsmen and useful citizens", (Atchoarena, 2002:229).

The out come of this new philosophy of education, however meager, was evident from the number of technical and related institutions that had been established by 1951. By this date, there were 23 technical and related institutions with a total enrolment of 3,330 students, or about

1% of the total population of students in the country's second-cycle institutions. The integration of pre vocational education with the general academic curriculum was part of the 1987 reform. This was advocated on the assumption that the products of basic education would use their pre vocational knowledge to generate self-employment.

In 1990, the government established the National Council for Technical and Vocational Education and Training (NACVET), which is jointly under the Ministry of Education and Ministry of Employment and social welfare. This decision reflected an attempt to co-ordinate the activities of the various providers, including those directed towards the informal sector. The programmes in the informal sector are coordinated by NACVET (Atchoarena, 2002:220).

Currently there are 156 government vocational training institutions run by nine different agencies throughout the country. There are also a fluctuating number of private institutions, currently estimated at a minimum of 250. The majority of people who are presently being trained in vocational skills are enrolled in the 20 Technical institutes under the Ministry of Education, with a significant but smaller number in the 19 National Vocational institutes (NVTIs) in the Ministry of Employment and social Welfare. The Ministry of Agriculture funds and certifies agricultural training programmes offered by the institutions under its management.

Provision

Pre-vocational education is integrated with the general academic curriculum at the basic level. At the secondary level, specialization is available in a number of TVET subjects. Technical institutes, farm institutions and vocational training institutes provide alternatives to the

CHAPTER THREE

PRESENTATION AND ANALYSIS OF THE DATA

This chapter deals with presentation and analysis of data obtained through the questionnaires from the sample university's department heads, instructors, assistant instructors, graduates of the university working in Addis Ababa City Administration in different organizations and from the unemployed graduates found in the city. Relevant documents were also analyzed to secure information not gathered by the questionnaires.

The study involved a total of 202 samples. Out of which 142 were employed graduates of the university from the Industrial Department working in Addis Ababa city, 20 unemployed graduates from the same Department found in Addis Ababa, three Department Heads, 27 Instructors and 10 Assistant Instructors of the university in the Industrial Department. Out of 142 questionnaire copies distributed among the employed graduates, 130 (91.54%), all copies among unemployed graduates, 2 copies among Department heads, 20copies among Instructors and 7copies among Assistant instructors were filled and returned. Hence, out of 202 questionnaire copies distributed, 179 (88.61%) were returned. Accordingly, basic questions raised in chapter one were treated under each table.

Table 2: Description of Respondents by Sex and Age

No	Items	Instructors		Assistant Instructors		Graduates	
1	**Sex**	**Freq**	%	**Freq**	%	**Freq**	%
	Female	0	0	0	0	27	18.00
	Male	20	100	7	100	123	82.00
	Total	20	100	7	100	150	100
2	**Age**						
	20-25 years	10	50	2	28.50	60	40
	26-30 years	5	25	5	71.50	48	32.00
	31-35 years	3	15	0	0	20	13.33
	36-40 years	0	0	0	0	10	6.67
	41-45 years	0	0	0	100	5	3.33
	above 46 years	2	10	0	0	7	4.66
	Total	20	100	7	100	150	100

As indicated in the above table 2, item 1, all the Department heads, Instructors and Assistant Instructors were males. This in turn indicated that still the number of female teachers (instructors) at university level is insignificant or minimal. Possible explanation of this can be low number of females' entry to vocational universities due to the occupational stereotypes, which consider such fields are male oriented. Out of 29 respondents 2 (6.89%) were Department heads, 20 (68.96%) were Instructors and 7(24.13%) were Assistant Instructors.

Out of 150 graduate respondents, the majority or 123 (82.00%) were males, while the number of female was only 27 (18.00%). The same reason holds true for low number of female graduates like female teachers or instructors at the university level.

Regarding the age groups, 1 department head, 10 (50%) instructors 2 Assistant Instructors and 60 (40%) graduate respondents were in the age range of 20-25 years. 5(25%) Instructors, 5 (71.5%) assistant Instructors and 48 (32.00%) graduates were in the age category of 26-30 years, but no Department head in this age range. Only 3 (15%) Instructors and 20 (13.33%) graduates were in the age range of 31-35 years. No Department heads and Assistant instructors in this age range. Except 10 (6.67%) graduates no respondent was found in the age category of 36-40 years. Similarly, there were only 5 (3.33%) graduates in the age range of 41-45 years. Respondents in the age range of 46 years and above were 1 Department head, 2 instructors, and 7(4.66%) graduates.

As can be seen from the above table, 1 Department head, 15 (75%) Instructors, 7 (100%) Assistant Instructors, and 108(72.00%) graduates were in the age range of 20-30 years, where this age range is youngsters age range in Ethiopian context. Therefore, as they form the majority of the respondents, they can contribute much to the economic development of the country through their present job (occupation) in the future.

Table 3: Description of Respondents by Fields of Study and Qualification

No	Items	Instructors		Assistant Instructors		Graduates	
1	Field of study	**Freq**	%	**Freq**	%	**Freq**	%
	Automotive	7	35	3	42.8	54	36.00
	Electricity electronics	6	30	3	42.8	46	30.67
	Manufacturing	7	35	1	14.28	50	33.33
	Total	20	100	7	100	150	100
2	Qualification						
	Diploma	0	0	5	71.42	14	9.33
	Bsc/BEd	17	85	2	28.57	136	90.67
	Msc/MA	3	15	0	0	0	0
	Ph.D	0	0	0	0	0	0
	Total	20	100	7	100	150	100

As revealed in the above table 3, 1 Department head, 7(35%) Instructors, 3(42.8%) Assistant Instructors and 54 (36.00%) graduates were from the Automotive Technology field of study (department), where this figure makes (36.31%) of the total 179 respondents. Like wise 31.28% of the total respondents were from Electricity-Electronics, where 1 Department head, 6(30%) Instructors, three Assistant Instructors and 46(30.67%) were graduate respondents. seven(35%) Instructors, 1 Assistant Instructor and 50 (33.33%) graduate respondents were from

the Manufacturing Department (field of study). This figure also made 32.40% of the total respondents.

Concerning the qualification of respondents, 5(71.4%) Assistant Instructors, and 12 (9.23%) graduate respondents had diploma. No Department head and Instructors at the university had a diploma. The majority of the respondents had first degree. Where 1 Department head, 17(85%) instructors, 2(8.60%) assistant instructors, and 136 (90.67%) of the graduates had Bsc/B.Ed. This made (87.15%) of the total respondents. There was only 1 Department head and 3(15%) Instructors having second degree at the university in the fields of study under consideration. While according to the new educational policy, the minimum qualification requirement to teach at university level is second degree; the majority of Adama University's Instructors i.e. 17 (85%) were teaching with first-degree qualification, this could adversely affect the quality of training provided. Because teaching capacity of teacher is one of determinant factors for the quality of training.

As indicated in the literature, the quality and competence of vocational trainers or teachers is as important as the quality, quantity and relevance of training materials to ensure the significant quality of the program.

Of the second-degree holders, 1 Department head and 1 Instructor from Automotive technology department and 1 Instructor from the Manufacturing department. No Ph.D holder was found in the department of the university.

Table 4: Graduate Respondents Distribution by the Year of Graduation

Year	Graduate respondents	
	Freq.	%
2000	12	8.00
2001	13	8.67
2002	17	11.33
2003	27	18.00
2004	22	14.67
2005	25	16.67
2006	34	22.66
Total	150	100

Source: AU Registrar

As described in table 4 above, 12 (8.00%), 13(8.67%), 17 (11.33%) of the graduate respondents were from the year 2000, 2001 and 2002 respectively. The largest proportion of the graduate respondents i.e 34(22.66%) were from the year 2006. 22 (14.66%) of the graduate respondents were from the years 2004 and 25(16.67%) were from 2005. While 27 (18.00%) of the graduate respondents were from the year 2003.

Table 5: Employed graduates Description by Their Jobs and Organizations They Work In

No	Items	Freq.	%
1	Organizations		
	Government TVET	86	66.15
	Private TVET	24	18.47
	NGO TVET	10	7.70
	Other companies	8	6.15
	Self-employment	2	1.53
	Total	130	100
2	Present jobs		
	Teacher/Trainer	120	92.30
	Maintenance Engineer	3	2.31
	Engine surveyor	3	2.31
	Sales representative	2	1.54
	Self employed	2	1.54
	Total	130	100

From the above table, 120 (92.30%) graduates were teachers/trainers in different TVETs. 86(66.15%) graduates work in Government TVETs, 24 (18.47%) in private TVETs and 10(77%) in NGO TVETs. Eight (6.15%) graduate respondents were working in other companies like Insurances, while only 2(1.54%) graduates were self-employed. Most of the graduates being teachers/trainers in different TVETs corresponded or matched with the university's primary objective, "to train teachers/trainers for the National TVET programmes.

Table 6: Relevance of their Field Of Study to their High School Education by (the Graduate Respondents)

No	Degree of relevance	Freq	%	X^2 Cal	X^2 Cri
1	Relevant	71	47.33	13.32	9.21
2	To some extent	38	25.33		
3	Completely irrelevant	41	27.34		
	Total	150	100		

As described in the above table, 71(47.33%) graduate respondents were trained with training relevant to their High School education at the university. In another words, they could have been from the Vocational Schools. While 38(25.33%) graduates were trained with a training which is relevant to their High school education to some extent. The specialization of 41(27.34%) graduate respondents was completely irrelevant to their secondary education. Therefore, this irrelevance (mismatch) could have affected their training achievement and further their employment opportunities (employability).

Since the Chi-square calculated of 13.32 is greater than the critical 9.21 at alpha significant level 0.01 and degree of freedom 3; there is a significant difference of proportion between respondents from each stream of high school education.

Table 7: A relation between Automotive syllabuses of AU and the National TVETs

No	University's		National TVETs' syllabus
	Four years syllabus	Three years syllabus	
1.	Engine fundamentals	Engine fundamentals	Engine Fundamentals
2	Engine Rebuilding	Engine reconditioning and rebuilding	Engine dissembling and rebuilding
3	Automotive electrical system I,II	Automotive electricity I,II	Automotive electrical system
4	Transmission and Drive train	Automotive transmissions and drive train	Automotive power train
5	Automotive fuel, lubrication and cooling system	Carbureted fuel, lubrication and cooling system	-Fuel system - Lubrication system - Cooling system
6	Chassis ride control and front suspension	Chassis, ride control and suspension	Suspension ride and control system
7	Engine performance testing	Automotive air conditioning	Automotive air conditioning
8	Engine diagnosis and turn-up	Engine diagnosis, tune up and performance test	Engine diagnosis and tune-up
9	Auto body repair and painting	Auto body repair and painting	Automotive body repair and painting
10	Diesel mechanics	Diesel mechanics	Diesel injection pump service
11	Automotive brakes	Automotive brakes	Automotive brakes
12	Engine electronic control system	Electronically controlled engine system	Gasoline fuel injection and electronic ignition system
13	Senior project	✓ Hydraulic pneumatics	✓ Tire and wheel
		✓ Preventive vehicle maintenance and vehicle driving	✓ Vehicle driving
		✓ Introduction to engineering mechanics	✓ Automatic Transmission
		✓ Mechanisms of machine	✓ Automotive Air-brake
		✓ Senior project	✓ Steering system

As shows in the above table 7, jobs under the National TVETs' syllabus marked (✓) are jobs by which the National TVETs' syllabus differs from the university's old (4 four years) syllabus. Some of these jobs (course) are Automotive Air-conditioning, Vehicle driving and Automatic Transmission. Other jobs like Tire and wheel, Automotive Air-brake and Steering system were not singled out as a course in the university's syllabus, rather they were included under other courses. For example tire and wheels and steering system were included under the course chassis ride control and front suspension, and Automotive Air-brake under Automotive brakes.

This does not show the degree (extent) to which each jobs were covered in the course, because there is no corresponding duration of time allotted for each jobs. Different jobs like fuel system, lubrication system and Cooling System were also clustered together in the name of a course Automotive fuel, lubrication and cooling system. Similarly, the coverage of each jobs in the course is a problem.

Even though the variation between the TVETs' syllabus and that of the university's new (three years) syllabus was reduced to some jobs by the inclusion of Automotive air-conditioning and vehicle driving to the three years syllabus, still there is a variation between the two syllabuses by the job Automatic Transmission, which is not included in the university's syllabus as a single course and jobs included under other courses mentioned above.

Courses marked (✓) under the university's three years syllabus are courses by which the new (three years) syllabus differs from the old (4 years syllabus). Courses like Automotive Air Conditioning, preventive vehicle maintenance and Vehicle driving, and Hydraulic pneumatics are newly added courses, but Introduction to Engineering Mechanics and Mechanism of Machine were supportive courses in the old (four years) syllabus.

Table 8: Relation between syllabuses of AU and the National TVETs' of Electricity-Electronics

No	University		National TVETs' syllabus
	Four years' syllabus	Three year's syllabus	
1	General workshop practice	Basic electrical engineering measurement	Repairing basic electrical equipment
2	Basic electrical engineering measurement	Electronic device	Repairing and Installing household Appliance
3	Electrical circuit analysis I, II	Electrical circuit analysis I,II	Repairing electrical motors
4	Elector mechanical device	Electo magnetic devices	Motor operated household appliance installation and maintenance
5	Industrial and residential wiring	-Industrial wiring - Residential wiring	-Industrial wiring - Residential wiring
6	Basic electronics I	Electronic circuits	Low voltage AC generator maintenance
7	Electrical machines, transformers and drives I,II	Electrical machines and drives I,II	Electrical machines
8	Power systems	Power systems	Repairing radio and audio tape recorder
9	Digital electronics	Digital electronics	Industrial electronics control system
10	Industrial electronics	Industrial electronics and controllers	Industrial electronics control system
11	Mounting, operation and repair of electrical equipment	Fundamentals of radio and television	Repairing simple digital equipment
12	Protection techniques	Protection techniques	Installing and repairing television receiver
13	Electronic communication I,II	Communication system I,II	✓ Satellite television receiver installation, operation and maintenance
14	Instrumentation	Instrumentation	✓ Video cassette recorder repairing
15	Applied electronics	Computer programming	✓ Building electrician
16	Senior project	✓ Computer architecture and micro process	✓ Refrigeration and Air conditioning
		✓ Refrigeration and air conditioning	✓ Welding machine electrician
		✓ Control systems	✓ Industrial drive electrician
		✓ DREE I,II	✓ Electronic office machines
		✓ Senior project	

As shown in the above table 8 the TVETs' syllabus differs from the old (4 years) university's syllabus by jobs marked (✓) like electronic office machine, motor operated household appliance installation and maintenance. Refrigeration and Air-conditioning, satellite TV receiver, installation, operation and maintenance, and welding machine electrician. The other variation is that many jobs in the TVETs' syllabus were clustered together under one or two courses in the university's syllabus. For example, repairing of:-

- Basic electrical equipment
- Household appliance
- Electrical motors
- Public address system
- Radio and audio tape recorder
- Simple digital equipment and
- Video cassette recorder were represented by a course mounting, operation, and repairing of electrical equipment.

Though the mismatch between the university's new (three years) syllabus and that of the National TVETs' was reduced by the inclusion of the university's syllabus courses like Refrigeration and Air conditioning, and fundamentals of radio and television, there is still differences between the two by jobs like welding machine electrician, electronic office machines, and motor operated household appliance installation and maintenance contained in the National TVETs' syllabus. While the above clustered jobs are as they were.

Courses marked (✓) under the three years syllabus are by which the syllabus differs from the old (4years). Accordingly, the new (three years) syllabus differs from the old (four years) syllabus by about six courses these courses are:-

- Computer programming
- Computer architecture and micro processor
- Refrigeration and air-conditioning
- Control systems and
- DREE I,II

Table 9: A Comparison between Manufacturing Technology's syllabuses of the university and the National TVETs'

No	University's		National TVETs'
	Four years	Three years	
1	General workshop (metal)	General workshop practice I, II (metal)	Bench work
2	Metallurgy	Metallurgy	Basic metallurgy
3	Forging and foundry Technology	- Forging technology - Foundry technology	- Forging technology - Foundry technology
4	Metrology	Metrology	Basic metrology
5	Machine shop technology I,II	Machine shop technology I,II	Basic machine operation
6	Welding technology I,II	Welding technology I,II	- Welding - Advanced welding
7	Introduction to manufacturing	Introduction to manufacturing strength of material	Drilling and boring machine operation
8	Principles of metal cutting	Principles of metal cutting	Lathe machine operation
9	Introduction to CAD/CAM	Introduction to CAD/CAM	Basic Auto CAD
10	Sheet metal technology I,II	Sheet metal technology I,II	Sheet metal work
11	Metal working tools and machine maintenance	Metal working tools and machine maintenance I,II	Maintenance and repairing work of basic machines
12	Fundamentals of design	Fundamentals of design	Shaping and machine operation
13	Tool and Die design	Tool and Die design	Tool and Die making
14	Manufacturing process	Manufacturing process	Advanced Foundry
15	Senior project	Machine drawing	Milling machine operation
		Sheet metal drawing	Grinding machine operation
		✓ Community oriented practical education	Pressing Technology
		Machine elements	Mechanics
		Preliminary project	✓ Machining tolerances fits
		Senior project	✓ Quality control and inspection
			✓ Pneumatic and hydraulic
			✓ Tools and cutter grinder
			✓ Advanced machine operation
			✓ Machine setting

As can be seen in table 9 above, jobs marked (✓) under the National TVETs' syllabus are those found in TVETs' syllabus but not in both syllabuses of the university. These jobs are:- pressing Technology, Machining tolerances fits, Quality control and inspection, Pneumatic and Hydraulic, Tools and cutter grinders and Machine setting. The other variation between the syllabuses of the two Institutions is that, many jobs in the National TVETs' syllabus were clustered together in the name of Machine technology I,II in the university's syllabuses. These clustered jobs are:

- Basic machine operation,
- Drilling and boring machine operation,
- Lathe machine operation,
- Maintenance and repairing work of basic machines,
- Shaping and machine operation,
- Milling machine operation and
- Grinding machine operation

The mismatch between the two syllabuses of the university is due to some courses, which were supportive in the old (four years) syllabus added as major courses to the new (3 years) syllabus. These are courses like machine drawing, sheet metal drawing and machine elements. The only new major course added to the three years syllabus is Community oriented practical education, which is not found in the four years syllabus.

The problem of clustering jobs under one or two courses is that, it does not show the time allotted to each job in the semester. Some jobs can be given better attention and coverage than others. But in TVETs' syllabus each job has its own allotted time and coverage.

In the TVETs' syllabus, there is a project work that has its own duration of time at the end of each job, but in the university's syllabus there is only one project work a course i.e Senior project with four credit hours in the last semester of 4th year. The problem of this project work is that the trainee does not cover all the courses he/she took, because the project only focuses on one of the courses. Further more, to strengthen their practical skills TVETs' trainees will go out of school for the apprenticeship training in different organizations.

Table 10: Employed graduate respondents responses on further training to carryout their present job

No	Items	Freq	%	x^2 Cal	x^2 Cri
1	Have you been trained with appropriate skills to carryout your present job?			16.28	6.64
	Yes	42	32.31		
	No	88	67.69		
	Total	130	100		
2	Do you need further training to fill the skill gap?				
	Yes	88	100		
	No	0	0		
	Total	88	100		

As indicated in Table 10 above item 1, 88 (67.68%) of the graduates confirmed that they did not receive the appropriate skill to carryout their present jobs. To strengthen this statement, as shown in the same table under item 2, 88 graduate respondents asserted that they required further training to fill the skill gaps created between their training at the university and their present jobs.

Out of 88 respondents, responded they were not trained with the appropriate skills to carryout their present jobs, all of them asserted that they required further training to carryout their present jobs properly.

As indicated in the literature, analyzing the labor market for TVE purpose must be a continuous process in order to trace changes in the market and subsequently changes in the skills and qualification requirements at a stage early enough to allow the TVE system to react to it, i.e. to change training plans and curricula, to review occupational standards to develop new standards, and to build appropriate teaching capacities, (ECBP, 2006:37).

It is observed that the Chi- square calculated of 16.28 is greater than the critical 6.64 at alpha significance level 0.01 and the degree of freedom 1. This has shown that there is a significant difference of proportion between the two groups of respondents. Group of respondents responded "yes" and those responded "no" to the question that asks whether they were trained with appropriate skills or not to perform their present jobs.

Table 11. Extent of training utilized by the present jobs of the employed graduate respondents

No	Items	Freq.	%
1	To what extent do you think your current job utilizes the training acquired at the university?		
1.1	To a high degree	68	52.31
1.2	Partially or by half	46	35.38
1.3	To a low degree	13	10
1.4	It does not utilize at all	3	2.31
	Total	130	100
2	Reasons for low degree of utilization		
2.1	Irrelevant employment	8	61.54
2.2	Lack of teaching materials	5	38.46
	Total	13	100
3	Reasons for not utilized at all		
3.1	Irrelevant employment	3	100
	Total	3	100

As depicted in the above table, 68 (52.31%) graduate respondents responded that their present job utilized their training they received during their stay at the university to a high degree. While 46 (35.38%) of the respondents' training was utilized by their present job only to 50% or by half. 13 (10%) and 3(2.31%) of the graduate respondents were hired on a job that utilized their training to a low degree and on the job that did not utilize their training at all respectively. This again means these graduates were working on a job for which they were highly over qualified. As indicated in the literature irrelevant employment is where people are doing jobs for which they are over qualified or under qualified.

This situation has a negative effect on labor economically, socially and morally (Kluzynski 1985:13)

Irrelevant employment was a reason for low degree of training utilization as indicated by 8(61.54%) of the respondents. While 5(38.47%) of the respondents responded that reason for low degree of utilization was lack of teaching materials. In the same manner irrelevant employment was reason for not utilization at all of graduates training.

Table 12: Graduate respondent's satisfaction with their present job

No	Items	Freq	%
1	Are you satisfied with your present job?		
1.1	Yes	55	42.31
1.2	No	75	57.69
	Total	130	100
2	Reasons for dissatisfaction		
2.1	Unable to utilize the training	16	21.33
2.2	Poor working conditions	25	33.33
2.3	Poor prospect for promotion	30	40.00
2.4	Other	4	5.33
	Total	75	100

As shown in the above table, 75(57.69%) of the graduate respondents were not satisfied with their present job. While, 55 (42.31%) of the graduate respondents were satisfied with their present job. According to 30 (40%) of the unsatisfied graduates the main reason for their dissatisfaction is poor prospect for promotion, 25 (33.3%) of them were unsatisfied with their job due to poor working conditions. 16 (21.33%) responded that their dissatisfaction accounted to inability of their job to utilize their training. While 4(5.33%) of the graduate respondents responded that, causes of their dissatisfaction are other than the above mentioned ones. Such as low salary and low social prestige given to the teaching profession.

Table 13: Future employment opportunities of the gradates by (Department heads, Instructors and Assistant Instructors)

No	How do you evaluate the future employment opportunities of the graduates?	Freq	%
1	Are encouraging	5	17.24
2	Are discouraging	24	82.76
	Total	29	100

As can be seen from the above table, only 5(17.2%) respondents responded that the future employment opportunities of the university's graduates is encouraging. While 24 (82.76%) of Instructors, Department heads and Assistant Instructors in the Industrial Department of the university suggested that the future employment opportunities are discouraging because wastage of human resource is being observed. This indicated that the university should take some measures to reduce the problem, though not possible to eliminate.

Table 14: Current employment statuses of the graduates by (Unemployed graduates)

No	Items	Freq	%
1	**What is your current status of employment?**		
1.1	Unemployed	20	100
1.2	Self-employed	0	0
1.3	Total	20	100
2	If unemployed, how long have you stayed unemployed?		
2.1	Six months	0	0
2.2	One year	13	65
2.3	One year and six months	1	5
2.4	Two years	4	20
2.5	More than two years	2	10
2.6	Other	0	0
2.7	Total	20	100

As shown in the above table, all the graduate respondents are unemployed. Hence, 13 (65%) respondents have stayed unemployed for a time of one year. While, 4 (20%) and 2(10%) graduates have stayed being unemployed for two years and more than two years respectively. One graduate respondent asserted that as he/she has stayed being unemployed for one year and six months, but no respondent responded that as she/he have stayed being unemployed for six months.

Table 15 Current daily activities of the graduates by (Unemployed graduates)

No	Items	Freq	%
1	What is your current daily activity?		
1.1	Working as a daily laborer	1	5
1.2	Helping parents at home	2	10
1.3	Searching for a job	17	85
1.4	Working for an organization	0	0
1.5	Running own business	0	0
1.6	Other	0	0
1.7	Total	20	100

As indicated in the above table, the daily activity of 17 (85%) graduate respondents' currently is searching for job. But, 2 (10%) of the respondents asserted that as they are currently engaged in helping parents at home. Only one respondent is working as a daily laborer irrelevant to his/her specialization. The daily activities of most graduate respondents is searching for a job, this indicated that as the labor market is not absorbing the graduates efficiently.

Table 16: To minimize graduate unemployment, measures to be taken by the university (by department heads, instructors and assistant instructors)

No	Measures	Freq	%
1	Determine the number of students at entry point	1	3.44
2	Have information on local market condition	6	20.68
3	Conduct tracer study	4	13.79
4	All	15	51.72
5	Other	1	3.44
	No response	2	6.89
	Total	29	100

As indicated in the above table, only 1 respondent suggested that the university should determine the number of students at the entry point to minimize graduates unemployment. Concerning information on the local market, 6 (20.68) of the university's Department heads, Instructors and Assistant Instructors suggested that the university has to have information on the local market; the other 4(13.79%) of them recommended that the university should conduct a tracer study first. About 15 (51.72%) of Instructors, Assistant Instructors and Department heads of the Industrial Department responded that the university should carryout all the above-mentioned measures to minimize graduate unemployment.Two respondents did not respond to the above question.

As indicated in the literature, many difficult problems with respect to the preparation for work arise at the time when training does become appropriate. And to deal with these problems, one of the general principles is that the need to consider just which types of skills are relevant in a given country and which skills would be better to get hired as needed on international markets than produced at home. This is because; all countries turn to the international labor market for some rare skills.

Table 17: Reasons for graduates' unemployment by (Department heads instructors assistant instructors)

No	Reasons	Freq	%
1	Lack of skill on the part of graduates	0	0
2	Lack of interest for self-employment	8	27.58
3	Employers' lack of confidence	8	27.58
4	Weak economic performance	12	41.38
5	Other	1	3.45
	Total	29	100

As indicated in the above table 17, zero percent of the respondent responded that lack of skill on the part of the graduate. This depicts that; graduates acquire sufficient skill during their training in the university. As 8(27.58%) responded that lack of interest of graduates to be self-employed and employers' lack of confidence are reasons for graduates' unemployment. The largest portion of the respondents 12(41.38%) suggested that weak economic performance of the country is the major reason for unemployment due to absence of job opportunities to absorb the graduates. Other than the above-mentioned reasons, 1respondent(3. responded that there are other major reasons for graduates' unemployment though he/she did not mention the reason.

As 8(87.58%) suggested that there is lack of interest from the part of the graduates to be self-employed. This is to mean the graduates are looking to be waged employed rather than self-employed on their own courage. This still required attitudinal change of the graduates toward self-employment.

Weak economic performance in another words mean that there is in balance (mismatch) between the economic development and the educational system expansion.

Table 18: Employment rate of graduates by year of graduation (by graduate respondents)

No	Rates of employmer %	Years of graduation													
		2000		2001		2002		2003		2004		2005		2006	
		Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
1	0-20	0	0	0	0	1	5.88	0	0	0	0	4	16.00	15	44.11
2	21-40	1	8.33	0	0	3	17.64	6	22.22	5	22.73	9	36.00	13	38.23
3	41-60	2	16.67	2	15.38	2	11.76	5	18.51	10	45.45	7	28.00	4	11.76
4	61-80	2	16.67	3	23.07	4	23.52	8	29.62	3	13.63	3	12.00	2	5.88
5	81-100	7	58.33	8	61.53	7	41.17	8	29.62	4	18.18	2	8.00	0	0
6	Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	Total	12	100	13	100	17	100	27	100	22	100	25	100	34	100

As indicated in table 18 above, 7(58.33%) graduate respondents of the year 2000 asserted that the employment rate of the corresponding year as 81-100%, while an employment rates 41-60% and 61-80%, were responded by 23 (16.67%) graduate respondents of the year 2000 each. Only 1 respondent responded as 21-40%.

8(61.53%) graduate respondents of the year 2001 rated the employment rate of the year as 81-100%, but 2(15.38%) and 3(23.07%) rated the employment of the year as 41-60% and 61-80% respectively.

The majority of the graduate respondents of the year 2002 rated the employment opportunities created to them by the year as 81-100%. Rates 21-40% and 61-80% were rated by 3(18.75%) and 4(23.52%) of the graduate respondents of the same year respectively. Rates 61-80% and 81-100% were rated by 8(29..62%) graduates of the year 2003. The rest 5(18.51%) of them rated it as 41-60%. Accordingly, 10(45.45%) graduate respondents of the year 2004, 7 (28.00%) of 2005, and 11.76%) graduate respondents of the year 2006 rated it as 41-60%. The employment rate of 61-80% is indicated by 8(29.62%) graduate respondents of 2003, 3(13.63%) of 2005, and 2(5.88%) of 2006. This rate was rated least by the corresponding respondents of the above three years.

As indicated in the above table, the employment rate of the university graduates was going decreasing, from 81-100% in 2000 and 2001, reached below 50% by the year 2006 as asserted by most graduate respondents of the year. This is an indicator of the external inefficiency of the university.

As indicated in the litrature, labor market information comprises information on the supply side of the labor market i.e demographic

developments, number of school leavers at different levels, number of employed by region and qualification etc, and information from which the present and future demand for skills and qualifications in the labor market can be derived i.e skill gap, employment trends by sectors and occupations, emerging markets, new investments, economic opportunities in the area.

The principal problem of external efficiency TVET programmes is essentially the mismatch between the job expectations generated by the education system and the job opportunities provided (ECBP 2006:36).

Table 19: Rate of employment opportunities of 2006 graduates by (department heads instructors and assistant instructors of the university)

No	Rates of Employment	Freq	%
1	0-20%	15	51.72
2	21-40%	9	31.03
3	41-60%	4	13.79
4	61-80%	1	3.44
5	81-100%	0	0.00
6	Other	0	0.00
7	Total	29	100

As shown in the above table 19, the largest number of respondents, 15 (51.72%) rated the employment rate of 2006 graduates, as 0-20%. While 9(31.03%) of them rated 21-40% and 4 (13.79%) rated it as 41-60%, finally only 1 rated it as 61-80%. No one of the respondents responded the employment rate of 2006 as 81-100%.

Since 24 (82.7%) of the respondents rated the employment opportunities of the graduates of the year 2006 was below 50% or half, this is to mean there is high rate of unemployment among the graduates of the year. This also coincides with the responses of the graduate respondents of the above-mentioned year in table 18.

Table 20: Reasons for the absence of self-employment (by the university's department heads, instructors and assistant instructors)

No	Reasons	Freq	%
1	Lack of skills and knowledge	0	0
2	Lack of finance to start the business	19	65.52
3	Lack of readiness from the part of graduates to be self-employed	10	34.48
4	Other	0	0
	Total	29	100

As shown in the above table, 19 (65.52%) university's Department heads, Instructors and Assistant Instructors responded that the main reason for absence of self-employment was lack of finance to start business. And 10 (34.48%) of the respondents asserted lack of readiness from the part of the graduates to be self-employed as the main reason. But no respondent responded that lack of skills and knowledge as a reason for minimum number of self-employed graduates. This means that graduates have got the required skill and knowledge to be self- employed.

As indicated in the literature, in order to become successful entrepreneurs people need self-confidence, creativity, a realistic assessment of the market. Basic business furthermore requires access to finance, access to land or structures to operate from. Therefore, there has to be a mechanism by which the graduates can get financial support

to start their business to reduce the rate of unemployment as a self-employment takes the largest portion of employment in the informal sector of the economy.

Table 21: Constraints to start a business as self-employed by (unemployed graduates)

No	Items	Freq	%
1	To start your business as self-employed, what was the main constraint?		
1.1	Absence of financial institutions to lend money	9	45
1.2	Financial institutions did not want to lend money	7	35
1.3	Lack of interest from your side to be self-employed	0	0
1.4	Lack of land or space to begin your business	4	20
1.5	Total	20	100

As shown in the above table, most (45%) graduate respondents faced, absence of financial institutions to lend money as constraint to start their business as self-employed. As indicated by 7(35%) graduate respondents the main constraint they encountered to start their own business was Financial Institutions refused to lend them money. The rest 20% graduate respondents faced a problem of land or space to start their business as a self-employed. No one responded that lack of interest as constraint. This indicated that, as there are no such convenient conditions to begin own business as self-employed.

Table 22: Relevance of the training to the existing labor market by (unemployed graduates)

No	Items	Freq	%
1	Highly relevant	0	0
2	Relevant	3	15
3	To some extent relevant	13	65
4	Irrelevant	4	20
5	Total	20	100

As shown in the above table, most (65%) graduate respondents responded that the training they were trained with at the university is only relevant to the existing labour market to some extent. While 4(20%) respondents responded that, as the training they received is irrelevant to the labour market, and 3(15%) indicated that the training is relevant to the labour market. No unemployed graduate respondent responded that the training is highly relevant to the labour market.

Table 23: Factors determining employability of the graduates

No	Factors	Ranked by graduates	Ranked by heads, instructors and Assistant instructors	D^i	Di^2
1	Relation between the university and employing agencies	1	1	0	0
2	Teaching capacity of teachers	3	5	-2	4
3	Content of the curriculum	2	2	0	0
4	Quality of workshop facilities	5	4	1	1
5	Graduates high school education relevance to their training	6	6	0	0
6	Attitude of the graduates toward the practical work	4	3	1	1
				$\Sigma D^i=0$	$\Sigma D^{i2}6$

Since the calculated spearman rank order of 0.828is less than the spearman rank order of 0.886 critical at n=6 and alpha significant level

of 0.05, there is no significant difference of ranking of the determining factors for the employability of the graduates between the two groups of respondents. Accordingly, both sample respondents ranked the relation between the university and employing agencies first, this is to mean the university should have to create stronger relation with employing agencies and conduct a tracer study of where about of its graduates. Both groups ranked content of the curriculum 2nd, this means the training provided at the university has a significant role in determining employability of the graduates, because content of the curriculum indicates the relevance of the training to the labor market. Similarly, the graduates' high school education relevance to their training ranked 6th or least by both groups.

This in turn means, it is not their background rather their achievement in the training during their four or three years stay in the university is the determinate factor. The rest three factors were ranked differently even though there is no significant difference in ranking between the two groups. For example teaching capacity of teachers was ranked 3rd by the graduates but ranked 5th by the university's department heads, instructors and assistant instructors. Similarly attitudes of the graduates ranked 4th by the former and 3rd by the latter groups, quality of workshop facilities ranked 5th by the graduates and 4th by the university's department heads, instructors and assistant instructors.

Table 24: Factors encountered in looking for job (by graduate respondents)

No	Factors	Ranked by employed graduates	Ranked by unemployed graduates	Di	Di2
1	Absence of job opportunities	1	1	0	0
2	Lack of occupational information	3	3	0	0
3	Inadequate experience	2	2	0	0
4	Racial prejudice	4	4	0	0
	Total			ΣDi=0	ΣDi2=0

As shown in the above table 23, there is no difference between the rankings of the factors of the two groups of employed and unemployed graduate respondents. The calculated spearman rank order of 1 at n=4 showed that there is strong positive relationship between the rankings of the two groups. Accordingly, of the factors encountered by the graduates during search for a job after graduation, absence of job opportunities was ranked first among the factors. This indicated that the number of graduates and job opportunities created to absorb the graduate by the economy was not balanced or there was a mismatch between the two. The factor ranked second was inadequate experience. This also means, most employing agencies required of the graduates some years of experience to hire them. Lack of occupational information was ranked third by the graduate respondents. Racial prejudice ranked 4th or the factor encountered by the graduate respondents least.

The two factors ranked 1st and 2nd showed that there were few job opportunities that require some years of experience. Therefore, it was very difficult for a new graduate to get job in this context. Accordingly, as indicated in the literature, educational system expansion that does not consider the economic development of a country will result in high rate unemployment of school leavers.

CHAPTER FOUR

SUMMARY, CONCLUSION AND RECOMMENDATIONS

4.1. Summary

The purpose of this study was to investigate the employability of Adama University graduates of the Industrial Department in the years 2000-2006. Accordingly, questions addressing the factors determining employment opportunities such as the linkage between the university and employing agencies, relevance of the training to employment and labour market responsiveness to the university's graduates were raised on the base of the following basic questions:-

- How is the university's syllabus related to the national TVETs'?
- How relevant is the training to employment?
- Is the labor market absorbing the graduates efficiently?
- What are the factors affecting employability of graduates?

The study employed a descriptive survey method conducted on three groups of respondents. The first group containing university personnel, such as, Department heads, instructors and Assistant Instructors in the Department of the university under consideration. The second group of respondents consists of employed graduates of the university working in Addis Ababa City Administration in different organizations. And the third group consists of unemployed graduates found in Addis Ababa. Accordingly, the study involved 2 Department heads, 20 Instructors, 7 Assistant instructors, 130 employed graduates and 20 unemployed graduates. Purposive sampling technique was employed to select respondents among the university's staff and employed graduates, but

snowball sampling technique was used to select the unemployed graduates.

Information was obtained from the respondents through three sets of questionnaire one for each group, and through document analysis. The data obtained were analyzed using percentages, mean, Spearman rank order and Chi-square. From the data analyzed the following major findings were obtained.

1. The largest portions of the respondents are young. They are found in the age range of 20-30 years. This means they can actively contribute to the economy of the country.
2. Most of the respondents are first-degree holders, i.e 85% of the university instructors, 136 (90.67%) of the graduates and 2(8.57%) assistant instructors.
3. Of 130 Employedgraduate respondents, most (92.30%) of them work in TVETs as trainers or teachers. This corresponds /asserts/ with the primary objective of the university which is to train capable teachers for the national TVET programs.
4. 41(27.34%) and 38(25.33%) of the graduate respondents attained training completely irrelevant and relevant to some extent to their high school education at the university respectively. This mismatch could have affected their training achievement and employability.
5. Both the four years (old) and the three years (new) syllabuses of the university did not include the whole jobs and duties in the national TVETs syllabus. In other words, there are some courses /jobs/ in the National TVETs syllabus but not in the university's syllabuses indicating that there are mismatches between the two.
6. The study also revealed that, out of the Employed graduate respondents, most of them require further training to fill the skill gap between the training they received at the university and their present job.

7. Most of the unemployed graduates have been searching for a job for a time of one year.
8. Most (56.67%) of the Employed graduate respondents are not satisfied with their present jobs. Some of the reasons for their dissatisfaction are, poor working conditions and poor prospect for promotion.
9. As asserted by most (65%) unemployed graduates, the training they received at the university is relevant to the existing labour market only to some extent.
10. Of reasons for graduates' unemployment, 12(41.38%) of the respondents replied the absence of job opportunities due to weak economic performance of the country.
11. To minimize the graduate unemployment, most of the respondents asserted that the university should have to have enough information on the local market condition at first and conduct tracer study at second place.
12. Concerning factors determining employability of the graduates, both groups of respondents suggested that strengthening the relation between the university and the employing agencies is the primary determinant factor.
13. Most graduates encountered absence of job opportunities in the economy during their search for job after graduation. Racial prejudice was the least encountered factor.
14. Self-employment was minimum among the graduates; this was because of the graduates' lack of finance and interest to start their businesses. And absence of Financial Institutions to lend money.
15. The employment rate of the university's graduates had shown a decreasing trend from year to year and finally failed below 50% by 2006 as asserted by most graduates of the year and university's Department heads, Instructors and Assistant Instructors.

4.2. Conclusion

Results of the analysis of data indicated that both syllabuses of the university did not include all the jobs in the TVET's syllabus. This had created a skill gap on the graduates of the university especially on those teachers/trainers in TVET centers. In concern to the relevance of the training at the university to employment, 67.69% of the Employed graduate respondents asserted that they were not trained with appropriate skills to carryout their present job. This assertion is more strengthened by 84.62% of the Employed graduate respondents who said they require further on-job training to properly carryout their current job. Most of the unemployed graduates have been searching for job for one year and above.

Similarly, it is concluded that employment opportunities of the graduates is decreasing from year to year ranging from its peak (100%) in 2000 to the lowest (below50%) in 2006. This shows that the labour market was and still is not absorbing the graduates of the university efficiently. Attesting this, both groups of the respondents gave their justification saying the loose relation between the university and employing agencies accounts for the major determining factor for the graduates deteriorating employability.

4.3. Recommendations

From the above findings and summary, the following recommendations have been forwarded:-

1. According to the primary objective of the university, which is to train skillful and knowledgeable TVET trainer, the university's syllabus should include all courses (jobs) in the National TVETs' program, to sustain the relevance of the university's curriculum.

Hence, the university's curriculum designers are expected to consider (re- consider) the TVETs' syllabuses.

2. Employing agencies of the graduates particularly the government, private TVET and NGO TVET owners are expected to provide to the trainers /teachers/ at their TVETs either on- the- job or off- the-job short term training to fill the skill gap created to the graduates due to the mismatch existed between the university's syllabus and that of the National TVET programmes. This problem is serious among the graduate trainers at 10+3 program in TVETs. But this does not mean it did not exist in other programmes.
3. The employment opportunities of the graduates of the university has been decreasing from year to year, whose main cause was absence of job opportunities created by the economy to absorb the graduates. As employability is a measure of external efficiency of an educational system, the university therefore has to have information on the local market condition, conduct a tracer study, and determine the number of students at entry point to overcome the existing problem of external efficiency.
4. From the analysis discussion, the number of self-employed graduates was very minimum, some of the reasons were lack of finance to start the business , lack of readiness from the part of the graduates to be self-employed and absence of Financial Institutions to lend money. Since the informal sector of the economy whose its main constituent is self-employment can play a significant role in reducing the rate of unemployment even at the National level, there have to be mechanisms for the graduates to start their business, specially the financial support by the local governments and attitudes of the graduates toward self-employment should be developed positive through entrepreneurial training in the university.

5. To increase employability of the graduates, strengthening the relation between the university and employing agencies was the main factor ranked first both by the graduate respondents and university's department heads, instructors and assistant instructors, therefore the university has to create a strong relation with all government, private and NGO employing agencies. By identifying those organizations hiring the graduates frequently and keeping in touch with them, in such away that by asking some vacant positions in the organizations.

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Appendix 1

Addis Ababa University

School of graduate studies

College of Education

Department of Educational Planning and Management

This questionnaire has been developed to be filled by graduates of Adama University. The purpose of this questionnaire is to gather data on the employability of the graduates of Adama University. Accordingly the success of this study depends on the honesty of your response.

Thank you in advance

Notice: put "x" mark in the box in front of your choice

Part One: Personal Data

1. Name of your organization
   A. Government TVET ☐ B. Private TVET ☐
   C.NGO ☐ D. Other, please specify ☐
2. Sex A. Male ☐ B. Female ☐
3. Age A. 20-25 years ☐ B. 26-30 years ☐ C. 311-35 years ☐
   D. 36-40 years ☐ E. 41-45 years ☐ F.Above45 years ☐
4. Qualification A. Diploma ☐ B. BSC (B.Ed) ☐
   C. M.SC ☐ D. Ph.D ☐
5. Major field of study_____
6. Year of graduation _____

Part two: General questions

2.1 Information on the relevance of curriculum

7. How is your specialization (filed of study) relevant to your high school (secondary) education?

   A. Relevant ☐ C. Completely irrelevant ☐
   B. To some extent relevant ☐

8. If completely irrelevant, specify your High School Education please

   _____

9. Have you been trained with appropriate skills to carryout your present job?

   A. Yes ☐ B. No ☐

10. Is there a skill gap between your job and your previous training?

    A. Yes ☐ B. No ☐

11. If your answer Q 10 is yes do you need further training to fill the skill gap between the job and your training?

    A. Yes ☐ B. No ☐

2.2 Information on the relevance of training to employment

12. Your current occupation/ job_____

13. Do you think that your current job utilizes the training you acquired at the university?

    A. To a high degree ☐ B. Practically by half ☐
    C. To a low degree ☐ D. It doesn't utilize at all ☐

14. If your answer for question No. 11 is "C" or "D", what is/are the reason/s please specify_____

15. Are you satisfied with your present job?

    A. Yes ☐ B. No ☐

16. If your answer to Q 15, is "B" please rank the following factors contributed to your dissatisfaction from 1st to 3rd the first being contributed the most and the 3rd being the least.

    A. Unable to utilize the training
    B. Poor working condition
    C. Poor prospect for promotion
    D. Other factor/s, please state and rank_____

2.3 Information on factors determining the employability of the graduates

16. Which of the following factors do you think are most significant in determining the employability of the graduates? Indicate your answer by rank ordering each of the following alternatives from the most significant to insignificant using the following rating scales.

A. The most significant (4) B. Significant (3)

C. The least significant (2) D. In significant (1)

No	Factors	Alternatives			
		A	B	C	D
1	The relation between the University and employing agencies.				
2	Teaching capacity of the teachers				
3	The content of the curriculum				
4	The quality of workshop facilities				
5	Students' high school education relevance to their training				
6	Attitude of the graduates toward practical work				

2.4 Information on the labor market

17. Rank the following factors that you encountered to the most and to the least in looking for a job after graduation from 1st to 4th. The first being the most and the 4th being the least problem you encountered.

A. Absence of job opportunities ☐

B. Lack of occupational information ☐

C. Inadequate experience ☐

D. Racial prejudice ☐

E. Other factors please specify and rank_____

18. How do your ate the employment opportunities of the graduates of the year your graduated?

A. 0-20% ☐ B. 21-40% ☐

C. 41-60% ☐ D. 61-80% ☐

E. 81-100% ☐ F. Others please specify_____

Appendix 2

Addis Ababa University

School of Graduate Studies

College of Education

Department of Education Planning and Management

The purpose of this questionnaire is to gather data on the employability of the graduates of Adama University. Accordingly the success of this study depends on the honesty of your response.

Thank you in advance

Items to be filled by the universities, department heads, teachers and assistant teachers

Part one: Personal data

1. Department_____
2. Your position in the department_____
3. Sex A. Male ☐ B. Female ☐
4. Age A. 20-25 years ☐ C. 31-35 years ☐
   B. 26-30 years ☐ D. 41-45 years ☐
   E. 46 and above ☐
5. Qualification A. Diploma ☐ B.B.Sc/B.Ed ☐
   C.M.SC ☐ D.Ph.D ☐

Part two: general questions

6. If graduates are not employed, what are the major reasons?
   A. Lakc of skills and knowledge from the part of graduates ☐
   B. Lack of graduates' interest to be self employed other than in government organization. ☐
   C. Lack of confidence of employers about skills and knowledge of graduates ☐

D. Weak economic performance and absence of employers ☐

E. Other please specify_____

7. If self-employment was minimal or absent, what could be the major reasons?

A. Lack of skills and knowledge ☐

B. Lack of finance to start the business ☐

C. Lack of readiness from the part of graduates to be self-employed ☐

D. Other, place specify_____

8. As professional, how do you evaluate the future employment opportunities of graduates?

A. Are encouraging ☐ B. Are discouraging ☐

9. What should the university do to minimize graduate unemployment?

A. Should determine the number of students at the entry point ☐

B. Should secure sufficient data on the local market condition ☐

C. Should conduct tracer studies and adopt the result as part of the program ☐

D. All ☐

E. Other, please specify_____

10. Which of the following factors do you think are most significant in determining the employability of the graduates? Indicate your answer by rank ordering each of the following alternatives from the most significant to insignificant using the following rating scales.

A. The most significant (4) B. Significant (3)

C. The least significant (2) D. In significant(1)

No	Factors	Alternatives			
		A	B	C	D
1	The relation between the University and employing agencies.				
2	Teaching capacity of the teachers				
3	The content of the curriculum				
4	The quality of workshop facilities				
5	Students' high school Education relevance to their training				
6	Attitude of the graduates toward practical work				

11. How do you rate the employment opportunities of the year 2006 graduates?

A. 0-20% ☐

B. 21-40% ☐

C. 41-60% ☐

D. 61-80% ☐

E. 81-100 % ☐

Appendix 3

Addis Ababa University

School of Graduate Studies

College of Education

Department of Educational Planning and Management

The purpose of this questionnaire is to gather data on the employability of the graduates of Adama University of Industrial Department. Accordingly the success of this study depends on the honesty of your response.

Thank you in advance

Part One. Personal Data

1. Sex A. Male ☐ B. Female ☐
2. Age A. 20-25years ☐ B. 26-30 years ☐
   C. 31-35 years ☐ D. 36-40 years ☐
   E. 41-45 years ☐ F. Above 45 years ☐
3. Qualification A. Diploma ☐ B. Bsc/BEd ☐
   C. Msc ☐ D. Ph.D ☐
4. Major field of study_____
5. Year of graduation_____
6. How relevant was your high school education to your current specialization A. Very relevant ☐
   B. Relevant ☐
   C. To some extent relevant ☐
   D. Completely irrelevant ☐
7. If completely irrelevant, specify your high school education please_____
8. Your current status of employment:
   A. Unemployed ☐ B-Self-employed ☐

9. If your answer for Q.8 is "Unemployed", how long have you stayed unemployed?

A. Six-months ☐ B. One year ☐

C. One year and six-months ☐ D. Two years ☐

E. More than 2 years ☐ F. If other, please specify_____

10. How do you see the relevance of your training to the existing labor market conditions?

A. Highly relevant ☐ C. To some extent relevant ☐

B. Relevant ☐ D. Irrelevant ☐

11. To start your business as self-employed, what was the main constraints?

A. Absence of financial institutions to lend money ☐

B. Financial institutions did not want to lend money ☐

C. Lack of interest from your side to be self-employed ☐

D. Lack of land or space to begin your business ☐

12. Your current daily activities

A. Working as a daily laborer ☐

B. Helping parents at home ☐

C. Searching for a job ☐

D. Working for an organization ☐

E. Running own business ☐

F. If other, please specify_____

13. Which of the following factors do you think are most significant in determining the employability of the graduates? Indicate your answer by rank ordering each of the following alternatives from the most significant to insignificant using the following rating scales.

A. The most significant (4) B. significant (3)

C. The least significant (2) D. In significant (1)

No	Factors	Alternatives			
		A	B	C	D
1	The relation between the University and employing agencies.				
2	Teaching capacity of the teachers				
3	The content of the curriculum				
4	The quality of workshop facilities				
5	Students' high school education relevance to their training				
6	Attitude of the graduates toward practical work				

14. Rank the following factors that you encountered to the most and to the least in looking for a job after graduation from 1st to 4th. The first being the most and the 4th being the least problem you encountered.

A. Absence of job opportunities ☐
B. Lack of occupational information ☐
C. Inadequate experience ☐
D. Racial prejudice ☐
E. Other factors please specify and rank_____

15. How do you rate the employment opportunities of the graduates of the year you graduated?

A. 0-20% ☐ B. 21-40% ☐
C. 41-60% ☐ D. 61-80% ☐
E. 81-100% ☐ F. Others please specify_____

Declaration

I, the undersigned, declare that, this thesis is my original work and has not been presented in other University and that all the sources of material used for the thesis have been acknowledged.

Name **Mulugeta Asfaw**

Signature_____

Date of submission **Friday, July 20, 2007**

This thesis has been submitted for examination with my approval as University Advisor

Name **Dr. Tilaye Kassahun**

Signature_____

Date_____