



Ayele Abebe

# Influences of Individual and Contextual Factors on Improving the Professional Development of TVET Teachers in Ethiopia

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*Influences of Individual and Contextual Factors on Improving the Professional  
Development of TVET Teachers in Ethiopia*

Vom Fachbereich Sozialwissenschaften  
der Technischen Universität Kaiserslautern  
zur Verleihung des Akademischen Grades  
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## Dedication

*To*

*My beloved wife*

*Seble Wongel Zebdiwos*

*and our dearest sons*

*Natnael, Misgana, and Abel*

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# List of Abbreviations

AAU	Addis Ababa University
APEC	Asia – Pacific Economic Co-operation
AU	African Union
CPD	Continuous Professional Development
DeSeCo	Definition and Selection of key Competences
ECBP	Engineering Capacity Building Program
ECSA	Ethiopian Central Statistical Authority
ECTS	European Credit Transfer system
EFA	Education for All
EGSECE	Ethiopian General Secondary Education Certification Examination
EQF	European Qualification Framework
ESDP	Education Sector Development Program
EU	European Union
GDP	Gross Domestic Product
HRD	Human Resource development
ICT	Information and Communication Technology
ILO	International Labour Organization
IVET	Initial Vocational Education and Training
MDG	Millennium Development Goals
MoE	Ministry of Education (Ethiopia)
OD	Organizational Development
OECD	Organization for Economic Co-operation and Development
PASDEP	Plan for Accelerated and Sustained Development to End Poverty
SDL	Self-Directed Learning
TDP	Teacher Development Program
TEI	Teacher Education Institutions
TESO	Teacher Education System Overhaul
TVET	Technical and Vocational Education and Training
UNESCO	United Nation Educational, Scientific and Cultural organization
UPE	Universal Primary Education
QA	Quality Assurance
QCA	Qualitative Content Analysis

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## Statement of Declaration

I declare that this PhD dissertation entitled “*Influences of individual and contextual factors on improving the Professional development of TVET Teachers in Ethiopia*” is my work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

Ayele Abebe  
Kaiserslautern, October 2009

## **Abstract**

The overall aim of this dissertation is to contribute to the improvement of the professional development of the Technical and Vocational Education and Training (TVET) teachers in Ethiopia by utilizing both theoretical and empirical enquiry. This study tried to provide insights into the influences of individual and contextual factors on the teachers' learning and professional development, for improving the professionalization of the TVET teachers. Specifically, this research focused on identifying and determining the influences of teachers' self perception as adult learners and professionals, and investigates the impact of the context, process and content of their learning and experiences on their professional development. The knowledge of these factors and their impact on the teachers' learning and development led to the formulation of context-specific recommended actions towards the improvement of the learning and professional development of the Ethiopian TVET teachers.

Specifically, this research tried to provide answers for the following five research questions.

(1) How do TVET teachers perceive themselves as active learners and as professionals? And what are the implications of their perceptions on their learning and development? (2) How do TVET teachers engage themselves in learning and professional development activities? (3) What contextual factors facilitated or hindered the TVET Teachers' learning and professional development? (4) Which competencies are found critical for the TVET teachers' learning and professional development? (5) What actions need to be considered to enhance and sustain TVET teachers learning and professional development in their context?

It is believed that the research results are significant not only to the TVET teachers, but also to schools leaders, TVET Teacher Training Institutions, education experts and policy makers, researchers and others stakeholders in the TVET sector.

The theoretical perspectives adopted in this research are based on the systemic constructivist approach to professional development. An integrated approach to professional development requires that the teachers' learning and development activities to be taken as an adult education based on the principles of constructivism. Professional development is considered as context - specific and long-term process in which teachers are trusted, respected and empowered as professionals. Teachers' development activities are sought as more of collaborative activities portraying the social nature of learning. Schools that facilitate the learning and development of teachers exhibit characteristics of a learning organisation culture where, professional collaboration, collegiality and shared leadership are practiced. This research has drawn also relevant point of views from studies

and reports on vocational education and TVET teacher education programs and practices at international, continental and national levels.

The research objectives and the types of research questions in this study implied the use of a qualitative inductive research approach as a research strategy. Primary data were collected from TVET teachers using a one-on-one qualitative in-depth interview method. These data were analyzed using a Qualitative Content Analysis method based on the inductive category development procedure. ATLAS.ti<sup>®</sup> V5.0, software was used for supporting the coding and categorization process.

The research findings showed that most of the TVET teachers neither perceive themselves as professionals nor as active learners. These perceptions are found to be one of the major barriers to their learning and development. Professional collaborations in the schools are minimal and teaching is sought as an isolated individual activity; a secluded task for the teacher. Self-directed learning initiatives and individual learning projects are not strongly evident.

The predominantly teacher –centered approach used in TVET teacher education and professional development programs put emphasis mainly to the development of technical competences and has limited the development of a range of competences essential to teachers’ professional development. Moreover, factors such as the TVET school culture, the society’s perception of the teaching profession, economic conditions, and weak links with industries and business sectors are among the major contextual factors that hindered the TVET teachers’ learning and professional development.

A number of recommendations are forwarded to improve the professional development of the TVET teachers. These include change in the TVET schools culture, a paradigm shift in TVET teacher education approach and practice, and development of educational policies that support the professionalization of TVET teachers. Areas for further theoretical research and empirical enquiry are also suggested to support the learning and professional development of the TVET teachers in Ethiopia.



# CHAPTER ONE

## INTRODUCTION

### 1.1 Introduction

This chapter begins by providing brief overview of the background, the historical development of modern education, and the current education system in Ethiopia with emphasis to the Technical and Vocational Education and Training (TVET) system. Then a discussion on the teacher education system precedes an elaborate presentation of the challenges and constraints in this system, followed by the description of the research problem as part of the overall teacher education system in the country.

The significance of the research, its objectives and the research questions that this study tried to provide answers are presented. The limitations and delimitations of this research work are also included. This chapter ends with a summary of the main issues discussed.

### 1.2 The Education System in Ethiopia

#### 1.2.1 Background

Ethiopia is a country with a population of 77 million of which the proportion of young population under the age of 15 accounts for 45%. Ethiopia covers around 1.1 million sq. km of area and is home for more than eighty ethnic groups. Its topography spans from that of the highest mountain peak of mount *Dashen* at 4620 m above sea level to that of the lowest depression of the *Dalol* at 100 m below sea level. Likewise, it is a country of diverse ecology ranging from the desert regions along the eastern boarder to that of a tropical forest region to the south-western part. (ECSA 2008)

Ethiopia, as one of the developing countries in the Sub Saharan Africa, has a predominantly agrarian economy and strives to develop and improves the lives of its people. The rain-fed agriculture sector of the country accounts for more than 80% of the employment of the labour force and contributes to half of the country's Gross Domestic Product (GDP). The industry and manufacturing sector contributes around 12 % of the GDP. Currently the country is implementing a national Plan for Accelerated and Sustained Development to End Poverty (PASDEP<sup>1</sup>) with the main objective of poverty eradication.

On the education sector, Ethiopia has been committed to achievement of the Universal Primary Education (UPE) since the 1961 *Addis Ababa Conference on African Education* in which member nations pledged to achieve by 1980. As that proved unsuccessful for all the African countries , the second agreement was reached in 1972 in which UPE was projected to be achieved before the new Millennium 2000 but yet again results were dismal. Ethiopia has also pledged to the attainment of Millennium Development Goals (MDG<sup>2</sup> ) and the Education for All (EFA<sup>3</sup>). Currently, the Vision of the Ministry of Education of Ethiopia is to achieve Universal Primary Education by 2015. (MoE, 2005)

## **1.2.2 Emergence of Modern Education in Ethiopia**

Until the early 1900s, formal education was confined to a system of religious instructions organized under church schools for preparing individuals for the clergy and for other religious duties and positions. In the process, these schools also provided religious education to the children of the nobility and others associated with the elite families. (MoE 2005)

Toward the end of the nineteenth century, Emperor Minilik II permitted the establishment of European missionary schools which introduced modern education in Ethiopia that would cater for the needs of the government statecraft and also to the demands of the local economy and

---

<sup>1</sup> PASDEP is Ethiopian national strategic plan for five -year (2005– 2010). In 2004 around 39% of the population lived below the poverty line.

<sup>2</sup> The Millennium Development Goals (MDGs) are the eight development goals set during the UN Millennium Summit in September 2000 by 192 countries to achieve by the year 2015. These goals include reducing extreme poverty, reducing child mortality rates, fighting disease epidemics such as AIDS, and developing a global partnership for development.

<sup>3</sup> These are the six EFA goals adopted by the World Education Forum in Dakar, in 2000. These include ensuring that by 2015 all children have access to free and compulsory primary education of good quality and ensuring that the learning needs of all young people and adults are met through equitable access to appropriate learning and life-skills programmes.

societal activities. It was Emperor Minilik II who established the first *western* type of elementary school in Ethiopia in 1906 around his Palace in Addis Ababa. This school signals the beginning of a secular and modern education era in the country. The same year another school was opened in eastern part of the country and many other schools started to flourish thereafter. In the earlier period of the secular education in Ethiopia focus were given to the teaching of foreign languages, like French, English and Italian, and also elementary mathematics and basic sciences. Religion was also offered as one of the subjects.(Eteffa 1971)

The first Educational Act was passed by the Ethiopian government in 1905 which stipulated the rights of children of age 6 and above to modern education and the responsibilities of parents and guardians to send their children to school. But this Act was not actually put into effect mainly due to the strong opposition of the church towards a secular education which was portrayed as one that will encourage the young people to abandon their faith in the church and their obedience to the authorities.

The second Education Act of Ethiopia was passed during the Empress Zewditu Regime in 1928 and was an attempt to balance the secular and religious education provisions in the country. As the role of the church in the country's politics and governance was influential, the expansion of modern education has been limited as a result of its objection. (MoE, 2005; Eteffa, 1971; Abraham, 1993)

The new emperor of the country after Zewditu, Emperor Haile Sillasje, was educated in one of the first modern schools built by Minilik II. It was believed that Haile Sillasje's education has been instrumental for his strong support to expand modern and secular education. In the same year he was crowned as Emperor, he established the first Ministry of Education and Fine Arts of the country in 1930. The Ministry was entrusted with the management and expansion of education. Despite efforts for expansion of education, in 1935 the country had then only twenty schools that enrolled a total of 8000 students. Very few students have been studying abroad through scholarships<sup>4</sup>. The first technical and vocational school was opened in 1942 in Addis Ababa and a year later the first high school, the Haile Sillasje secondary school was established (Abraham 1993).

A number of reforms, new legislations and restructuring have been made in the 1940s and 1950s which were more influenced by experts from Britain in terms of consulting the ministry

---

4 The granting of scholarship to students to study abroad (mainly to Europe) actually begun in 1894 well before the establishment of the first primary school in the country.

with regard to curricula, examination and certification were evident. The language of instruction in junior and secondary school was by and large English and students completing their secondary education were taking the London Matriculation examination from England as the national school leaving examination until 1967. (Abraham 1993)

The education sector between 1950s and early 1960s was characterized as an era where the demand for education remain unmet, access to education were limited for few and its equity unfair, high student failure in national examinations and by increased demand for a relevant and contextualized curricula and text books. It was also an era where the country has opened its first higher education institution - the Haile Sillasje University College in 1950. (MoE 2005, Abraham 1993)

Ethiopia hosted the United Nation conference on the development of education in African countries in May 1961. Earlier studies as well as this conference highlighted the major problems in the Ethiopian education system which was raked at the bottom among the Africa nations. The conference participants adopted for the first time in the continent to achieve UPE for all children by the year 1980. Ethiopia had by then an enrolment of only 10% of the school age children. (MoE 2005, Teferra and Altbach 2004)

In the period from 1961 to 1971, the government expanded the school system more than fourfold to a level of 1,300 primary and secondary schools and 13,000 teachers, and student enrolment had reached over 650,000. Major issues in the education system in this period were related to the shortages of teachers, relevance of education to economy, low number of schools, and high drop out rate, low gross enrolment ratio, gender parity and lack of fair access to all. In 1963, the ministry of education has modified the three-tier structure<sup>5</sup> of the general education from that of 4+4+4 to 6+2+4 system. The number of post-secondary and higher education institutions in the late 1960s were also increased to six which enrolled around 10, 000 students and had about 4,000 graduates. (Abraham, 1993)

The relevance of technical and vocational education and training (TVET) and its provision as an integral part of the secondary education was one of the main issues of discussion during the 1962 Education conference on *secondary education in Ethiopia*. One of the conference resolutions led to the change in the curriculum of the secondary schools of the country. The

---

5 In the 1940s and 1950s, the structure of the educational system was a three- tier system where the elementary, junior and secondary schools require 4 years each. The 1963 education reform changed the structure to 6+2+4 and also Amharic become for the first time the only language of instruction in the primary schools.

changes brought about a significant shift from the academic subject dominated curricula to that of comprehensive curricula where the academic, technical and vocational subjects are offered in a balanced way in the secondary school education. The comprehensive secondary school (grades 9- 12) curriculum was put in practice in 1963. The inclusion of such subjects as Industrial Arts (mainly woodwork, metal work and electricity), Commerce, Agriculture and domestic science in the curricula were clear indication of making the education more relevant to the immediate needs of the student's employment and the local economy. Around 140 comprehensive secondary schools were implementing these curricula in 1979. (Worku 1981, Teferra and Altbach 2004)

Probably one of the major educational reform studies conducted in Ethiopia was the 1971 Ethiopian *Education Sector Review* study<sup>6</sup>. This comprehensive study of the education system initiated by the government was to respond to the growing public dissatisfaction and mounting student activism in the university and secondary schools. The review was completed in August 1972. It recommended, among others, reaching universal primary education as quickly and inexpensively as possible, ruralising the curricula through the inclusion of informal training, equalizing educational opportunities, and relating the entire education system to the national development process. The most radical aspect of the change it recommended was the expansion of education in favour of the countryside and the rural population at the expense of the urban population over allocation of resources.

Despite its critical review, it was not publicly published until February 1974, which in the mean time the urban population generated opposition mainly through the urban students, parents, and the teachers' union. Most opponents resented what they considered as the removal of education from its elite position. Many teachers also feared salary reductions. Strikes and widespread disturbances ensued, and the education crisis became one of the contributing factors in the Imperial regime's fall in 1974. (Teferra and Altbach, 2004; Abraham, 1993)

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6 The Education Sector Review (ESR) recommended three alternatives to attain universal primary education by 2000. the first one was a 6+4+4 education system along with the introduction of a double shift system and lengthening the school days from 180 to 220 days. The second alternative was a 4+4+4 system where a 4-year primary education( termed then as the minimum formation education ) for the great majority of the population and allowing 20% of these students to proceed to 4- year junior education followed by another 4-year secondary education only for those with the best grades in the junior schools. The third alternative was , a modification of the second alternative , 4+2+4 system with age of nine as a school starting age for grade one.

The rate of expansion of education from 1975 – 1989 was on average 12% annually and student enrolment at all levels reached near 4 million. Though many of the challenges in the education system were not basically resolved, the post – revolution socialist government (the *Derg* regime) has undertaken a literacy campaign that resulted, at least for a period of time, the reduction of the country's illiteracy rate from 93 % in 1975 down to 37% in 1983. (Negash 2006, Abraham 1993)

During the *Derg* regime, the Ministry of Education was warning the government of the educational crisis as early as 1980 not only in terms of achieving UPE but also the increasing unemployment of the secondary school graduates. The Ministry of Education had also planned to reduce the pool of unemployment through the introduction of an 8-year universal polytechnic education that could help the students' access to the world of work. Partially supported by the government, the plan was not fully realised.

The down fall of the *Derg* regime in 1991 brought about far reaching consequences in the social, political and economic sectors of the country. The command economy of the socialist era was replaced by the free market economy principles and the country was politically constituted as a Federal Democratic Republic country (MoE 2005, Negash 2006).

### **1.2.3 Current Education System**

Following the new Ethiopian Constitution, proclamation 1/ 1995, primary and secondary education became the mandate of the regional governments where as the expansion and development of the higher education is under the federal government.

The current education and training policy was stipulated in July 1994 aimed at addressing the educational problems of access, equity, relevance, and quality. The regional governments ensure the rights of their people to learn in their language and work towards achieving access to education for all age cohorts in their regions.

The current educational structure consists of eight years of primary education followed by four years of secondary education. The primary education has two cycles, first cycle (grades 1- 4) and second cycle (grade 5- 8). The secondary education has also two cycles. The first cycle is the general secondary education (grade 9- 10) which leads to the end of the general education for all students. Students who complete grade 10 will sit for national general secondary education certification examination. The grades 11-12 constitute the second cycle

of the secondary education. Students who passed the national exam with higher academic achievements would enter to the second cycle of the secondary education as a pre-university education for future enrolment into the higher education institutions. The students who are not enrolled in the preparatory secondary education would join the TVET programs which offer from one to three years of technical and vocational training in various fields. Figure 1 depicts the current educational structure of Ethiopia.

Cognizant of the fact that education is a key to its development, Ethiopia has embarked different educational expansion and development programmes at the primary, secondary, TVET and Higher education levels. Such growth is evidenced in increase in the number of students, schools and teachers.

Data from the Ministry of Education (MoE, 2009) shows that the total number of schools, students and teachers has increased in the primary, secondary and tertiary levels of the education as shown in Table 1. Over the seven year period, between 2001/2 and 2007/8 academic year, the numbers of students, schools and teachers have increased almost by two folds.

All Levels	Total numbers in the Academic year	
	2001/2002	2007/2008
Schools	12,544	25, 430
Students	8, 667,390	16,228,645
Teachers	140,973	291,676

**Table 1 Number of schools, students, and teachers at all levels of education. (MoE, 2009)**

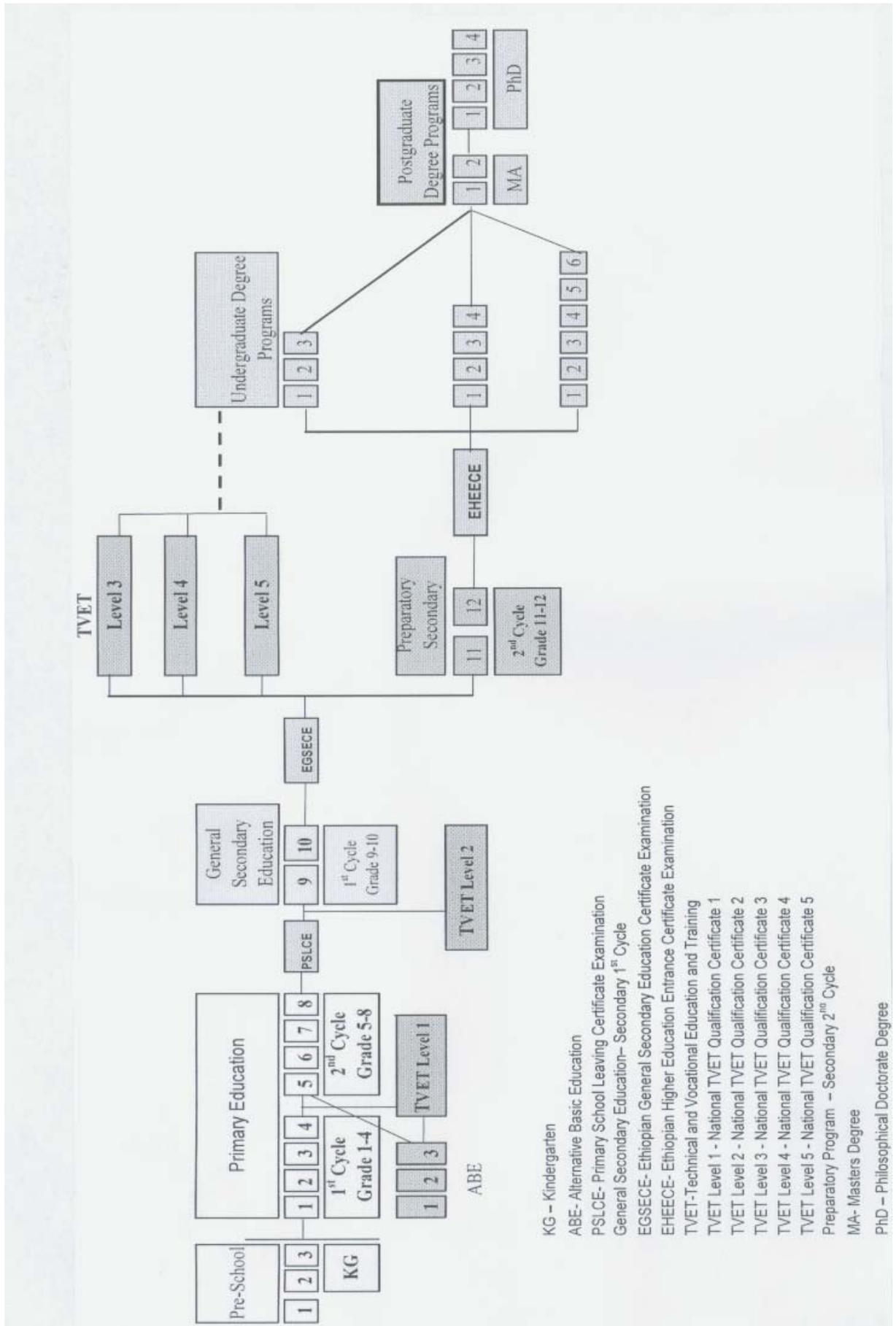


Figure 1 Structure of the Ethiopian Education System (MoE, 2009)

A summary of key indicators of the Ethiopian education system for the Year 2008 are provided in Table 2. These indicators include the Net Enrolment Rate (NER<sup>7</sup>), Net Intake Ratio (NIR<sup>8</sup>), Gender Parity Index (GPI<sup>9</sup>), and the Pupil to Teacher Ratio (PTR<sup>10</sup>). The share of Certified Teachers<sup>11</sup> in the different levels of the education system is also shown in Table 3.

Year 2007/2008	Grades	NER	NIR	GPI	PTR
Primary Level	1-8	83%	92%	0.9	57
Secondary Level	9-10	14%	-	0.67	43
	11-12	20%	-	0.49	

**Table 2 Key indicators of the Education system (MoE, 2009)**

Year 2007/2008	Grades	% of Certified Teachers
Primary Level	1-4	97%
	5-8	66%
Secondary level	9-12	64%

**Table 3 Share of certified teachers in the education system (MoE, 2009)**

Though recent developments in terms of the percentage of primary education net enrolment and certified primary level teachers are increasing, the need for improving the student enrolment and teacher training at all levels of the education system remain a critical challenge to be met.

<sup>7</sup> **Net Enrolment rate (NER)** is the proportion of students enrolled from the official age group of the country's population. It is calculated by dividing the number of properly aged primary students (for Ethiopia ages 7-14 for primary and 15-16 for secondary education) by the number of actual students of the age cohort attending school.

<sup>8</sup> **Net Intake Ratio (NIR)** is the percentage of new entrants in grade 1 who are 7 years old, out of the total number of children at official admission age (age 7 for Ethiopia) in a given year and in the same way for those entering secondary level (grade 9) at the age of 15 or 16 .

<sup>9</sup> **Gender Parity Index (GPI)** is the ratio of female to male enrolments in the respective level of the education system.

<sup>10</sup> **Pupil to Teacher Ratio (PTR)** is the ratio of the total number of students to the total number teachers in the respective education level.

<sup>11</sup> **Certified Teachers** refers to the minimum qualifications the teachers are expected to attain according to the requirement of the ministry of education. A minimum of a teaching certificate acquired through one to two years of teacher training after completion of grade 10 is required for teachers of grades 1-4. For teachers of grades 5-8, a three-year teacher education after completing grade 10 is needed. Teachers in the secondary level are expected to hold a Bachelor degree through attending teacher education program in a university.

## 1.2.4 Technical and Vocational Education and Training

From its early beginning, TVET in Ethiopia followed the school- based model of training. The inclusion of technical and vocational training in the formal educational system dates back to the establishment of the first TVET School in 1942 in Addis Ababa as the *Ecole National des Artes Technique* (later named as Addis Ababa Technical School). The school offered trainings in such occupational areas like auto mechanics, machine technology, building construction, surveying, drafting, electricity, radio technology, carpentry, economics, accounting and management. As the demand for its graduates in the labour market increased, admission to the school was limited to those applicants who had at least completed the 8<sup>th</sup> grade. Eligible applicants were enrolled into the three-year training, known as 8+3 program, and upon completion they were awarded diplomas.

Over the years, Addis Ababa technical school underwent a number of changes in terms of the trainings offered and their entry level and duration. The school offered the 8+4, 10+2, and 10+3 programs and applicants from many parts of the country with the best academic achievements competed for admission to the then prestigious school.

In 1943, the Addis Ababa School of Business and Administration (later renamed Addis Ababa Commercial College) was inaugurated with the aim of supplying trained personnel in the Vocational fields of accounting and secretarial sciences for business and commerce, as well as for civil service. Later, banking and finance training fields were added. It offered trainings at the 8+4, 10+3, 11+3 and 12+2 levels. Currently, it offers Bachelor degree level programs under Addis Ababa University.

The establishment of the Bahir Dar Polytechnic Institute in 1963 with the aim of producing skilled technicians in agricultural and industrial occupations further supported the development of TVET in Ethiopia. This school was later upgraded to a higher education institution level.

The 1962 educational reform in the country, that saw secondary schools curricula change to a more comprehensive education and training, made TVET more accessible to students. At the heart of this reform was that TVET will provide the opportunities for the secondary school students to join the world of work right after completion of their studies. In fact, it was a transformation that gave the necessary focus and recognition for the importance of TVET in the education system, but such a reform was not well supported by the resources necessary for

its success. No significant institutional expansions or development programs aimed at developing TVET took place in the educational system between the mid-1960s and the mid-1980s.

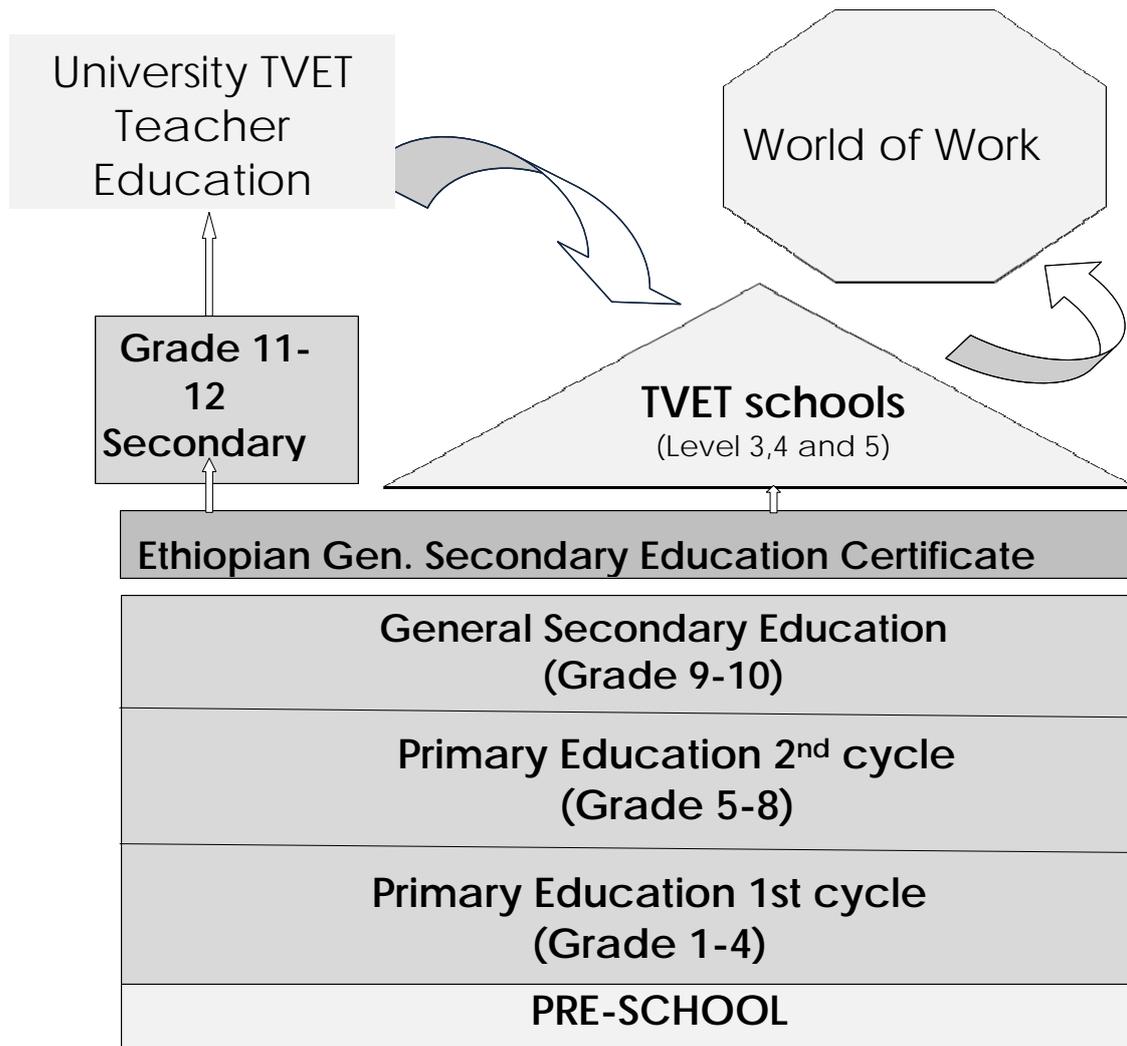
Following the 1994 Education and Training Policy, the TVET sector was properly recognized as a vital tool for socio-economic development and as a main component in the educational system. Government and private sector investments in the expansion of TVET have helped to increase the number of TVET schools, teachers, as well as the number of occupational training areas.

Admission to the TVET programs is mainly based on students' achievement in the Ethiopian General Secondary Education Certificate Examination (EGSECE) after completion of grade 10. Figure 2 depicts the pathways into the TVET and TVET teacher education system in Ethiopia. Based on the results of the EGSECE, students are streamed into either the Preparatory program or the TVET programs. The preparatory program (grade 11-12) admits those students who have successfully passed the EGSECE and are offered pre-university preparatory courses for entering to Bachelor degree programs in the universities.

The TVET programs are for those students who are unable to join the university preparation program because of their lower EGSECE results or have failed to achieve the scores for admission to preparatory program. Students in the TVET path could attend programs that range from one year to three years that would enable them to join the world of work.

TVET Teacher education is offered in the universities and students enrolled in these programs are assigned to different technical and vocational study areas to be teachers at TVET schools after completion. These students enrolled in the TVET teacher education programs had no possibilities to get trained in the technical and vocational schools as their pathway to university system does not permit. Thus the three-year university teacher education program is the only opportunity they had to develop competences as technical and vocational teachers before their employment.

The TVET institutions provide school-based skill trainings with durations ranging from one year (10+1) or level 3 qualification to three years (10+3) or level 5 qualification. TVET trainings are run under the auspices of the ministry of Education and regional government education bureaus, ministries of Agriculture, Health and other institutions including the private sector.



**Figure 2 Pathways to TVET and TVET teacher education**

TVET programs are offered in more than 20 technical and vocational occupational fields with more than 170 trades. Major focus areas of the TVET programs include Agriculture, Health, Industrial, Construction, and Business sectors. The list of the occupational areas includes:

- Metal Manufacturing
- Automotive Technology
- Construction
- Electricity and electronics technology
- Information and communication
- Metrology
- Textile technology
- Water technology
- Leather technology
- Craft
- Agriculture
- Agro food processing
- Health
- Sport
- Industrial laboratory
- Business and services
- Hotel and tourism
- Culture
- Transport

A rapid expansion and significant development in the enrolment of TVET students and construction of TVET schools have been registered as depicted in Table 4. TVET student enrolment has increased at average annual rate of growth of 26% in the last successive years. For instance ,the number of TVET schools in the country was 17 in 1994 as compared to the 460 in 2008 which accommodated 230,000 trainees. Similarly the number of TVET teachers has increased from 800 during year 2001 to 9000 in 2008. (MoE 2009)

<b>TVET</b>	<b>Year 2001</b>	<b>Year 2008</b>
Students	8200	230,000
Schools	48	460
Teachers	800	9000

**Table 4 TVET expansion between 2001 and 2008 (MoE, 2009)**

## **1.3 Teacher Education in Ethiopia**

### **1.3.1 Development of the Teacher Education System**

In the earlier stages of the introduction of modern education in the country, most of the teachers were expatriates and voluntary workers from different countries, and few Ethiopian teachers without teacher training. The first teacher training institution was established in Addis Ababa in 1943 in the Minilik II School. A single class room from this school was allocated for the 'Addis Ababa Teacher Training College' which admitted its first 32 teacher candidates in 1944 for a two - year training. Later that year another 20 trainees were recruited and admitted. The first locally trained Ethiopian teachers from this school were graduated and employed in 1946. The admission criteria for the teacher training program were the completion of primary school (then at grade 6) and passing the entrance examination of the teacher training college. The trained teachers were certified to teach grades 1-8.

The teachers' college was relocated to two different schools in Addis Ababa and was finally moved to eastern Ethiopia in Harar in 1952 (Eteffa 1971, Negash 2006, Abraham 1993). Admission criteria to the teacher education programs as well as the training duration have been varied in the course of the years.<sup>12</sup> The content of the trainings were more focused on academic subjects to help the

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<sup>12</sup> Teacher training from 1943 to 1954 have changed intermittently between different forms. These include the completion of grade 6 followed by a 2 - year training or the 6+2 form , the 8+2 form, the 6+3 form , the 8+1 form , and the 8+4 form.

teachers to successfully pass their secondary school examination rather than preparing them as teachers. Teacher education courses offered in the teacher training programs included history and philosophy of education, teaching methodology, psychology, Moral and ethics.

In 1955, a two tier teacher training programs which award a certificate for a one year training and a diploma for two to three years training were begun.<sup>13</sup> These programs continued until the end of 1965, by which time only around 38% of the countries elementary school teacher were trained and qualified. It is during this period that the TVET teacher training was included in the teacher education system of the country. TVET teachers were trained particularly in agriculture, home economics, handicrafts, and adult education programs. The training of teachers in vocational subjects was included because of the need to strongly link students' education with rural development in the country. (MoE 2006)

A major reform in the teacher education system in 1966 addressed the issues related to the variation in the admission levels and the length of the teacher training period. It was decided to phase out the earlier forms of training in favour of a uniform standard admission level and training period to be used by all training colleges. The new resolution demanded teacher candidates to complete grade ten and enrol for a two-year teacher training period. This reform also resulted in the development of a standard teacher training curriculum to be used by all training colleges. The curriculum, unlike the previous ones, provided equal emphasis to both the academic subjects and the teachers' professional courses. The problem of employing untrained teachers in the schools was also dealt in the reform by incorporating *special educational standard improvement in-service programs* for the untrained teachers. (MoE 2005, MoE 2006, Abraham 1993)

The teacher education in Ethiopia particularly for secondary schools, at a bachelor degree level, were made part of the higher education system following the opening of the department of education in Haile Sillassie I university in 1965 and the establishment of Bahir Dar Pedagogy academy in 1972. In 1974, there were five teacher training institutions in the country with a total enrolment capacity of 2300 teachers offering programs at Bachelor degree, diploma and certificate levels.

According to MoE (2006) , all the teacher education institutions in the country were closed between 1974-1977 as students of higher education and senior secondary schools were engaged in a national literacy and development campaign (Known as *Ediget beheberet ye ewketenna ye sera zemecha* ).

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<sup>13</sup> Between 1955 and 1962, a one-year certificate level training was offered for candidates who completed grades 6, or 8. The diploma level training was allowed for those who completed grade 8 for four -year training ( 8+4) and a three year teacher training program for those who completed grade 9

### 1.3 Teacher Education in Ethiopia

During this period as no newly trained teachers were available, around 7100 students from grade 9-12 were recruited and directly employed as teachers without any teacher training for primary schools in order to cope up with the considerable increase in the student enrolment. The practices of employing untrained teachers in to the education system and also the admission of students with least academic achievement in to the teacher training institutions were often considered as one of the main reasons for the low status attached to the teaching profession by the society. (MOE, 2008)

According to the college of education of Addis Ababa University (AAU 2008), the teacher education in the 1990s focused mainly on the issues of the inadequate number of pedagogical course offering and on the need to streaming university students in subject areas into *teaching* and *non-teaching* programs. What dominated the early 1990s included the debates between the academic subject departments, the education departments and the Ministry of education on the number of education courses to be offered to would-be teachers trainees in the Bachelor degree program. Despite the proposal to offer 30% of the degree program as educational courses by Education colleges and departments, the educational courses actually offered varied from 13% to 18% of the total courses in the bachelor degree program.

All university students in the natural science and social science fields take these education courses despite the fact that only some of them could be employed as teachers in the education sector. These students are therefore trained through out the program on the assumption that there would be a limited chance to become a teacher. University graduates were then assigned through a lottery system to be employed in different ministries and civil service sectors and most students considered it as a bad luck if they draw a lot with the possibility of employment as a teacher in the Ministry of Education. Therefore, the absence of a targeted effort to motivate students in order to develop interest to be teachers has affected the teacher training and employment. (Desta, 1990)

In order to rectify the situation whereby graduating students would be teachers not as a matter of chance at the end of their study, students were later on streamed into two groups (the teaching and the non –teaching) in their respective fields of study from the early stage of their university education. As placement of students into the teaching and non- teaching programs were based on student choices and more importantly on their academic performances , it was usually those students with the least interest and low academic performance as compared to the other group that would join the teaching stream.( Desta 1990 ; MoE 2006 ; AAU 2008)

### 1.3.2 Challenges in the Teacher Education System

In attempt to improve and further develop the teacher education system, the ministry of education has conducted a number of assessments at national level (MoE: 2002, 2006, and 2008). A nation-wide study conducted in 2002 on the *Quality and Effectiveness of Teacher Education in Ethiopia* showed the urgent need to bring about a paradigm shift in the teacher education system of the country. Some of the findings of this study were

- weak pre-service training and absence of continuous professional development opportunities for the teachers and teacher educators
- many teacher educators were not professionally trained and provide trainings which are not based on the contextual situations at the schools.
- teachers' recruitment was not based on students' interest and calibre. Mostly student teachers enrolled have poor academic background , and have no interest and commitment for the profession
- teacher education curricula are based dominantly on the development of academic knowledge. Little emphasis is given to the development of such competences like critical thinking , problem solving and communication
- the teaching-learning processes are dominantly teacher – centred and students are considered as passive receivers of knowledge.
- absence of continuous assessment of students work as well as teachers' performance
- teaching profession was undermined by the society.
- high student number per class and lack of conducive work environment in the schools
- limited resources and low infrastructure and facilities
- ineffective and inefficient school administration. (MoE, 2006, p 100)

As a result of these national assessments on the teacher education system, the ministry of education introduced a national reform program on the teacher education system known as the Teacher Education System Overhaul (TESO) in 2003. The main components of the reform under the TESO included five sub-programs that pertain to the major bottlenecks in the system. Later on two more sub programs were added and the TESO program was renamed as Teacher Development Program (TDP). The sub programs in the TDP are

- Teacher educators professional development program
- Pre-service training curriculum improvement program
- In – service training improvement program
- Student- teacher recruitment system development
- Teacher education system development

- English language improvement program
- Educational leadership and management program

An earlier assessment by the Ministry of Education (MoE, 2006) of the major problems regarding teacher training process reveals similar issues as critical problems facing the system. These major problems and their possible causes according to the report are presented in the Table 5.

<b>Major Problems</b>	<b>Possible Causes</b>
Low academic calibre of teachers	<ul style="list-style-type: none"> <li>- employment of untrained teachers</li> <li>- poor quality of the teacher training</li> <li>- assigning teachers to teach above the standard ( grades ) they are qualified</li> <li>- lack of continued professional development</li> </ul>
The absence of student -centred teaching methods	<ul style="list-style-type: none"> <li>- the exclusive use of teacher-centred method</li> <li>- absence of student -centred teaching method training for the teachers</li> <li>- very distant power relation between teacher and student ( teachers as a sole source of knowledge and authority )</li> <li>- large class sizes and limited supply of educational materials and teaching aids.</li> <li>- teachers unwillingness to exert extra effort to be actively engaged in the process</li> <li>- limited student interactions due to cultural influences</li> </ul>
Teachers' disciplinary problems	<ul style="list-style-type: none"> <li>- low motivation of teachers</li> <li>- lack of professional ethics</li> <li>- low work discipline</li> </ul>
Weak interaction of teachers with each other , with the school management and parents	<ul style="list-style-type: none"> <li>- limited interaction between teachers to support and develop one another</li> <li>- lack of ownership of school programs by the teachers and administration</li> <li>- high teaching work load</li> </ul>
External factors	<ul style="list-style-type: none"> <li>- limited effort by educational administration at various level to motivate and engage teachers</li> <li>- delayed salary and other payments</li> <li>- administrative problems</li> <li>- lack of guidance and counselling</li> </ul>

**Table 5 Major problems and possible causes in the Ethiopian teacher education system (MoE 2006)**

## **1.4 The Research Problem**

The problems associated with the teacher education system in Ethiopia are multi –dimensional and interrelated. It may be difficult to single out a problem which stands in isolation or that could be readily solvable. Thus a systemic approach towards addressing these problems and looking for options to solve them is necessary.

This research in particular focuses on identified problems with regard to the Ethiopian TVET teachers' education and their professional development. In fact, the problems and constraints that are inherent in the teacher education system of the country may also characterize the major problems in its TVET teacher education and professional development. The TVET teachers and their education, as part of the whole teacher education system do share the opportunities and challenges that are manifested in the whole system.

Therefore, the problems related to the TVET teachers education and professional development could be understood from the characteristics of the general teacher education system as well as from consideration of the peculiar nature of the TVET teacher education. In addition to this, an in-depth understanding and definition of the problem could be achieved by paying particular attention to the specific problems within the TVET teacher education system.

Evaluations and assessments made on both the general teacher education system and on that of the TVET provided the basis for the formulation of the research problem. Full fledged impact studies at national level on the results of the Teacher Development Program (TDP) have not yet been conducted. However, a survey made by the College of Education (AAU 2008) asserted that despite some improvements in the teacher education, various problems are negatively affecting teachers' education and professional development. Among these problems in the current teacher education and professional development includes

- the reduction of the teacher education Bachelor degree programs from four to three years
- high student enrolment with out proportionate increase in resources in the teacher education institutes
- assignment of most students with least academic achievement in university examinations to teacher education program
- limitation of resources in the teacher education institutes to offer appropriate education

- overburdened teacher educators and limited continuous professional development
- continued use of the teacher –centred method as a dominant approach

A report by the Ministry of Education (MoE 2008) ascribed four major problems that have currently faced the teacher education system of the country in terms of teachers and the teachers' education and training. These are

- lack of interest in the teaching and supporting students' learning
- teachers weak academic knowledge and teaching skills
- the inability to implement student- centred teaching methods
- low motivation and professional ethics

In relation to the development of a national TVET strategy, the MoE (2006) addressed the major problems regarding TVET teachers as follows:

The shortage of a sufficient corps of TVET teachers / instructors represents the most severe obstacle to the TVET development in Ethiopia. The quality of TVET teachers /instructors has suffered as a result of the low reputation of their profession. Most TVET teachers /instructors have relatively low formal qualifications, severely affecting the TVET delivery at higher qualification levels. Furthermore, technical teachers are often unmotivated. They did not choose to become technical teachers, but were placed in technical teachers colleges because there were no other options available.

Finally existing TVET teachers /instructors are mostly inappropriately practically skilled, i.e. not competent to provide TVET in accordance with the occupational standards. This is a result of a training system that long emphasized theoretical knowledge (though often not aligned with modern technology requirements) disregarding the importance of practical skills and appreciation of the world of work. (P.9)

Similarly, a national study (Erhardt and Kreuchauf, 2007) conducted under the auspices of ECBP regarding the major problems of the Ethiopian TVET teachers' education and professional development showed that the TVET teachers are generally characterized by

- lack of theoretical and technical (practical) skills
- no professional work experience in industry and business
- low levels of self- esteem as a teacher and lack of commitment
- absence of self-initiative to change and innovation

## *Chapter 1 Introduction*

- limited capabilities in linking TVET training to labour market demands
- limited opportunities for further training and development
- employment of untrained teachers without teacher education
- weak link of their teaching and training with labor market

From these assessments and study reports, it is evident that numerous problems exist within the TVET teacher education system. However, this research focus on the problems related to the TVET teachers' professional development. The critical problem related to the TVET teacher education and professional developments are well articulated in the Ministry of education development plan for 2005-2010. In its Education Sector Development Plan ( ESDP III , 2005- 2010), the MoE stated the significance and the dire need for TVET teachers learning and professional development as:

“Further training and continuous upgrading for the existing [TVET teachers] workforce are only partially in place. A meaningful structure for steady adaptation to workforce demand and life-long learning is still missing.” (MoE/ ESDP III, 2005, p .16)

The TVET system demands teachers who continually upgrade themselves and engage in further trainings in order to facilitate the teaching-learning process at the TVET schools and similar institutions. The need for professional development and life long learning is clearly a necessity for an effective TVET system. Hence one could pose a number of questions: why such an important component of the TVET system is not fully in place? Why the learning and professional development activities are not fully embedded in the system? What factors hindered the learning and professional development of TVET teachers?

A better understanding of the problem of TVET teachers' learning and professional development in the current system helps the effort to improve the status quo. More specifically, TVET teachers understanding of the problems regarding their own learning and development are significant. They need to articulate the factors that facilitated or hindered their professional development and their reflections on their experiences need to be taken into account. Their voices need to be heard in order to bring about changes and improvement in their own learning and development.

It has been asserted that the professional development of teachers is an important factor that, not only provides the teachers own learning and development opportunity, but also have a wide-reaching consequences. Villegas –Reimers (2003) argued that

“ Aside from the individual satisfaction or financial gain that teachers may obtain as a result of participating in professional-development opportunities, the process of professional

development has a significant positive impact on teachers' beliefs and practices, students' learning, and on the implementation of educational reforms.” (p.19)

It is therefore critical to pay due attention to the TVET teacher education and continual professional development if the TVET system is to achieve desired goals and effectiveness. Educational reforms that are planned and implemented to bring about changes in the system need to gain the willingness and commitment of the teachers as change agents. At the same time, it is also important for education reforms to take into account that teachers are also as one of the variables of the reform process. Teachers' practices should also be changed through continuous engagement in their own learning and development. Therefore, this dual role teachers' play as change agents and variables of change in the education system commands the need to address the problem with regard to their learning and professional development.

Many authors (for example, Kettle and Sellars, 1996; Kallestad and Olweus, 1998; Youngs, 2001) have shown cases where educational reforms have been successful through articulating and incorporating teachers professional development programs.

“Regardless of the scope of the reform, the relationship between educational reform and teachers' professional development is a two-way or reciprocal relationship [...] Educational reforms that do not include teachers and their professional development have not been successful. Professional-development initiatives that have not been embedded in some form of reform of structures and policies have not been successful either”. (Villegas- Reimers, 2003, p20)

TVET reform programs in Ethiopia have shown results in terms of rapid increase in student population, new schools and structures built, and also the sharp increase in the number of TVET teachers. However, such expansion would not guarantee the creation of effective and flexible TVET system. Thus, the central focus of the research problem lies in understanding the nature and identifying the factors affecting the learning and professional development of the TVET teachers from their vantage point.

## 1.5 Aim of the Research

The National TVET strategy of Ethiopia (MoE, 2006) stipulates that

“Highly skilled, qualified, motivated, flexible and creative TVET teachers and instructors are the backbone of any TVET system, capable of adjusting to changing technological environments and create conducive learning environments for different target groups”.  
(p.31)

The development of such a workforce does not only require an effective pre-service TVET teacher education system but also the provision of continuous professional development programs with the internal and external conditions that facilitate the environment for such a life-long learning process in the workplace and beyond.

There are many actors involved in such a process of creating and maintaining competent TVET teachers in the TVET schools, along with multitude of factors that influence the process, content and context under which it takes place. The complexity and dynamism of teacher learning and professional development issues do not yield to simple prescriptive, universal strategies or models that could be readily applied to achieve sustainable platform for teacher professional development.

Cognizant of these facts, this research is set in specific contextual situation of the teachers in Ethiopian TVET schools in relation to their learning and continued professional development. Thus this research attempts to draw from some the existing theoretical framework and studies results, both from national and international dimensions, to understand and interpret the data obtained from the TVET teachers themselves. This research is considered as one of those scholarly contributions for the betterment of the professional development of the TVET teachers.

The overall aim of this research is to contribute theoretically and empirically to the improvement of the professional development of TVET teachers in Ethiopia. This work could help broaden the theoretical basis of the TVET teacher education and professional development and advance the practices in the context in a number of ways.

From a theoretical perspective, it advocates that TVET teachers' professional development could be better understood, designed and implemented by taking into account the *TVET teachers as adult learners*. The notion that teachers need to be considered as adult learners, not as an ultimate source and suppliers of knowledge, provides a perspective that have a wider implications on how teachers and their professional development activities are perceived.

Moreover, it will be essential to consider *teachers' education and professional development as an adult education*. The various principles, models and practices that are found in the wider adult education literature provide the theoretical understanding and options for a different perspective and practice in the TVET teacher education programs in the country.

*The constructivist approach to teacher education and professional development* as well as the *systemic approach* in addressing these issues help contribute to the development of practical strategies and methodologies that are specific to the context. Constructivism, as a theory of learning, has major ramifications for the goals education practitioners set, and the strategies to be adopted to achieve these goals (Fosnot, 1996). It calls for a shift in a way teacher education and professional development are conceptualized, approached and assessed. It moves away from the *imparting knowledge / skills paradigm* to that of facilitating learning processes and / assisting the learners to construct their own knowledge. Thus, this research contributes in a way towards the application of a systemic constructivist approach to improve the learning and professional development of TVET teachers in Ethiopia.

From empirical point of view, this research aims to contribute to the understanding of the *TVET teachers' perceptions* of themselves as learners and as professionals who need to be engaged in continuous learning and development process. The implications of their perceptions on the day- to-day teaching learning process in their schools, and their own development will be explored to gain insight for improvement. The research also provides accounts of how the TVET teacher education and professional development are undertaken as an individual and group learning processes in the Ethiopian context. Based on the contextual situations in which the TVET teachers find themselves, the factors that facilitate or hinder their learning and development would be pointed out. These factors, within the school and beyond, which are peculiar to the context, provide further understanding of the practices as related to the teachers' learning and development.

The theoretical and empirical discussion of this research with in the context of the Ethiopian TVET teachers would help

- To promote TVET teachers individual and group learning for their own development and better student learning and achievement.
- To provide practical strategies for improving the current TVET teachers education and professional development at their work places and in the institutions.
- To present alternatives for policy makers, teacher educators, researchers, and other stakeholders for improving the conceptualization and practices of TVET teacher education and development in Ethiopia.

## 1.6 The Research Objectives and Questions

### 1.6.1 The Research Objectives

This research has the following specific objectives to be achieved.

- To identify and determine the influence of the individual TVET teacher's self perception on their learning and development as adult learners and professionals.
- To identify the factors that the TVET teachers consider as having major influences in their individual and group learning and development
- To determine how the context , the process , and the content of teacher development practices impacted on TVET teachers learning and development
- To recommend strategic options, as part of an overall professional development framework, to support sustainable learning and professional development of the TVET teachers in Ethiopia.

### 1.6.2 The Research Questions

Based upon the overall aim and the specific objectives of the research, the following research questions are developed. This research attempts to provide answers for these questions based on the empirical evidences obtained from the TVET teachers themselves.

*Research Question One:* How do TVET teachers perceive themselves as learners and as professionals? What are the implications of the individual teacher's perceptions on their learning and development?

*Research Question Two:* How do TVET teachers engage themselves in learning and professional development activities?

*Research Question Three:* What contextual factors facilitated or hindered the TVET Teachers' learning and professional development?

*Research Question Four:* Which competencies are found critical for the TVET teachers' learning and professional development?

*Research Question Five:* What actions need to be considered to enhance and sustain TVET teachers learning and development in their context?

## 1.7 The Significance of the Research

There is a scarcity of research on improving the professional development of TVET teachers in Ethiopia (Biazen and Amha 2009; MoE 2006; Kawachi 2009). The few available studies on teacher education and development mainly focus on the teacher education system for those teachers who teach in the primary and secondary schools of the general education. The TVET teacher education is considered as separate program from that of the general education teachers.

Biazen and Amha (2009) pointed out the need for more studies and documentation in the TVET sector of the education. They stated

“Studies made on the technical and vocational education and training program are almost inexistent. Documentation, research and evaluation outputs appear to be neglected. This needs to be the concern of all stakeholders.” (P. 34)

The acute shortage of TVET- related research was also recognized as one of the strategic issues during the development of the national TVET strategy (MoE, 2006). The Ministry of Education stated in the plan,

“TVET development is currently hampered by a serious lack of relevant data and information about TVET issues [...] necessary to inform planning, monitoring and evaluation in the TVET system [...]. At the moment, TVET related research is provided mostly by international experts. Research capacities within Ethiopia are rather underdeveloped. In order to become self reliant in the long run, high quality domestic TVET research capacities need to be built in Ethiopia.” (P. 35)

Major teacher education reform programs implemented in the last few years, like the TDP / TESO, do not included TVET teachers’ education and professional development as their core components. Projects and reform programs in the TVET sector were also exclusively focusing on the curriculum development and the provision of technical skill trainings for the teachers. (MoE/ TESO, 2003)

Reforms in education systems that have not included teacher education and professional development as significant components in their programs risk their failure. Many agree on the critical role teachers play in the school and in the education system. The dual role teacher play, both as change agents and change subjects, would put them at the centre of reforms. As changes agents, they are expected to implement the reforms in the education system and at the same time they are required to change their perceptions and practices according to the reforms. Therefore, the significance of focusing on the teachers’ learning and professional development could be asserted from such point of view.

This research work will significantly contribute to the body of knowledge and empirical findings as related to the TVET teacher professional development in the Ethiopian context. Building upon the theoretical frame works in adult learning and life long learning grounded in a systemic constructivist approach, the results of this research is of significance to the many actors that are involved in the TVET teacher education and professional development.

TVET teachers, schools leaders, teacher training institutions, education experts and policy makers, researchers and others who are closely related to TVET and the professional development of TVET teachers would benefit from this study. Furthermore, professionals in the public and private TVET sector, who support, improve and manage adult learning in the workplace, curriculum developers, trainers, learning support staff and others benefit from the results of this research.

The findings of this research provide useful insights into the context in which TVET teachers' learning and developments occur, the individual and group based processes and activities, and content of these activities. It sets out the factors that have influenced the teachers' growth as professionals in the workplace and provide valuable information for those involved in improving or reforming the TVET teachers' professional development.

The various study results and international practices included in this research help to bring to forefront the different perspectives and debates in the teacher professional development in general and the TVET teachers in particular. Given the recent initiatives and reform agendas pursued in reforming the Ethiopian TVET teacher education (ECBP, 2008), this research contributes to the on-going efforts by providing theoretical perspectives and empirical results from a systemic constructivist approach towards teacher education and development. The findings and the specific recommendations that are forwarded in this research could provide options to reconsider some of the dominant views and practices in the current Ethiopian TVET teacher development system.

The significance of this research, for TVET teachers, policy makers, teacher educators and others, could be seen also from the perspective of influencing the perceptions and processes about teacher education as adult education, and strengthening the position of teaching as a profession. The findings of this research are useful in terms of its contributions to bring about a perspective change in the TVET teacher education and development designs, implementation and creation of an atmosphere conducive to leaning and development.

Furthermore, the findings of this research would also provide useful inputs for other researchers and future studies to further understand and improve the TVET teacher education and professional development in the country.

## **1.8 Limitations**

The limitations of the research are mainly related to the methodology used in the research data collection. Specifically the choice of the small sample population through non-random sampling method and the subjective nature of the data collected through in-depth interviews are considered as the main sources of limitation for generalizing the results of the research to all TVET teacher population in the country. In fact, the advantages of choosing these methods over the others have been discussed in detail in the chapter 4. However, the fact that the inherent weakness associated with these methods could not be overlooked or assumed as limitation free. Hence, cautions were made whenever extrapolation of the findings from this sample to all of the TVET teachers' population is sought.

In qualitative research where the objectives and research questions of the study do not lend the use of such methods as random sampling and quantitative analysis, it is essential to employ different types of non random sampling techniques and qualitative analysis methods.

The sample population of this research constitutes twelve teachers from TVET schools in Addis Ababa and Adama cities and their selection were based on achieving diversity within this group. This means the teachers have been selected as to represent different groups in terms of their teaching experience, field of study, and performance. It is assumed that this sample may possibly cover the various opinions and perspective among the TVET teachers and provide better insights into the information searched to provide answers for the research questions. A further assumption that was made is that the data obtained from this group is more likely to be similar if the sample were chosen in a random way. Notwithstanding the peculiarities of each of the TVET schools in the country, the data obtained from this sample is believed to reflect many of the salient and critical issues in the current TVET system of the country.

The data collection method used is a one-on-one in-depth interview with the sample population. This method of collecting data has many advantages in qualitative research. In fact, it requires that the interviewer should have the necessary skills to conduct the interview and illicit important data while reducing bias or lose of focus on the main theme. The data obtained from these interviews are assumed that they are true reflections of the TVET teachers on their learning and development.

All the responses of the interviews, though subjective in nature, are therefore taken to be the representations of the actual scenario in the learning and development process of the teachers at their school and other settings. The limitation of the in-depth interview may be also being considered in terms of whether the data obtained reflect the actual facts grounded in the day to day practices. Interviewees' honest responses, with less personal bias and the subjectivity, help the results of the research to be more representative of the actual situation.

The limitations that are discussed so far may influence the validity of the research in terms of the ability to generalize the results to the entire TVET teachers' population and also to other settings.

## **1.9 Delimitations**

The delimitations of this research are related to the choices made regarding the interviews, the types of TVET schools considered, and the theoretical perspective adopted in the analysis of the data.

In the development of the proposal and the design of the research, it was considered more important to take the perspectives of the TVET teachers themselves in describing, and critically reflecting on their own learning and professional development. Such a choice entails that the perspectives of other important actors in such process like the school principals , students , teacher educators , TVET teacher training institutions , policy makers and others may not be equally considered or represented in the data. In particular, this condition may impact on the results of the research, particularly if there are contrasting and differing perspectives on the TVET teacher education and Professional development.

All interviewed TVET teachers were from government TVET Schools in the urban areas. TVET teachers in the private schools, company training centres and in other skill development centres are not included in the research. Furthermore, the school principals and administrative staff with in the government TVET schools where the teachers were selected are not included as interviewees.

Despite a number of teachers' professional development approaches, the theoretical approach adopted in this research is mainly on a systemic constructivist approach to teacher education and development. As argued in the theoretical discussion sections of this research, the merits of such an approach over the others were taken into account in the analysis and conclusions made in the research.

These choices and decisions of inclusions and exclusions were made in an attempt to focus the research and limit its scope and allow a degree of feasibility to data collection and analysis using the qualitative research approach. Thus these boundaries set in this research indicate its delimitations.

## **1.10 Summary**

This chapter reviewed the historical development and current status of teacher education in Ethiopia in general and the TVET teacher education in particular. This review provides insight into the major constraints facing the teacher education system in Ethiopia in general, and the learning and professional development activities of the TVET teachers in particular.

The research problem is based on the learning and professional development challenges of the Ethiopian TVET teachers. The Ministry of Education assessments of the learning and professional development of the TVET teachers is well described in its report which stated that “Further training and continuous upgrading for the existing workforce are only partially in place. A meaningful structure for steady adaptation to workforce demand and life-long learning is still missing.” (MoE/ESDP III, 2005, p .16)

TVET teacher education is relatively new program in the Ethiopia teacher education system as it was only in the mid 1990s that the country has launched its first TVET teacher education program at Bachelor degree (3- year university education) level. This limited experience at a national level and the scarcity of research on the professional development of TVET teachers (Biazen and Amha, 2009; Kawachi, 2009; MoE, National TVET strategy, 2006, p 35) indicate the relevance of conducting research works in the field.

The main aim of this research is to contribute both theoretically and empirically towards the improvement of the practices of professional development of the TVET teachers in Ethiopia. Based on this major goal , this research has further formulated four specific objectives: These are (1) To identify and determine the influence of the individual TVET teachers’ self perception on their learning and development as adult learners and professionals , (2) To identify the factors that the TVET teachers consider as having major influences in their individual and group learning and development , (3) To determine how the context , the process , and the content of teacher development practices impacted on TVET teachers learning and development (4) To recommend strategic options which support and facilitate a sustainable learning and development of the TVET teachers in Ethiopia.

## *Chapter 1 Introduction*

Based on these objectives of the research, five research questions are formulated. This research attempts to provide answers for these questions based on the empirical evidences obtained from the TVET teachers themselves. This research work will significantly contribute to the body of knowledge and empirical findings as related to the TVET teacher learning and professional development in the Ethiopian context. It is anticipated that TVET teachers, schools leaders, teacher training institutions, education experts and policy makers, researchers and others who are closely related to the professional development of TVET teachers would benefit from this study.

The choice of the small sample population through non-random sampling and the subjective nature of the data collected through in –depth interviews are considered as the main sources of limitation for generalizing the results of the research to all TVET teachers in the country

In the development of the proposal and the design of the research, it was considered more important to take the perspectives of the TVET teachers themselves in describing, and critically reflecting on their own learning and professional development. This delimitation entails that the perspectives of other important actors in such process, like the school principals, students, teacher educators, TVET teacher training institutions, policy makers and others may not be equally represented in the data. In particular this choice may impact on the results of the research particularly if there are contrasting perspectives on the TVET teacher education and professional development.

# CHAPTER TWO

## THEORETICAL BASIS FOR PROFESSIONAL DEVELOPMENT OF TVET TEACHERS

### *Introduction*

This chapter has six parts and provides the basic theoretical frameworks upon which this research work is grounded. The first part deals with teachers' professional development: its features, significances, and the factors affecting the process. The second part focuses on the theories related to learning and professional development on the basis of constructivism. The application of constructivism to TVET and how this approach is appropriate to today's requirement in the work places and the demands of the learning and developments of the work force are discussed. The section on the constructivist approach to technical and vocational teacher education also provide further insight in to the relevance of the approach.

Discussion about the concept of competence, key competences and examples of competences requirement for TVET teacher are found in part three. The next part examined the various themes related to 'teachers as adult learners and professionals'. These include some of the adult learning theories, the significance of teachers' beliefs and perception in their learning and development, teachers' motivation for development, as well as the debates on teaching as a profession.

The roles of colleagues, school culture and leadership on the teachers' professional development are elaborated in the fifth section of this chapter. Transforming schools into learning organizations and the development of community of learners within the school is a central focus of this section. The last part of this chapter stresses on the relevance of systemic constructivist approach to professional development. A short summary of the chapter is also given at the end.

## 2.1 Teacher Professional Development

### 2.1.1 Features and Characteristics of Professional Development

Teacher professional development has been defined in a number of ways, providing different emphasis on a range of issues inherent to its complex nature. Darling-Hammond and McLaughlin (1996) defined teachers' professional development as

“Deepening teachers’ understanding about the teaching/ learning process and the students they teach [...] and must begin with pre-service education and continue throughout a teacher’s career”. They state that “effective professional development involves teachers both as learners and teachers, and allows them to struggle with the uncertainties that accompany each role.” (P. 203)

Their definition stresses the view that teachers play both as teachers and as learners themselves. It also indicates that the dual role teachers’ play extends over their career life and is one of the means to overcome the various challenges of teachers in their profession.

Glatthorn (1995) described professional development of teacher as a growth achieved by a teacher “as a result of gaining increased experience and examining his or her teaching systematically” and emphasised that not only formal experiences (like workshops or mentoring) but informal experiences (like readings, watching media) also contribute to professional development of the teacher. The inclusion of both formal and informal experiences that teachers encounter in their work life as part of their professional development provided a broader perspective<sup>14</sup> of teachers’ professional development. Such inclusion allows that the traditional ‘*staff development*’ or ‘*in-service* programs’ need not to be the only route to teacher development but all other opportunities whereby the teachers grows as an individual learner and as a professional. This signals a newer era or shift in the understanding, design and implementation of the teacher professional development.

A wider perspective to teachers’ professional development, beyond the traditional means, prompted the need to consider the personal, contextual, content and process factors in the design and implementation of the development activities. Villegas- Reimers (2003) stated that such a wider perspective in the way professional development is viewed has been considered by other scholars “as the *new image* of teacher learning, *new model* of teacher education, *a revolution* in education,

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<sup>14</sup> Glatthorn stressed that the concept of professional development is broader than that of the definition of career development (the growth in career cycle) and that of staff development (which is often a formal in-service program).( Glatthorn , 1995, p 41 )

and even a *new paradigm of professional development*.” (Villegas – Reimers, 2003, p 12; Cochran-Smith and Lytle, 2001; Walling and Lewis, 2000)

Many Writers on the issues of teachers’ professional development has suggested a number of characteristics that describe the newer or modern approach to teacher professional development. Villegas – Reimers (2003, p 13-14) listed seven characteristics in contrast to the traditional transmission based approach, as described below.

1. Professional development need to be *based on constructivism* as opposed to the ‘transmission-oriented model’. Accordingly, the implication of this change in approach is that the teachers are always and at any stage of the process considered as *active learners* (Lieberman, 1994; McLaughlin and Zarrow, 2001) who are engaged in the concrete tasks of teaching, assessment, observation and reflection. (Dadds, 2001; Darling-Hammond and McLaughlin, 1995; King and Newmann, 2000)

2. Professional development need to be considered not as a one-time event but rather as a *long-term process* where by teachers learn from series of learning events and experiences.(Cohen, 1990; Ganser, 2000; Lieberman, 1994; Dudzinski *et al.*, 2000 )

3. Effective professional development is *context – specific process* and need to be highly related to the teachers’ day-to-day work life and school settings. The focus on *school- based* development activities provide a much better development opportunities and also position schools as communities supporting continual learning and development of the teachers.

“Schools are transformed into communities of learners, communities of inquiry (McLaughlin and Zarrow, 2001), professional communities (King and Newmann, 2000) and caring communities (Jenlink and Kinnucan- Welsch, 1999) because teachers are engaged in professional development activities (Lieberman, 1994). The most successful teacher development opportunities are ‘on-the-job learning’ activities such as study groups, action research and portfolios (Wood and McQuarrie, 1999).” (Villegas – Reimers (2003, p 13)

4. Professional development is considered as a sustained *culture building process*. Such a process requires trusting, respecting and empowering the teachers themselves. Likewise, the professional development activities need to be conceived not as simple skills or competence acquisition activities but as a part of the longer cultural change process. A number of writers have associated such professional development process *to school reform* (Guskey, 1995b; Loucks-Horsley, 1998; Cochran-Smith and Lytle, 2001). Such processes require the need to perceive *teachers as*

*professionals* who would be provided by adequate support from the school or the reform program in pursuing their own and the school development.

The UNESCO/ ILO joint publication on TVET for the 21<sup>st</sup> century ( 2001) described the significance of teachers continuous learning “...to ensure the high quality of technical and vocational education, priority should be given to the recruitment and initial preparation of adequate numbers of well-qualified teachers, instructors/trainers, administrators and guidance staff, and to the provision of continuous professional upgrading throughout their career, and other facilities to enable them to function effectively”.

5. Professional development provides opportunities for teachers to acquire newer knowledge, skills and experiences based on their prior knowledge base upon entering in to the profession. The newer perspective conceives teachers as *reflective practitioners* who build newer understanding, practices and expertise through constant reflections. (Darling-Hammond and McLaughlin, 1995; Schifter et al., 1999; Dadds, 2001)

6. Professional development activities are more of *collaborative activities* among teachers and others. Clement and Vanderberghe (2000 ) emphasized that professional development are most effective through interactions among teachers , between school administrations , parents and other members of the society and the teachers (Grace 1999). Therefore, the social nature of learning (Jarvis, 1987) and the importance of collaboration with others are considered as one of the salient characteristics of professional development.

7. Professional development models are results of search for *an optimal mix* (Guskey, 1995a, p. 117) rather than an attempt to achieve one best model or set of methods and techniques that are applied in various settings (Scribner, 1999). The uniqueness of each individual and contextual setting in which the teachers find themselves need to be taken into account when designing and implementing development activities. These situations underline the fact that not only professional development is closely interwoven with the individual, organizational and environmental contexts but also reveals the complexity of the process itself.

Other definitions of the professional development concept strongly linked it to professional goals and continual improvement of their services to the students. For example, Hoyle and John (1995) defined professional development as “the process by which teachers acquire the new knowledge, skills, and values which improve the services they provide to clients” (p. 17). In the sense of such a definition, teachers’ learning is regarded mainly as a professional learning.

## 2.1.2 Factors Affecting Professional Development of Teachers

Schiff et al. (1997), while developing criteria for quality professional development of science and mathematics teachers in USA, classified the various factors that influence teachers' professional development into three groups: context, process and content. They argued that

“Quality professional development is a dynamic and fluid process. If appropriate structures are in place (context), a variety of best practices (processes) are used, and appropriate knowledge and skill acquisition are occurring (content), then professional development will impact student achievement.”

(p. 6)

Similar perspectives are also found in the literatures that deal on the professional development of teachers. For example, Villegas-Reimers (2003) and other authors stressed that “when looking at professional development, one must examine the content of the experience, the process by which the professional development occurs, and the context in which it will take place” (P.11).

### 2.1.2.1 Contextual Factors

The contextual factors in the teacher professional development include those factors related to the wider perspective of the societal, organizational, school work culture, prevailing systems of learning and development and others. These factors in general address the question of *why*, *where* and *when* the learning and professional development takes place. Woods (1994) stressed that such factors need to consider the framework of the social, economic and political trends and events. These contextual factors influence teachers' learning and development and need to be well understood and considered while planning their learning and development activities. In fact, the complexity of the variables and their interrelationship show the difficulties associated with such initiatives. Therefore, the enormous variability leads to a situation where there is no one single best option or solutions towards a search for the best model or system of professional development for teachers. Every system or model needs to be only grounded to its unique setting which reflects its context.

Villegas – Reimers (2003) described the relevance of contextual factors and the non-existent of a one-fits-all model as there is no single form or model of professional development better than all others and which can be applied successfully in any institution or context. Schools and educators must evaluate their needs, cultural beliefs and practices in order to decide which professional development models would be most beneficial to their particular situation. It is clear in the literature that different factors within a workplace (which is one of the significant variables of ‘the context’), such as school structure and culture, influence the teachers' sense of efficacy and professional motivation. (p. 15)

Contextual factors in teacher professional development have profound influences since cognition and learning are activities which are situated, social, and distributed. Rooted in the thinking of Dewey, Vygotsky and others, theories of cognition explicitly posit that

- Knowledge is inseparable from its context and activities within which it is developed. Both the physical and social contexts are an integral part of an activity that takes place as the activity itself is an integral part of the learning that takes place within it. Hence cognition is situated.
- Interactions with the people in one's environment are major determinants of both what is learned and how learning takes place. The impact of social interactions as well as the social context under which these takes place needs to be taken into account to understand and plan teacher development activities.
- Learning activities are often collaborative in nature rather than an individual process as the learner depends on resources from others and hence are distributed across people and their environments. (Piaget 1985 , Resnick 1991 , Borko and Putnam, 1998 , among others )

### 2.1.2.2 Process Factors

The *Process* factors are related to the ways various learning and development activities take place. It is centred on the question *how* these development activities are designed, executed, and assessed in terms of the achievement of their intended goals. Reinmann - Rothmeier and Mandl (1996) asserted that the process that facilitate life long learning in adults need to be based on constructivism. Thus the learning process should be considered as a social process where learners not only engage actively in the process but also are in charge of the direction and control of the process.

Arnold (2005a) stressed on the need for the integral development of the technical, methodological and the social and communication competences. He further asserted that such interdisciplinary qualifications could be achieved through a careful selection and application of appropriate didactical designs that facilitate self-directed learning process and activities.

To this end, the process of training or professional development should incorporate more than the transmission – mode of teaching. This calls for the need for applying wide range of spectrum of teaching-learning methods rather than focusing on the instructional mode, which often gives

emphasis to the technical or specialized competences and at times stand as an obstacle to further learning itself.

Arnold (2005a) noted the importance of using action-oriented methodologies in order to facilitate the integration of different competences necessary for student learning and wrote:

“ Teaching that is almost exclusively centred on technical and specialised contents and frontal methodologies hinders, in the truest meaning of the word, the development of integral occupational action competencies in terms of comprehensive qualifications consisting of technical, specialised, methodological, social and leadership competencies. In order to be able to develop the students’ methodological capacities as well as the social and leadership competencies, it is essential to include live and action-oriented learning methodologies in addition to the technical/specialised knowledge and skills. In order to be able to develop key qualifications, the resolute step should be taken to cast aside the *dead* learning culture of frontal teaching and transmission of technical/specialised contents, which does not allow the learner to have any other role than that of an attentive listener. The *dead* learning culture of frontal teaching and transmission of technical contents should be replaced by a *live* learning culture of self-organised learning. [...] The spectrum of university learning and teaching methods has to be expanded so that, along with technical and specialised competence, a methodological and social as well as leadership competence can emerge. If one compares the methodologies of transmitted learning with those of action-oriented or experience-oriented learning, it can be observed that only action-oriented methodologies can guarantee the integration of the three necessary dimensions of occupational action competencies.” (Arnold 2005a, p. 95)

The process of teachers’ learning at the teacher training institutions as well as their professional development process therefore need to be undertaken in a environment which promote *Live* learning culture which in turn require a change in the learning frame work. Basic assumptions held with regard to the frontal teaching or the *dead* culture needs to be examined and replaced by the characteristics of *live* learning. Table 6 shows the comparison of the divergent views between the two types learning.

Dead Learning	Live learning
The mere presentation of information by the teacher automatically leads to learning.	Relevant learning always includes the transformation of the individual. Real learning is often exemplary Learning.
Learners cannot be entrusted with the responsibility of their own learning process.	Learners possess –as all human beings do– a natural potential for learning that can be promoted and fully developed through a better educational organisation.
Learners are best considered as objects that can be manipulated and not as persons.	Learning that is based on personal initiative, with the involvement of the person as a whole –feelings as well as intellect– is the most effective, and consequently, the one with the most lasting learning effect.
Examinations are a suitable means to find out what occupational (vocational) qualifications have been acquired by the learners.	Lasting and significant learning takes place when learners perceive the learning contents as relevant to their personal objectives.

**Table 6 From *Dead* learning to *Live* learning according to C. Rogers (Arnold, 2005a, p 97)**

Arnold (2005a) further stressed the importance of distinguishing the didactic aspects and criteria suited to adult learning which need to be taken into account in the design of such programs. He suggested ten didactic criteria from five didactic aspects as depicted in Table 7.

Didactic aspects	Didactic Criteria
Personal didactic choice	1. Learning objectives/contents/ topics can be jointly defined.
	2. Personal learning projects can be integrated and further developed.
Didactic self-organisation	3. Organisation of learning is flexible in terms of time and methodology, and is open to many ways of learning.
	4. Targeted learner, activity and self-exploration methods are applied.
Communicative learning that is open to experiences.	5. Consciously linked, as far as possible, to life situations and/ or professional experiences.
	6. The social and communicative aspects of the learning process are intentionally promoted.
Justification of the technical/ specialised contents	7. The selection of contents is based on curricular, didactic and theoretical-pedagogical aspects.
	8. The offered learning contents are reduced and rendered “comprehensible”.
	9. The offered learning contents can be explored through self-activity (Activity thesis).
Extra disciplinary Justification	10. Action-based presentations of problems are explicit topics.

**Table 7 “10-FROM-5” didactic aspects and criteria of learning suited to adults (Arnold 2005a, p. 54)**

### 2.1.2.3 Content Factors

The *Content* factors refer to the new knowledge, skills, attitudes and experiences that teachers acquire both in their field of studies as well as in the pedagogical and didactic aspects. These factors focused on the question of *what* of the teachers’ learning and development. Arnold (2005a) argued that learning in preparation for a profession requires not only of developing technical knowledge and skills (specialized competences), but also learning and working techniques (methodological competence) and the capability for team work and communication (Social and leadership competence). He asserted that the development of these competences is interdependent and could not occur in isolation from one another, thereby emphasising the need for an integral development of the three aspects of a comprehensive occupational action competence.

Therefore, content wise the development of comprehensive occupational competence by the teachers needs to be taken into account when dealing about the professional development of

teachers in both their initial teacher education programs and professional life. The need for moving towards teachers' development of the comprehensive competence calls for not only changes in the content of their curriculum in the teacher training colleges and universities , but requires a fundamental change in their ways of doing things ( cultural change ), and most importantly changes in their didactic arrangement to facilitate self-organized learning activities. ( Arnold, 2005a )

## **2.1.3 Significance of Professional Development of Teachers**

### **2.1.3.1 Impact on Teachers' Beliefs and Practices**

Professional development has significance not only for the individual teacher motivation and the gaining of the intrinsic and extrinsic rewards, but it also “has a significant positive impact on their own beliefs and practices, students' learning, and on the implementation of educational reforms.” (Villegas – Reimers, 2003, p19)

Research results indicate that professional development activities have impact on teachers' perception and beliefs. In fact, the relationship between teachers' beliefs and their practice is not a linear one, rather a dialectical one, moving back and forth between change in belief and change in classroom practice. (Cobb, Wood and Yackel, 1990; Franke *et al.*, 1997; Thompson, 1992, in Nelson, 1999, p. 6)

The results of the study by Wood and Bennett (2000), with early childhood teachers, showed that those teachers involved in the collection of data concerning their own theories of play and their relationship to practice have changed their own theories or teaching practices, or even both. A number of other studies<sup>15</sup> support the relationship between teachers' professional development activities and the changes in teachers' beliefs and practices (Kettle and Sellars, 1996; Kallestad and Olweus, 1998; Young 2001). But the challenge and the need for more research lies on precisely identifying which professional development activities are directly attributable to bring about changes in teachers beliefs, perceptions and practices. (Guskey 1997; Baker and Smith, 1999)

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<sup>15</sup> Supovitz and Turner (2000) report that data from the US National Science Foundation Teacher Enhancement program showed that the degree of professional development to which teachers are exposed is strongly linked to both inquiry-based teaching practice and investigative classroom culture. Supovitz, Mayer and Kahle (2000) in a separate study involving data collected in Ohio, USA, found that as a result of teachers' involvement in intensive professional development activities: “Teachers' attitudes, preparation, and practices all showed strong, positive, and significant growth from pre- professional development to the following spring. Furthermore, these gains were sustained over several years following [the teachers'] involvement.”( Villegas- Reimers , 2003 . p22 )

### **2.1.3.2 Impact on Students' Learning and Achievement**

There are diverse views and approaches on how students' achievement be measured, and too often the impact of professional developments are not assessed in terms of student learning. However, there are a number of evidences that suggest links between teachers' professional development with students' learning and also correlation between the improvements of teachers' practices on the student achievements. Research works, for example by Falk 2001; Grosso de Leon, 2001, have indicated that the more professional knowledge the teachers have, the higher the level of achievement of their students.

Likewise, the study by Cohen and Hill (1997) showed a link between improved teaching practices by the teachers has led to the increase in the level of student assessment results. "Teachers who participated in sustained curriculum-based professional development reported changes in practice that, in turn, were associated with significantly higher student achievement scores on state assessment." (Darling-Hammond, 1999, p. 32)

The role of teachers' professional development in changing their teaching methods and practices, and the positive effects of these changes on their students' learning are evidenced also by the study of Borko and Putnam (1995). Their study revealed "powerful evidence that experienced teachers' pedagogical content knowledge and pedagogical content beliefs can be affected by professional development programs and those changes are associated with changes in their classroom instruction and student achievement." (p. 55)

### **2.1.3.3 Impact on the Success of Educational Reforms**

For variety of reasons and purposes, educational reforms at national, regional, district or at a school level are often implemented. The changes and transformations often envisaged in these reform programs require the active involvement of the major stakeholders such as teachers, school administrations, policy makers, the general public, governments and many others.

The dual role of teachers in education reforms , both as an implementer of change and also as one of the variables of change in the reform process position them as a critical success factor in the reform process. Therefore, if improvements and changes are to be continually sustained in educational reforms, the role of the teachers is far more than important. On one hand, the

## *Chapter 2 Theoretical Basis for Professional Development of Teachers*

Continually changing and dynamic nature of today professional environment requires teachers to keep themselves abreast of these changes and learn new ways of doing things. On the other hand, they are also responsible for facilitation of learning and development of relevant competences of their students.

Educational reforms not only pose some demands on the teachers' knowledge, skill, judgment, and day-to-day practices, but also changes in perceptions, values and perspectives regarding the school systems, educational philosophies and other broader view points. Teachers' role as implementers of the reforms also demand them that they need to have the understanding of the underlying assumptions of the reforms, the social and historical context underpinning them for their successful implementations. Professional development may provide teachers with the necessary knowledge and skills for effective implementation.

“Regardless of the scope of the reform, the relationship between educational reform and teachers' professional development is a two-way, or reciprocal, relationship. Educational reforms that do not include teachers and their professional development have not been successful. Professional development initiatives that have not been embedded in some form of reform of structures and policies have not been successful either.” (Villegas Reimers, 2003, P. 24)

There are many reports that showed the success or failure of education reforms being closely linked to the teachers' beliefs and practices in the system. Several studies show education reforms have failed for a number of reasons including:

- The lack of input from the teachers in the design stage of the reform because the teachers have not been actively involved and their contributions are not sought and are not part of the process from the very beginning (Morris, Chan and Ling, 2000; Walker and Cheong, 1996).
- Reforms which teachers perceived them as a threat to their profession or autonomy and leading to heavier workloads, confusion and lack of respect (Day, 2000; Klette, 2000; Chadbourn, 1995).
- Reforms whose principles and underlying assumptions are different from teachers' existing attitudes and mindsets and considered as threats by teachers.

On the other hand, educational reforms that have centred on teachers' professional development have been extremely successful even at national levels due to the inclusive nature of the process and the engagement of other stakeholders (Dahlstrom *et al.*, 1999; Robinson, 1999; Samuel, 1998). It is true that reforms that are supported by teachers do not necessarily succeed unless the reform also

brings about changes in the context, structure and culture of the schools and systems in which they function. The absence of changes in the overall educational system would jeopardize teacher efforts in the reform process as well as the achievement of the goals of the reform itself. In the same manner, teacher professional development activities that are not supported by all other actors in the system and not well integrated with the existing system are doomed to fail (Futrell *et al.*, 1995; Wideen, 1992; Schifter *et al.* 1999). Therefore, educational reforms and teacher professional development must go hand in hand for either or both to work well, as they share a symbiotic relationship.” (Villegas Reimers, 2003, p24)

## **2.2 Learning and Professional Development on the Basis of Constructivism**

### **2.2.1 Constructivist Approach to Learning**

Learning theories help the understanding of what is learned or what characterizes a learning process. There are a number of learning theories, but neither of these theories alone or in isolation could provide the full picture of adult learning. As there is “ no one adult learning theory that successfully applies to all adult learning environments” (Frey & Alman, 2003 , p 8 ) , the different learning theories "each of which contributes something to our understanding of adults as learners." (Merriam & Caffarella, 1999, p. 271)

Learning can be defined as the competence-building acquisition of knowledge, capacities, and skills (Arnold, 2005a, p.39). Learning could happen in formal or informal settings, intentionally or unintentionally (incidentally). Many studies argued that much of the competence acquisitions in adults are acquired through informal learning (Vaill 1998; OECD 1977; Laur-Ernst 1988 in Arnold 2005a).

However, learning concepts and theories are too often based on the formal type of learning and learning processes and not so much on the informal learning. Arnold (2005a) stressed the need for a more focused study and understanding of the “informal and self –guided learning processes in daily life, in the work environment and in real life practice” (P.39).

In general, learning theories could be grouped as behavioural, cognitive, and constructivist<sup>16</sup>. The behavioural learning theories posit learning as a transmission of knowledge expressed through a change in behaviour as a result of selective reinforcement of the individual's response to external stimuli. The cognitive theories also support the transferability of knowledge but assert learning as an individual thinking process whereby learners actively engage in acquiring new understanding, knowledge and skills. Cognitive theories give much emphasis on the role of thinking or cognition in the process of learning from personal experience and interactions with others in the learning context. (Brown, 1998; Billett 1996, Murphy 1997b)

Constructivism is founded on the work of Piaget, Dewey, Vygotsky, Ernst von Glaserfeld, Kant and Kuhn and others (Phillips, 1995; Fosnot, 1996). Constructivist learning theories posit that knowledge could not “be transported from the outside to the inside”, but rather represented as “a restructuring process within a closed system” (Luhmann 1987, p. 60, in Arnold, 2005a). Hence what can be best achieved in teaching is not the creation of knowledge and competence in others but the creation of an environment to “stimulate and facilitate this restructuring process in the learner. Accordingly learning is created by the learner through the construction of knowledge as a result of interpretive interaction with and experiences in the environment. As Arnold (2005a) wrote,

“Constructivist learning theories are the expression of a “change in the trends of educational psychology” (Reinmann-Rothmeier and Mandl 1997, p. 74): learning is no longer considered an individualised acquisition of information and behavioural change, but is bound to the complex mesh of biological factors, socio-cultural integration and emotional and motivational processes. Within the framework of such multi-perspective considerations, learning is presented as a “construction of knowledge“. “Learning more means developing knowledge and competencies – on the basis of ‘biological disposition’, individual experiences and existing knowledge structures – which can be useful and usable in real-life situations. New information is connected to previous knowledge, it is interpreted against the background of one’s own experience and thus “networks” are constructed that can train to act in concrete situations” (Arnold 2005a, p41).

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<sup>16</sup> There are various ways of categorizing learning theories. For example, Baumgartner (2003, p2) stated “Learning theory can be divided into the schools of behaviourism and constructivism.” Dubin and Okun (1973) described that behaviourism, neo-behaviourism and cognitivism, and Humanism as major learning theories. Gagnon and Collay (1997) viewed constructivism as perspective based on cognitive theory. Arnold (2005) described behavioural, cognitive, constructivist and subject based learning theories as major learning theories. The descriptions of learning theories, models, paradigms, approaches, types, and processes may lead to difficulties in the use of a consistent semantics or terminologies through out in the literature of teaching and learning theories.

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Some authors, for example Simpson (2002), argue that constructivism is not a theory, but rather an epistemology or philosophical viewpoint about the nature of learning. Schunk (2004) also holds a similar view and asserted that constructivism needs to be understood not as a unified theory, but as one having three different perspectives within it: namely exogenous, endogenous, and dialectical perspectives.

“The exogenous perspective holds that the environment influences beliefs through experiences, exposure to models, and teaching; thus learning is a reconstruct of the environment and what is learned is only accurate to the extent it reflects the environment. The endogenous perspective holds that learning arises from previous learning and not directly from environmental stimulation. Thus learning is not merely a reconstruct of the environment but a cognitive abstraction of all that was previous learned. The dialectical perspective holds that learning is social in nature and occurs from interactions between people in the environment. This is very similar to the exogenous perspective except that adding the social variable allows some of the abstraction found in the endogenous perspective” (Campbell, 2008. p 2).

Others described constructivism as a philosophy (Dougimas, 1998) and a way of thinking about knowing, not another epistemology (Tobin and Tippins, 1993). There are a number of forms of constructivism which differ particularly in terms of the relative emphasis placed on the role of the ‘individual’ versus the ‘social’ in the creation of knowledge (Bickhard, 1998; Phillips, 1995). These variations or forms<sup>17</sup> of constructivism include cognitive constructivism, radical constructivism, situated constructivism and co-constructivism (symbolic interaction or social constructivism). Some would argue that cognitive constructivism and social constructivism are “the more generally recognized and written about flavour of constructivism” (Campbell, 2008, p 3)

Despite the different forms of constructivism, all of them share the following central tenets:

- new knowledge is built on the foundations of previous learning
- learning is an active rather than passive process
- language is an important aspect of the learning process , and
- learning environments should be learner-centred (Reinmann –Rothmeier and Mandl, 1996; Phelps, 2002, p 2)

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<sup>17</sup> Martin Dougiamas (1998), in his article *A Journey into Constructivism*, discussed and shared his personal experience using six forms of Constructivism: Trivial constructivism, Radical constructivism, Social constructivism, Cultural constructivism, Critical constructivism, and Constructionism.

## 2.2.2 Implication of Constructivist Learning Theories on Teaching and Learning

Many writers posit that adult education in general and professional development activities in particular need to be based on a constructivist theory of learning (Reinmann -Rothmeier and Mandl, 1996; Lieberman 1994). The adoption of a constructivist approach or any other particular point of view would have implications to the underlying assumptions about the various aspects of the learning and teaching process.

Arnold (2005a, pp.65-73) described the implications of constructivist view points to the educational sciences and practices, and notably in connection with the relativistic and subjective nature of “Knowledge”. He drew a number of conclusions and their ramifications as related to the process of learning and the roles of the teacher and the learner in a constructivist approach to adult education. Some of the conclusions he drew are discussed below.

### *“The Pedagogical Consequence: Farewell to Didactic Linearity”*

Based on the constructivist approach to knowledge construction, teaching is not considered as a direct cause of learning and the process of teaching-learning is best understood as a ‘self-contained’ development process of the teacher and the learner. Therefore, learning is the process of re-interpretation of what is known “ or at least that which is already known flows continuously into the learning process, learning does not consists the mere adoption and acquisition of what is new”. Therefore it will be essential to design an ‘open’ curriculum that ensures the active involvement of the learner in the process.

The linear transmission of knowledge from the teacher to the learner could not be justified, as the teacher can not influence the cognitive process of the learner. What teachers need to do is to offer knowledge and providing different option to choose from. This in turn requires that teachers not only need to acquire technical, didactic and methodological competences, but also an ‘active attitude’ towards their own specialized and technical knowledge. Acquisition of such an active attitude implies that teachers should recognize that there is no such thing as “ the correct” knowledge but rather a construct , temporal and incomplete and they often need to engage in the process of continuous exploration and development of their own knowledge. Also it requires teachers to realize that their chance of transmission of knowledge to the learner is very limited. It can be concluded that from the constructivist point of view, for teachers, “the pure transmission of knowledge is far less important than the processing of knowledge, the handling of knowledge, recognizing its constructive and relative nature.” (p. 67)

**“The way is the goal: Methodological Competence and Didactic Professionality”**

Constructivist view of the teaching learning process places much emphasis on the role of the teacher and the learner. Teachers need to make use of appropriate mix of methods which could facilitate the active engagement of the learner in the process of constructing their own knowledge throughout the process. This requires the design of a didactic setting whereby active learning methods and corresponding tasks for such methods be designed to support the learner independent knowledge exploration process. So what is most important is not the methods *per se* rather how actively the learners are engaged in the management of the construction of their knowledge. (Arnold 2005a, p.68)

**“Self-guided and Action-oriented Learning”**

The responsibility of the learner in the construction of knowledge is clearly emphasised in the constructivist view point. Learners need to actively involve themselves in the process of searching and selecting relevant information, managing this information and constructing knowledge based on their earlier knowledge and experiences. It is the effort and active engagement on the part of learner in such knowledge construction process that facilitate the learning process. Accordingly, learners should to take their responsibilities for their self guided or self organized action -oriented learning process.

In a learning process characterized by action-oriented learning, the role of the learners in doing practical actions on their own is of prime importance. Teachers should nurture, rather than intervening, in the autonomy, self – determination, and self guided action-oriented learning of the learners as to facilitate learners’ interaction with their environment and society. (Arnold 2005a, p. 68-69)

**“The New Demands on the Role of the Teacher: Pedagogical Serenity”**

Constructivist approach to a learning process requires the shift of role for teachers from that of knowledge *provider* or *transmitter* to one that creates the conditions necessary for the live and self organized learning process of the learners. Such a change in the role of the teachers does not imply that their role has to be diminished or considered unimportant. Rather the new role that professional teachers should play in such a new learning process emphasises their responsibilities as facilitators to be engaged in the planning, facilitating and supporting a live learning process. The building blocks for these newer roles of teachers are

“an open –mind attitude and multifaceted learning arrangements, the preferred application of learner and activity- centred methods, the conscious and systematic promotion of the self-exploration

competences on the part of the learners and the reduction and vitality of the teaching inputs – which are unfortunately or meaningfully still necessary.” (Arnold 2005a, p 72)

The need for a new pedagogical approach by teachers in their practice is also emphasised by many other writers (Putnam & Borko, 2000; King and Newman, 2000; McLaughlin 1997; Bransford, Brown, and Cocking, 1999). They stressed on the need for the teachers to play a new role by developing stimulating learning environments to facilitate their students’ construction of knowledge. They further argued that the traditional teacher development approaches are not sufficient, and in many cases are even antithetical, to effective learning based on constructivism.

Kwakman (2003) discussed two different perspectives regarding how teachers could acquire the competences necessary for their new role as facilitator of their students learning.

“Although there is much agreement about the limitations of this traditional professional development approach, there is less agreement about the way teacher learning has to be organized otherwise. Opinions and solutions regarding alternative ways to support teacher learning seem to depend on the kind of theoretical perspective taken. In the literature two different theoretical perspectives are prevalent that help to understand different approaches to teacher learning: the cognitive psychological perspective and the professional development perspective” (p.150).

The cognitive psychological perspective emphasises that teachers’ knowledge construction and self-directed learning requires their own active engagement in constructive learning process which in turn is mainly influenced by the teachers’ existing knowledge and beliefs and the particular contextual situations in which they find themselves. Therefore, adopting newer role by the teacher involves transformative learning that result in changing existing beliefs and attitudes about the teaching - learning process as well as about the learners and themselves as teachers. Accordingly, teachers learning need to focus on acquiring this new knowledge and beliefs, particularly by supporting them for changing their existing knowledge and beliefs in a favourable environment where they themselves take responsibilities for their learning. Putnam and Borko (2000) suggest that the appropriate environment for such teacher learning should be chosen depending on the goals of the learning process and often multiple learning settings, both at the workplace and outside, are recommendable. However, it places more emphasis on the role of the teacher educators (or staff developers) and the learning process outside the school setting as newer learning experiences is gained outside the workplace as well.

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On the other hand, the Professional development perspective gives emphasis the need for teacher to learn new conceptions regarding the construction of knowledge and the pedagogy in order to discharge their newer roles as facilitators. This perspective pays special attention to the workplace context as a primary and most suitable place for the professional development of teacher in acquiring competences that are necessary for their new roles. This perspective favours the professional communities (such as intra- and inter - school professional communities, networks, partnerships and collaborations with other institutions) as important learning settings conducive for professional development of teachers as new competences are acquired through practice.

Both perspectives call for a newer competence development for teachers to adopt the constructivist approach to leaning and the significance of the situated learning, but differ on their degree of emphasis on the role of workplace as settings for the learning and the role of teacher educators. The cognitive psychological perspective give emphasis to the role of the teacher educators and learning outside the schools where as the professional development pays particular attention to the teachers themselves as key actors in this process in a professional community settings. However, both perspectives value the significance of developing schools in to places for the teachers to learn and develop. (Kwakman, 2003)

### **2.2.3 The Contribution of Constructivist Theory to Teacher Education and Practice**

Constructivism, as a theory of learning, has major ramifications for the goals teachers set, the strategies they adopt and the methods of assessment they use (Fosnot, 1996). Constructivism might be best understood by contrasting it with instructivist approaches whereby teachers identify what is to be taught (learning objectives), how it is to be taught (learning sequence and strategies) and determine if the teaching has been effective. Constructivist approaches, however, emphasise the importance of students raising their own questions, generating their own hypotheses and models and testing these by themselves.

The contribution of constructivist theory as an alternative paradigm in teacher education and professional development could be explained in terms of its premises regarding knowledge, and the perception of reality (Keiny, 1994). Knowledge is viewed as something that does not exists by itself but dependent of the view of the learner and ultimately constructed of the individual's subjective reality. Glaserfeld (1989) stressed that the conceptual constructs that we call knowledge, are viable in the experiential world of the knowing subject. "According to Glaserfeld, operational

schemes are instrumental in that they help learners achieve a coherent conceptual network reflecting the paths of their acting as well as thinking, which, at any given point in the learner's experience, have proved viable. This type of instrumentality is epistemic and, as such; it entails a radical shift in the conception of knowledge" (Keiny, 1994, p 157). Thus teaching is not about imparting knowledge but about facilitating learning and assisting learners in their own construction of knowledge.

Constructivists assert that language, as an instrument of communication, does not automatically convey ideas or knowledge. Once we assume that the meaning of words, sentences, or texts is constructed out of basic elements or building blocks abstracted from an individual's experience, meaningful communication can arise only in the course of protracted interaction, through mutual orientation and adaptation (Maturana, 1980). To understand what someone has said or has written, means to have built up a conceptual structure that in a given context appears to be compatible with the structure the speaker had in mind. This compatibility manifests itself in that the receiver neither says nor does anything that contravenes the speaker's expectations (Glaserfeld, 1989). The constructivist notion of knowledge and communication is similar with Schön, Stenhouse, and others who have described professional development as a process of generating personal theories-of-action. According to Schön, teachers, like other practitioners, do not apply theories, but construct them from their practice, through an active dialogue with the materials which constitute their field of action. Thus, professional development can be viewed as a process of personal growth. (Schön, 1987; Stenhouse, 1975)

Therefore, one of the contributions of constructivist theory to the field of teacher education is to be found on the level of knowledge and communication. As knowledge cannot be simply "transferred" from teacher to learner, and verbal explanations do not automatically yield understanding, constructivism calls for a change or shift of the role of the teacher. It demands a transition of role from that of the *instrumental model* of the teacher as one who transfer knowledge to a *developmental* teacher, a teacher whose role is to *develop his or her students as learners, who are able to construct their own conceptual structures* (Keiny, 1987). Table 8 provides the comparison between the instrumental and the developmental models of the role of the teachers in the teaching-learning process.

The other contribution of constructivism stems from its perception of reality. Once we realize that there can be no single correct representation of reality, it could be understood as what the different persons involved in the situation, perceive and construct conceptually. Reality ceases to constitute

one objective truth and is conceived instead as *complex, multifaceted, and multidimensional*. It follows that such notions of “a model teacher” or “a correct way of teaching” can be discarded. Similarly if “teacher training” meant the acquisition of certain skills or behaviours, it should be replaced by a broader conceptual understanding of teachers’ education and professional development that emphasize not merely on the theoretical level, *but as an integration of theory and action*.

In line with Dewey’s idea of inquiry, teachers’ education should become a continuous open-ended process. This process starts with common-sense questions posed by the inquirer in striving to understand the situation and understanding is achieved when the situation is transformed into some kind of model or theory of action which, in turn, can be tested empirically by its capacity to achieve what the teacher had in mind. This kind of “conversation” with the situation helps reconstruct the teacher’s implicit ideas into more explicit theories of teaching. These ideas are translated into two teaching principles: Reflection-in-action, and a multidimensional conception of reality.

	<b>Instrumental</b>	<b>Developmental</b>
<b>General orientation</b>	Technical rationality	Reflection in action
<b>Epistemological aspect</b>	Objectivism: Knowledge is an external entity	Constructivism - Knowledge is a subjective construction
<b>Task ownership</b>	Teacher	student
<b>Assumption about the learner</b>	Passive , has to be controlled, i.e., external motivation	Active, initiative i.e., internal motivation
<b>Teacher’s responsibility</b>	To instruct , transfer knowledge	To promote student’s learning process by providing opportunities for direct interaction with knowledge
<b>Learning goals</b>	Achievements as products of learning	Learning as a process
<b>Education of teachers</b>	Training or modelling their acquisition of skills and techniques	Integration of theory and action; developing reflective and diagnostic capacities

**Table 8 The instrumental and the developmental conceptions of the Teachers’ role (Keiny, 1994).**

### **2.2.4 Vocational Teacher Education: from essentialism to constructivism**

Lynch (1997) discussed on the essential elements for the design of TVET for the 21<sup>st</sup> century and provided due emphasis on the significance of reforming TVET teacher education as to meet the challenges of this modern era. He stressed that the changing work environment and demands for attainment of better educational qualifications has resulted in the shift of the philosophical

underpinning of the vocational education in general and the TVET teacher education in particular. Based on earlier studies and research, he stated that these changes are suggesting a significant shift from Prosser's essentialism philosophy, which guided vocational education's development and growth for many decades, to that of Dewey's progressivism and towards Pragmatism based on the theory of constructivism. Lynch (1997) contrasted these philosophies in terms of different comparison areas along with their implication to the vocational education and the vocation teacher education. The comparison of these three philosophies, shown in the Table 9, were made in terms of the essential roles of vocational education , end products of vocational education , the clientele and relationship to the community , curriculum , teachers , methods of teaching , and evaluation. ( p.23)

“Based on the inductive analyses of evolving and proposed practices in vocational and technical education, Miller (1996) concluded that the unifying contemporary philosophy for vocational education today – and thereby for the vocational teacher education – is pragmatism and the corresponding theory of constructivism.” (Lynch , 1997, p.24)

Pragmatism emphasizes on change, learning by doing and learning as a life long activity for students and teachers alike. Lynch further argued that Dewey's philosophy of progressivism , changes and demands in the workplaces , learning and teaching theories and research results , have created a cumulative effect on current underlying philosophy and practices of the vocational education and the preparation and professional development of vocational teachers. He concluded that “It seems clear that the philosophical tenets associated with essentialism will no longer serve students and teachers well. The remarkable insight of Dewey, the reality- based philosophy of pragmatism and its focus on readiness to change, and the evolving educational theory of constructivism seem far superior to underpin reforms in vocational education and the education of its teaching force.” (Lynch, 1997, p.26)

Comparison Area	Essentialism ( Prosser)	Progressivism ( Dewey)	Constructivism
<b>The essential role of vocational education</b>	<ul style="list-style-type: none"> <li>- To develop the pool of vocational and technical skills necessary for a nation to be competitive in the world market</li> <li>- To maintain a skilled labour force.</li> </ul>	<ul style="list-style-type: none"> <li>- To teach people how to solve problems</li> <li>- To promote a more democratic and humane working environment</li> </ul>	<ul style="list-style-type: none"> <li>- To facilitate construction of knowledge through experiential , contextual, and social methods in real world environments</li> </ul>
<b>End products of Vocational education</b>	<ul style="list-style-type: none"> <li>- A skilled, competent, and intelligent labour force.</li> <li>- Stable work force ,well trained in the foundational and specific skills</li> <li>- Vocational graduate will possess a trade or occupation that has economic worth</li> </ul>	<ul style="list-style-type: none"> <li>- Flexibility and open- mindedness toward alternative solutions</li> <li>- Knowledgeable citizenry who are vocationally adaptable and self-sufficient</li> <li>- Background in work education practiced in harmony with civic aspects of life in a democracy</li> <li>- Vocational graduates will possess a maximum number of career options at any given point in the learning experience</li> </ul>	<ul style="list-style-type: none"> <li>- Self -directed learners who make connections in workplaces and other environments based on personal and social experiences</li> <li>- Recognize the importance of goals for the learner , and reconcile the dichotomy between learner and teacher goals</li> <li>- Share and value the perspectives of others</li> <li>- There is no ONE reality or one right answer</li> <li>- Flexibility , adaptability , and problem solving</li> </ul>
<b>The clientele and relation to the community</b>	<ul style="list-style-type: none"> <li>- People who want , need , and can benefit from vocational education and training</li> <li>- Vocational education is closely related to the business , industrial , and economic aspects of the community .Its relationship to academic education is less clearly defined</li> </ul>	<ul style="list-style-type: none"> <li>- People of all ages and abilities can benefit from vocational education. Everyone should be provided with vocational alternatives and opportunities to participate</li> <li>- Vocational education should be viewed as part of community life and should take place in the community itself</li> </ul>	<ul style="list-style-type: none"> <li>- Interdependence among individuals and the larger world around them. Learners always bring their own personal , social, cultural, work, and political histories , purposes , and interpretations with them to the situation, whether they are aware of it or not.</li> <li>- Learning occurs in social situations</li> <li>- Learning occurs best in the community where skills and knowledge will be practiced</li> </ul>

Comparison Area	Essentialism ( Prosser)	Progressivism ( Dewey)	Constructivism
<b>Curriculum</b>	<ul style="list-style-type: none"> <li>- Curriculum contains the essential core skills and knowledge required for employment. Courses are built sequentially leading to predetermined placement. Newly emerging jobs whose competency requirements are ambiguous ought to be avoided or approached on a risk management basis.</li> </ul>	<ul style="list-style-type: none"> <li>- Curriculum should be two- fold focusing on short range employability skills and long term transferability skills. The transferability skills should accommodate changes in technology, society, and individual needs and aspirations.</li> </ul>	<ul style="list-style-type: none"> <li>- The most important single factor influencing learning is what the learner always knows; build on prior knowledge.</li> <li>- Integrated subject matter focusing on themes and how different content areas address that theme to assist students in making connections.</li> <li>- Integration of academic and vocational education.</li> <li>- Attention to meta cognition and strategic self-regulation</li> <li>- Awareness of the importance of social context such as the difference between applied and pure theoretical subjects with an attempt to use the applied (vocational) subjects to teach the former.</li> </ul>
<b>Teachers</b>	<ul style="list-style-type: none"> <li>-Master of the occupational skill</li> <li>- Should be fact-oriented with latest technical developments in their areas of expertise</li> </ul>	<ul style="list-style-type: none"> <li>_ Teachers must be able to identify student interests, arrange for development of innate abilities, and should facilitate learning through students' natural curiosity and motivation. Teachers should be versatile and act as guides in presenting meaningful problems to be solved.</li> </ul>	<ul style="list-style-type: none"> <li>- The focus of teacher education is not just teachers' knowledge of the subject matter and pedagogy, but teachers' beliefs, conceptions, personal theories, experience related to subject matter, teaching, and learning.</li> <li>- Teachers are facilitators of student learning who are building their own knowledge. The teacher is viewed as a coach who provides more direct instructions at first , which gradually fades as students become more proficient as problem solvers.</li> <li>- Teachers model, mediate , and scaffold</li> <li>- Teachers engage in diagnostic teaching and attempt to remedy learner errors and misconceptions.</li> </ul>
<b>Methods of teaching</b>	<ul style="list-style-type: none"> <li>- Vocational learning should correspond to reality</li> <li>- Basic skills and technical knowledge are to be learned and applied exactly as would be in a real employment situation</li> </ul>	<ul style="list-style-type: none"> <li>-A broad range of teaching and learning techniques should be used to teach basic vocational skills with the notion of expanded opportunities firmly in mind.</li> <li>- Discussions and projects that develop problem –solving techniques and skills.</li> </ul>	<ul style="list-style-type: none"> <li>-Facilitate individual, personal learning</li> <li>- Learning is social, experiential, and active. Thus emphasis on discussion , collaboration , negotiation, and shared meanings.</li> </ul>

Comparison Area	Essentialism ( Prosser)	Progressivism ( Dewey)	Constructivism
	<ul style="list-style-type: none"> <li>- Lectures and demonstrations are particularly efficient</li> <li>- Teach single concepts and skills</li> <li>- Amenable to teaching machines</li> </ul>	<ul style="list-style-type: none"> <li>- Education for citizenship in a democracy.</li> <li>- Teaching for making accommodations and adapting to change</li> <li>- Group interaction for team building</li> </ul>	<ul style="list-style-type: none"> <li>- The use of multiple representations of concepts</li> </ul>
<b>Evaluation</b>	The stability of acquired skills in the employment market	<ul style="list-style-type: none"> <li>-Ability to compete in the job market</li> <li>- Ability to solve workplace problems</li> <li>- Ability to accommodate technical and social change</li> </ul>	<ul style="list-style-type: none"> <li>- Qualitative methods concentrating on learners' perceptions and constructions</li> <li>-Ability to adopt ( assimilate and accommodate ) and solve problems</li> </ul>

**Table 9 Comparison of Essentialism, Progressivism and Constructivism in Vocational education (Lynch, 1997, p. 27-29)**

## 2.2.5 Application of Constructivism in Vocational Education

Brown (1998) , in her article *Applying constructivism in vocational and career education* , discussed on the application of constructivism to technical and vocational education and training and how such approach is congruent to today's requirement in the work places and the demands of the learning and developments of the work force. She argued that elements of the theory of constructivism which include learner –centered teaching practices, problem-based learning, contextual teaching and learning experiences, curricula and authentic assessments, could be applied for improving the learning and teaching processes in vocational education.

### **Learner-centered teaching practices**

McWhorter et al. (1996) asserted that in a constructivist – based classroom the focus is on the learning rather than teaching. Due attention is given to the learners and the individual ways of learning. Learners collaborate with each other, work in teams, and take responsibilities for their learning. The teacher takes into account the different learning styles, learning needs, and their earlier experiences during the learning process and recognizes that the empowerment of the learner is the goal of the learner-centered teaching.

The vocational teacher role as a facilitator is to assist the learners in their knowledge and skill development by demonstrating ( modeling ) , supporting ( scaffolding ) , fading ( gradually decreasing assistance ) , and suggesting and challenging ( coaching ) the learner.

In terms of the constructivist approach applied to vocational education, Kerka (1997a) also similarly described that “the vocational teacher's role is not to set tasks, but to organize experiences that allow learners to develop their own knowledge and understanding. Using the methods of cognitive apprenticeship, the teacher is a coach who provides guidance that gradually decreases as learners become more proficient. The learning environment should be the key aspects of the community of practice: authentic activities sequenced in complexity, multiple experiences and example of knowledge application, access to experts, and a social context in which learners collaborate on knowledge construction.” (p.2)

### **Problem – based learning**

Savery and Duffy (1995) asserted that problem-based learning to be one of the best exemplars of a constructivist learning environment. Problem-based learning has a constructivist framework as it supports the values of collaboration, active involvement, reflection, personal autonomy and personal relevance. Learning activities in vocational education that support problem-based learning includes simulations, case based learning, action research, and anchored instruction.

Stepien and Gallagher (1993) identified four critical features of the problem based learning. These are

- The problematic situation always opens up the investigation and addresses real issues that are relevant to the learners.
- The problem is ill-structured and requires a careful exploration and often defies solution by a fixed formula or strategy. There may be no one *right* answer to it.
- Learners are the problem solvers. They *own* the problem, engage in inquiry and take responsibilities in their own thinking and formulating possible solutions.
- Assessment is used as structure for reflection.

The role of the vocational teachers in a problem – based learning focuses on developing and maintaining good interpersonal and group dynamics skills and adoption of instructional strategies, resources and activities in order to facilitate learners' social and thinking skills. In the context of constructivism, meaningful social interactions between learners and interdependences function as the prime source of cognitive growth and the construction of knowledge.

Stein et al. (1994) in their work entitled *A Constructivist Vision towards Teaching, Learning, and Staff Development*, discussed a number of principles that need to be adopted in learning and development activities based in a constructivist perspective. These include

- Each student must actively construct her or his own meaning in order to understand the material to be learned.
- Learning depends on the previous understandings that students bring to the learning situation.
- What, and how much, is learned depends on the context in which it is learned.
- What is learned depends on the shared understandings that students negotiate with the teacher and other students.

- Constructivist learning requires meeting students “where they are” and helping them to move to higher levels of knowledge and understandings.
- Teachers can use specific teaching methods to facilitate students’ active construction of knowledge.
- In constructivist teaching, the teacher emphasizes on ‘learning –how –to –learn’.
- The constructivist teacher uses continuous assessment to facilitate students learning.
- Constructive teachers are themselves constructive learners.

### **Contextual Teaching and Learning Experiences**

Contextual learning in vocational education emphasizes on the application of knowledge and skills to real –life problems which are closely related to specific situations in the learners’ personal, social and workplace circumstances. Contextual teaching gives much emphasis to higher order thinking, and the gathering, analysis and synthesizing of information from various sources, and their application in real situations. Brown (1998) described four different forms of contextual learning. These are the situated learning, cognitive apprenticeship, service learning, and work – based learning.

Situated learning could be described as the acquisition of knowledge and skills in the context in which they will be used. Stein (1998, p.1) identified four major tenets of situated learning. These are:

- Learning is grounded in the actions of everyday situations (Cognition)
- Knowledge acquirement is situational and transfers only to similar situations (Context)
- Learning is a result of social process encompassing ways of thinking, perceiving, problem solving, and interacting in addition to declarative and procedural knowledge (Participation)
- Learning is not separated from the world of action but exists in robust, complex, social environments made up of actors, actions, and situations (Community)

These elements of situated learning provide opportunities to actively engage learners in their learning and the use of cooperative and participatory teaching approaches to support them.

Cognitive apprenticeship, as described by Black and Schell (1995), make use of the traditional concept of craft or trade apprenticeship as a prevailing metaphor for teaching authentic activities through guided experience by focusing on the teaching of symbolic mental skills. Learners would have the opportunity to observe the works of others and practice, develop and refine their skills in authentic settings.

## 2.2 Learning and Professional Development on the Basis of Constructivism

Service learning is an activity based practice where real world problems provide the basis for learning. It reflects the theory of action learning and includes apprenticeships, experiential learning and job based learning. It provides learners to be engaged in a critical assessment of the service they provide and often reflection is a key component to such learning. The engagement of the learners in service provision , for example prospective teachers school service or other community services , provide first hand experience of the real situations and could affect one's disposition to learn.

Work-based learning is another form of contextual learning that is centered in the workplace and includes a planned program of formal training, and or mentoring, and paid work experience. Naylor (1997) described elements of work-based learning programs as

- Planned programs of job training and experiences
- Paid work experiences
- Workplace mentoring
- Instruction in general workplace competences , and
- Broad instruction in all aspects of the profession

Work-based learning, like all other forms of the contextual learning, need to actively involve the learners in action learning, so that they have the opportunity to construct their own meaning and communicate their meaning to others.

Integration of academic and vocational curriculum is one of the strategies vocational teachers could use to incorporate constructivist elements in teaching – learning process. Brown (1998) described the integration of academic and vocational curriculum in relation to constructivist based pedagogy and paradigm as:

“ In its most basic form, curriculum integration involves the infusion of academic content into vocational programs often referred to as *enhanced academics* . The new vocationalism, however calls for “enhanced relevance,” which is achieved when students engage in learning experiences that are situated in real –life contexts and that afford in –depth understanding and the development of higher order thinking skills.”(p.1)

Beane (1998) described such integration as having four components: the integration of experiences, the integration of knowledge, social integration, and integration as a curriculum design.

Allenspach et al. (1996) described authentic assessments as the engagement of learners in applying knowledge and skills in the same way they are used in the real world of work in order to measure learning that is meaningful to the learner. When such assessments are used as a means to lead the learner to an in-depth understanding and meaningful construction of knowledge, then they do reflect the essence of constructivism. Authentic assessments anchored in constructivist practices include co-learning, investigation, contextual performance, and other demonstrations of constructivist thinking. Learners need to be involved in the planning, evaluation, and selection of assessment form including alternative forms assessments that enhance the construction of the learner's knowledge.

## **2.3 Competences for TVET Teachers**

### **2.3.1 The Concept of Competence**

Various ways of defining the term competence are found in the literature often focusing on its different aspects. Some of these definitions are presented below.

“Competency is knowledge, skill, ability, or characteristic associated with high performance on a job, such as problem solving, analytical thinking, or leadership. Some definitions of competency include motives, beliefs and values.” (Mirabile, 1997, p. 75)

“A competency is a cluster of related knowledge, skills and attitudes that affects a major part of one's job (a role or responsibility), that correlates with performance on the job, that can be measured against well-accepted standards, and that can be improved via training and development” (Parry, 1996, p. 50).

“A competency is an underlying characteristic of an individual that is causally related to criterion-referenced effective and/or superior performance in a job or situation. Underlying characteristic means that competency is a fairly deep and enduring part of a person's personality and can predict behaviour in a wide variety of situations and job tasks. By causally related means that a competency actually causes or predicts behaviour and performance. Criterion referenced means that the competency actually predicts who does something well or poorly, as measured on a specific criterion or standard”. (Spencer & Spencer, 1993, p. 9)

“Competence [is the] ability to handle a situation (even unforeseen)”. (Keen 1992, p. 115)

“Human competence [...] is displayed behaviour within a specialized domain in the form of consistently demonstrated actions of an individual that are both minimally efficient in their execution and effective in their results”. (Herling, 2000, p. 20)

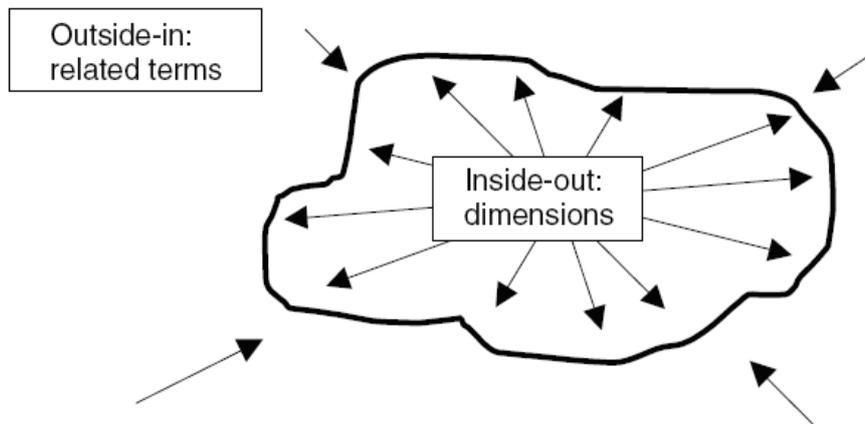
However, some writers suggest that the search for developing a standard definition for the term competence leads to no where. In this regard, Stoof et al. (2002) argued that “discussing competence definitions over and over again to reach consensus about the one and only true meaning of competence is a *dead-end road*. The one and only true competence definition does not exist, nor will ever be found.” (p. 347)

Stoof et al. (2002) further argued that, in contrast, a constructivist approach releases the search for the absolute truth about competence by allowing a variety of competence definitions. What becomes so important is then not whether we have the ‘true’ definition but its viability - the extent to which the constructed definition has proved to be adequate in the context in which it is used (Glaserfeld, 1995). A quest for the most viable competence definition seems to be much more fruitful. A constructivist approach does not aim at describing competence as an abstract concept, but it rather help the people concerned to pay due attention to their own situation and their own needs to construct a viable competence definition. They stated that the viability of a competence definition increases when based on the analysis of people, goal, and contextual factors, and taking into account that the constructed definition may need to be changed when the situations change in these factors.

A similar argument is also found in the works of many authors as the description and application of the concept of competence widely varies across countries, education systems and human resource development systems. Rauch et al. (2008) asserted that a number of problems may arise when we deal with such concept by citing the different interpretation and usage of the term by education policy makers in different OECD countries, by UNESCO, and in numerous education and training reform programs. They emphasised that “the concept of competence will remain a modern meaningless concept” unless it is understood as a social construct based on values and ideological assumptions. They considered that defining competence to be also an ethical and political assignment.

Stoof et al. (2002) recommended a boundary approach of competence in defining competence from a constructivist point of view. Their Amoebic-shaped boundary, which is subjected under

the influence of opposing forces from inside-out and outside-in, is depicted in Figure 3.



**Figure 3 The Boundary Approach of Competence (Stoof et al. 2002, p.353)**

The process in which the internal forces expand the boundary out ward is termed as inside-out approach. It is associated with the five dimensions of competences they considered as significant in their discussion which would ultimately define the shape of the boundary and consequently the definition of competence. These dimensions that need to be analysed and the choices of inclusion or exclusion to be made in defining competency are: *Personal versus task characteristics* , *Individual versus distributed competence* , *specific versus general competence* , *level of competence versus competence as a level* , *teachable versus non-teachable competence* .

Similarly the processes in which the external forces influence the boundary are termed as outside-in approach. It is linked to the choice of related terms in the defining competence. These terms are often associated with the terminology of competence , but analysis on their use provide a further insight in selecting which term to use in defining competence while understanding the similarities and differences between competence and these terms. The questions one may ask to make choices of appropriate terms in defining competence in a constructivist way include comparing and contrast the terms *Competence versus performance* , *competence versus qualification* , *competence versus ability ( and capability )* , *competence versus knowledge* , *skills* , *and attitudes* , *competence versus expertise* . (Stoof et al. 2002)

Stoof et al.( 2002) also claimed that their approach is one among the many attempts towards development of a framework that many aid the definition of competence through emphasising

on the constructivist variables of people, goal, and context as well as the forces defining the boundary of the competence definition.

Hager (2004) stated that much of the confusion in the definition and application of the term competence can be traced to questionable assumptions being made about learning as a product. By discussing some of the pervasive misconceptions of the learning process, he argued that a clear understanding of competence may be attained by clearly distinguishing three items, namely *performance and its outcomes*, the underpinning constituents of competence (*capabilities, abilities, skills*) and the *education, training or development* of people to be competent performers.

#### **Approaches to competence**

As there are differing approaches to conceptualize the term competence, it is evident that there is a challenge in developing a consistent and coherent typology of it that could easily fit to all contexts. Delamr Le Deist and Winterton (2005) compared the definitions and usage of the term competence that are prevalent in the mainstream in four countries: USA, UK, France and Germany. They explored the relative strengths and their particular characteristics of these four approaches in the context of training and development.

*The American Behavioural Approach:* It focuses on the importance of individual characteristics and the use of behavioural competence as a means of developing superior performance. In this approach competencies include “motives, traits, self-concepts, attitudes or values, content knowledge, or cognitive or behavioural skills – any individual characteristic that can be measured or counted reliably and that can be shown to differentiate significantly between superior and average performers, or between effective and ineffective performers.” (Spencer and Spencer, 1993, p.4)

*The UK Functional Approach:* It is based on the development of an occupational standards of competence grounded in functional analysis of occupations in a variety of contexts across a range of sectors. The occupational standards are firmly rooted in the reality of work and identify “key roles, which are then broken down into a number of units of competence. These are further sub-divided into elements of competence and, for each element of competence, performance criteria are defined which form the basis of assessment, with range indicators provided for guidance. (Delamr Le Deist and Winterton, 2005, p 34)

*The France Multidimensional Approach:* This approach is generally more comprehensive, considering savoir (compétences théoriques, i.e. knowledge), savoir-faire (compétences pratiques, i.e. functional competences) and savoir-e^tre (compétences sociales et comportementales, i.e. behavioural competencies). Dejours (1999) commented that in France, while the notion of individual competence has not yet generated a general, empirically validated theory, there is nonetheless a consensus definition based on these minimal three dimensions. These three dimensions rest on the concepts of knowledge (savoir and connaissance), a component based on experience (savoir faire or savoir agir) and a behavioural component (savoir e^tre or la faculte' de s'adapter). (Delamr Le Deist and Winterton, 2005, p 37)

*The German holistic approach:* In this approach, competence is defined as “the capacity of a person to act and is more holistic, comprising not only content or subject knowledge and ability, but also core and generic abilities.” (Arnold et al., 2001,p.176 in Delamr Le Deist and Winterton, 2005)

In 1996, the German education system adopted an ‘action competence’ (*Handlungskompetenz*) approach, moving from subject (inputs) to competence (outcomes) and curricula specifying learning fields (*Lernfelder*) rather than occupation-related knowledge and skills content (Straka, 2004). Vocational training curricula are elaborated in terms of Vocational action competence (*Handlungskompetenz*) comprising three competences: domain or subject competence (Fachkompetenz), personal competence (Personalkompetenz) and social competence (Sozialkompetenz).

Domain or subject competence describes the willingness and ability, on the basis of subject-specific knowledge and skills, to carry out tasks and solve problems and to judge the results in a way that is goal-oriented, appropriate, methodological and independent. Personal competence describes the willingness and ability, as an individual personality, to understand, analyse and judge the development chances, requirements and limitations in the family, job and public life, to develop one’s own skills as well as to decide on and develop life plans. It includes personal characteristics like independence, critical abilities, self-confidence, reliability, responsibility and awareness of duty, as well as professional and ethical values.

Social competence describes the willingness and ability to experience and shape relationships,

to identify and understand benefits and tensions, and to interact with others in a rational and conscientious way, including the development of social responsibility and solidarity. (Delamr Le Deist and Winterton, 2005)

### 2.3.2 Towards a Holistic Model of Competence

In pursuit for a holistic model of competency that may be useful in identifying the combination of competences that are necessary for particular occupations and the promotion of labour mobility, Delamr Le Deist and Winterton (2005) made a comparative analysis to find the relationships between the four dominant approaches to competence: The USA, the UK, the France, and the German approaches.

Based on their analysis, Delamr Le Deist and Winterton argued that there are growing evidences towards convergence in the approaches to competence typology for a global understanding that favours a multi dimensional and holistic approach rather than a one dimensional approach. They stated,

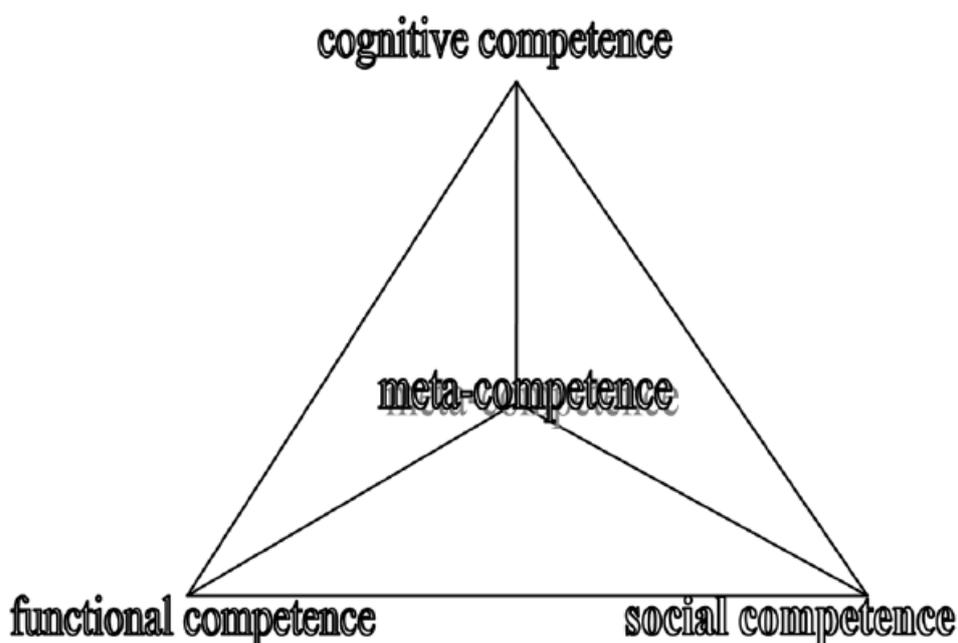
“A holistic typology is useful in understanding the combination of knowledge, skills and social competences that are necessary for particular occupations. The competences required of an occupation include both conceptual (cognitive, knowledge and understanding) and operational (functional, psycho-motor and applied skill) competences. The competences more associated with individual effectiveness are also both conceptual (meta-competence, including learning to learn) and operational (social competence, including behaviours and attitudes)” (Delamr Le Deist and Winterton, 2005, p. 39).

This typology of competence forwarded by Delamr Le Deist and Winterton (2005) is shown in Figure 4.

	<i>Occupational</i>	<i>Personal</i>
<i>Conceptual</i>	Cognitive competence	Meta competence
<i>Operational</i>	Functional competence	Social competence

**Figure 4 The Typology of competence (Delamr Le Deist and Winterton, 2005, p. 39)**

In an attempt to develop a global understanding of the concept of competence, Delamr Le Deist and Winterton (2005) represented their holistic model of competence by a tetrahedron as depicted in Figure 5 to represent the linkage between these dimensions of competence and the difficulty of separating them in practical context. The base of the tetrahedron is represented by Meta competence which is an over-arching input that facilitates the acquisition of the other substantive competences while practical competences are considered to be positioned in its faces.



**Figure 5 Holistic model of competence (Source: Delamr Le Deist and Winterton, 2005, p. 40)**

### 2. 3.3 Competences in TVET

In a UNESCO report, Jacques Delors (1996) described the four pillars for the education and training necessary for the 21<sup>st</sup> century as *Learning to know, Learning to do, Learning to be, and Learning to live together*. These pillars in general correspond to the commonly used classification of competences as Domain competence, methodological competence, personal competences, and social competences (Erpenbeck and Rosenstil, 2003).

In relation to corporate human resource development and in vocational training, Arnold (2005c) noted the shift in focus of competence development in TVET. He stated

“Over the past years, occupational pedagogic has emerged increasingly strongly as a science of competence development. While traditionally the focus was on technical competence and its promotion in formal and formalised, i.e., curriculum-based training process, today the emphasis is more on non-subject specific and cross-disciplinary learning processes in both formal and informal contexts.”(p.16)

Owing to the continual changes in the industry, technology, economy and society, the shift of emphasis in TVET has turned to those key competences which help people to deal with the changes in their work places and professions. These gave rise to the prominence of *methodological and social competences*. Further more, Arnold pointed out that

“Since the end of the 90s occupational pedagogic has further differentiated its skills concepts by focusing increasingly on emotional competence and informal learning. The latter was to a certain extent re-discovered and endorsed by findings which showed that 70% of an adult’s professional competence is acquired outside formal learning processes in school, vocational training or university (cf. Dohmen 2001, p.7)” (Arnold, 2005c, p. 17).

The historic development of occupational pedagogy with respect to competence development in both formal and informal learning is depicted in Figure 6.

	Technical competence	Methododological competence	Social competence	Emotional competence
Formal learning	A	B	C	D
Informal learning	E	F	G	H

**Figure 6 Expansion of technical and vocational education and training (Arnold, 2005c, p.16) (Keys: A = Traditional Form, B and C = Expansion 1987 ff, D – H = Expansion 1995 ff)**

Further more, Arnold and Pätzold (2009) pointed out the paradigm shift both vocational education and competence development faced recently in order to prepare the work force required in current and future environment. The need for a systemic approaches to professional development entails that the focus of both TVET and competence development in workplaces should be oriented towards “a cross-occupational” contents and key competences. They asserted that

“It is apparent that requirement profiles tied closely to particular occupations are gradually disappearing. Craft skills are tending to lose importance as selection criterion, where as in modernised areas personality-related qualities and key skills [...] are growing in relevance.” (Arnold and Pätzold (2009) in Rauner and Maclean 2009, p 336)

Presented in the Table 10 are their comparisons of the changing view of focus in competence development.

<b>Competence development – The changing view</b>	
<b>Focus Up Until Now</b>	<b>Changed Perspective</b>
Preparation for an “occupation” as a framework for a skilled job	Greater orientation to cross-occupational content and key competences (“de-professionalization”)
Idea of a finished training and learning process in the sense of fully rounded initial TVET	Competence development as a lifelong necessity
Orientation to occupational profiles and set curricula ( supply orientation )	Orientation to actual demand of regional business conglomerations ( demand orientation)
System development on the basis of standards with the greatest possible coverage ( state-wide or national )	System development understood as supply appropriate to and tailored to a region ( new unit of analysis)

**Table 10 The changing view of competence development (Arnold and Pätzold 2009, in Rauner and Maclean, p 337)**

### 2.3.4 Key Competences

Due to continual and rapid changes in the technology and society, the needs for competences that transcend occupational barrier have become essential. As a result of these situations, industries need workers who are broadly-skilled and can work in environments which are less structured and who are capable of responding in an effective manner to these changes. Individuals need to possess qualifications that enhance their mobility and adaptability to cope with these changes in their workplace and the society. Such qualifications are termed as key competencies.

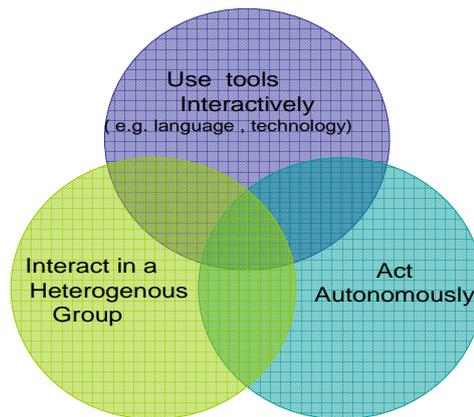
The OECD’s project on the Definition and Selection of key Competences (DeSeCo, 2005) brought about a wider collaboration among different stake holder from all member countries in order to produce a policy- relevant frame work for the identification and elaboration of key competences. According to the summary of the DeSeCo (2005) report, the definition of key competences was based on the criteria that each of these competences must

- contribute to valued outcomes for societies and individuals<sup>18</sup>

<sup>18</sup> Success for the individual was described through such outcome that include gainful employment, income, personal health, safety, political participation, and social networks. Whereas the success for society was expressed through such results as economic productivity, democratic processes, social cohesion, equity and human rights, and ecological sustainability. ( DeSeCo , 2005).

- help individuals meet important demands in a wide variety of contexts; and
- be important not just for specialists but for all individuals. (DeSeCo, 2005, p 4)

Based on these criteria, the DeSeCo conceptual frame work classified key competences in three broad areas: Competencies to use tools interactively, competences to interact in a heterogeneous group, and competences for acting autonomously.



**Figure 7 : Key competences in three broad categories (DeSeCo, 2005)**

According to the DeSeCo framework “these categories, each with a specific focus, are interrelated, and collectively form a basis for identifying and mapping key competencies. The need for individuals to think and act reflectively is central to this framework of competencies. Reflectivness involves not just the ability to apply routinely a formula or method for confronting a situation, but also the ability to deal with change, learn from experience and think and act with a critical stance.” (ibid., p 5)

The application of these key competences is context specific and individuals may use each of these competences in combinations to a varying degree to achieve goals based on various factors like the culture, structure, access to technology, social and professional demands.

Table 11 provides some of the reasons and the specific competences that describe each of the key competence categories.

Key competence area	Why	What competencies
<b>Using tools interactively</b>	<ul style="list-style-type: none"> <li>• The need to keep up to-date with technologies</li> <li>• The need to adapt tools to own purposes</li> <li>• The need to conduct active dialogue with the world</li> </ul>	<ul style="list-style-type: none"> <li>• Use language, symbols and texts interactively</li> <li>• Use knowledge and information interactively</li> <li>• Use technology interactively</li> </ul>
<b>Interacting in a heterogeneous group</b>	<ul style="list-style-type: none"> <li>• The need to deal with diversity in pluralistic societies</li> <li>• The importance of empathy</li> <li>• The importance of social capital</li> </ul>	<ul style="list-style-type: none"> <li>• Relate well to others</li> <li>• Co-operate, work in teams</li> <li>• Manage and resolve conflicts</li> </ul>
<b>Acting Autonomously</b>	<ul style="list-style-type: none"> <li>• The need to realize one's identity and set goals, in complex world</li> <li>• The need to exercise rights and take responsibility</li> <li>• The need to understand one's environment and its functioning</li> </ul>	<ul style="list-style-type: none"> <li>• Act within the big picture</li> <li>• Form and conduct life plans and personal projects</li> <li>• Defend and assert rights, interests, limits and needs</li> </ul>

**Table 11 Key competences (DeSeCo, 2005)**

### ***Key competences for lifelong learning***

Key competences for lifelong learning are described as the combinations of knowledge, skills and attitudes which all individuals need for personal fulfilment and development, active citizenship, social inclusion and employment. It is not conceivable that such competences will be developed by the young people at end of the initial education. Rather, these key competences need to be continually developed and maintained as to equip people to the challenges in their life. Such continual learning and development is achieved through lifelong learning.

In relation to the strengthening of the realization of the Lisbon Strategy<sup>19</sup>, the Commission of the European communities made a recommendation that emphasises the critical importance of

<sup>19</sup> This strategy was set by the European Council in Lisbon ( March 2000) which aims to make the EU“ *the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion and respect for the environment by 2010*”

key competences for life long learning. Accordingly, the commission provided a European framework for Key Competences for Lifelong Learning that serves as a reference for stakeholder including education providers, policy makers, learners, employers, and others. Such a framework helps the attainment of the strategic goals set by the council in the creation the most competitive and dynamic knowledge based economy in the world. Eight key competences for lifelong learning were identified and elaborated along with the action plans to achieve the desired objectives. These key competences for life long learning are:

1. Communication in the mother tongue;
2. Communication in the foreign languages;
3. Mathematical competence and basic competences in science and technology;
4. Digital competence;
5. Learning to learn;
6. Interpersonal, intercultural and social competences and civic competence;
7. Entrepreneurship; and
8. Cultural expression.

The recommendations also stressed that

“Many of the competences overlap and interlock: aspects essential to one domain will support competence in another. Competence in the fundamental basic skills of language, literacy, numeracy and ICT is an essential foundation for learning, and learning to learn supports all learning activities. There are a number of themes that are applied throughout the Framework: critical thinking, creativity, initiative taking, problem solving, risk assessment, decision taking, and managing feelings constructively play a role in all eight key competences.” (Commission of the EC, COM (2005) 548 final, p.13)

### **2.3.5 Defining Competence Framework for TVET Teachers**

A framework for the competences required by technical and vocational teachers help focus efforts of professional development in the teacher education programs during and after the pre-service programs. Though these competence requirements may have similarities in wide range of different levels and circumstances, it is important to distinguish the relative importance and priorities in the particular context under which the teachers are functioning.

The purpose of defining technical and vocational teachers' competences could also serve teachers and TVET schools in articulating, planning and implementation of their professional development needs at individual and school level.

The development of a competence framework could support the process of performance measurement through the comparison of work outputs against the competence requirement and provides also the opportunity to develop career development plans in promoting the professionalization of the vocational teaching.

However, such a competence frame work should not be considered as something that remain static but need to be continuously revised and updated according to the changing circumstances in the education system and the overall aim of the TVET education and training. Descy et al. (2009) described the external and internal factors that influence and shape the requirements and competences of the VET profession in Europe in the future. The external factors include

- labour market pressure on VET
- Demographic trends and implications for VET
- Economic competition and VET
- The role of VET in promoting social cohesion

Internal factors that play significant role in the learning, development and professionalization of the VET professional include

- Improving the image and attractiveness of the VET
- Qualification frameworks and learning outcomes
- The professional development of VET teachers and trainers
- Issues and trends in information technology, advice and guidance

There are a number of programs and projects, for instance in Europe, towards developing a competence frame work for the different professionals in VET including teachers, trainers, and principals. ( for example , The Cedefop<sup>20</sup> (Centre Européen pour le Développement de la Formation Professionnelle) , TTnet study PROFF - professionalization of TVET teachers for the future , report on identification of learning needs of VET teachers and trainers in a quality assurance framework , eKnowVET theme , among others ).

According to Volmari et al. (2007), the study that aimed at the development of a common European competence and qualification framework for the Initial Vocational Education and

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<sup>20</sup> <http://www.cedefop.europa.eu>

Training (IVET) professionals resulted in the identification of relevant competences for three VET professionals including the initial VET teachers. The result pointed out that in general the main competences required for the IVET teachers are grouped under five activities and responsibilities: administration, pedagogy, development, quality assurance, and establishing and maintaining networks. Table 12 shows the activities, knowledge, skills and the competences required by the initial VET teachers.

<b>ADMINISTRATION</b>			
<i>Activities IVET teachers should be able to:</i>	<i>Knowledge IVET teachers should have knowledge of:</i>	<i>Skills IVET teachers should be able to:</i>	<i>Competences: autonomy and responsibility</i>
<b>GENERAL ADMINISTRATION AND BUREAUCRACY</b>			
<ul style="list-style-type: none"> <li>- take registers</li> <li>- administer diagnostic skills tests</li> <li>- interview prospective students</li> <li>- record progress</li> </ul>	<ul style="list-style-type: none"> <li>- induction procedures</li> <li>- testing and screening procedures</li> <li>- procedures for tracking/ recording student progress</li> <li>- procedures for progression routes</li> <li>- procedures for tracking/recording student progress</li> </ul>	<ul style="list-style-type: none"> <li>- administer induction and screening processes</li> <li>- refer students to appropriate support networks</li> <li>- negotiate/record learning</li> </ul>	Effectively and autonomously implement appropriate administration, induction, screening tasks in accordance with contractual procedures as set by others. (EQF level 4)

<b>PEDAGOGY/ TRAINING</b>			
<i>Activities IVET teachers should be able to:</i>	<i>Knowledge IVET teachers should have knowledge of:</i>	<i>Skills IVET teachers should be able to:</i>	<i>Competences: autonomy and responsibility</i>
<b>CLASSROOM MANAGEMENT:</b>			Effectively and autonomously select and apply an appropriate range of learning theories, tutoring and mentoring strategies and deliver through the effective use of communication and social skills which maximises motivation and minimises class disruption. (EQF level 5)
<ul style="list-style-type: none"> <li>- appropriately use techniques to avoid/ deal with disruption</li> <li>- motivate students</li> </ul>	<ul style="list-style-type: none"> <li>- learning theories connected to successful classroom management and avoidance of disruption</li> </ul>	<ul style="list-style-type: none"> <li>- deliver learning in a varied and flexible way to aid motivation</li> <li>- establish a safe, secure and orderly learning environment</li> </ul>	
<b>DIDACTICS</b>			
<ul style="list-style-type: none"> <li>- select from a range of teaching and learning strategies</li> </ul>	<ul style="list-style-type: none"> <li>- learning theories which underpin and support a range of teaching strategies</li> </ul>	<ul style="list-style-type: none"> <li>- deliver learning in a varied and flexible way</li> </ul>	

## 2.3 Competences for TVET teachers

<ul style="list-style-type: none"> <li>- create and use appropriate resources</li> <li>- design and deliver various curriculum programmes</li> </ul>	<ul style="list-style-type: none"> <li>- knowledge of curriculum models, their content and resources</li> </ul>	<ul style="list-style-type: none"> <li>- structure and present information clearly and effectively</li> <li>- use learning resources (including ICT) effectively</li> </ul>	
<b>VOCATIONAL KNOWLEDGE</b>			
<ul style="list-style-type: none"> <li>- relevant up-to-date knowledge of their subject</li> </ul>	<ul style="list-style-type: none"> <li>- sound knowledge of their subject/craft/skill</li> </ul>	<ul style="list-style-type: none"> <li>- mentor, coach students in their skill specialism</li> </ul>	
<b>TUTORING, COACHING, MENTORING</b>			
<ul style="list-style-type: none"> <li>- select appropriate techniques for tutoring, coaching and mentoring of students</li> </ul>	<ul style="list-style-type: none"> <li>- sound knowledge of theories behind tutoring, coaching and mentoring techniques</li> </ul>	<ul style="list-style-type: none"> <li>- mentor, coach students in their skill specialism</li> </ul>	

<b>DEVELOPMENT</b>			
<i>Activities IVET teachers should be able to:</i>	<i>Knowledge IVET teachers should have knowledge of:</i>	<i>Skills IVET teachers should be able to:</i>	<i>Competences: autonomy and responsibility</i>
<ul style="list-style-type: none"> <li>- reflect on CPD needs in the following areas:               <ul style="list-style-type: none"> <li>i) vocational CPD needs</li> <li>ii) personal/ Pedagogical CPD needs</li> <li>iii) Institutional/ departmental CPD needs</li> </ul> </li> <li>- record CPD activities</li> </ul>	<ul style="list-style-type: none"> <li>- on-going developments in subject/ skill/ craft area</li> <li>- CPD opportunities which relate to personal/professional development</li> <li>- Departmental areas for development</li> <li>- Institutional support for CPD</li> </ul>	<ul style="list-style-type: none"> <li>- select and read professional journals connected with their subject/ skill specialism and the ability to integrate their reading/ research into their teaching</li> <li>- keep up with subject/skill area</li> <li>- select and anticipate CPD opportunities</li> <li>- record and evaluate CPD activities</li> </ul>	<p>Autonomously take responsibility for CPD needs and identify, participate in, and record CPD opportunities in line with personal and institutional professional priorities. (EQF level 6)</p>

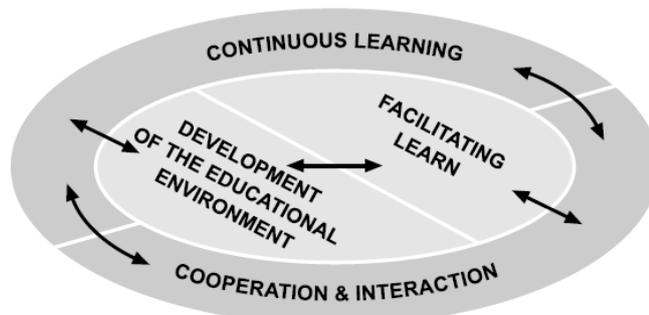
<b>QUALITY ASSURANCE (QA)</b>			
<i>Activities IVET teachers should be able to:</i>	<i>Knowledge IVET teachers should have knowledge of:</i>	<i>Skills IVET teachers should be able to:</i>	<i>Competences: autonomy and responsibility</i>
<ul style="list-style-type: none"> <li>- contribute to the QA cycles</li> <li>- embed QA thinking into everyday work</li> <li>- participate in the design of QA tools</li> <li>- evaluate personal performance</li> </ul>	<ul style="list-style-type: none"> <li>- QA systems</li> <li>- own role in the QA cycle</li> <li>- purpose and outcomes of QA cycle</li> </ul>	<ul style="list-style-type: none"> <li>- keep accurate records</li> <li>- use standardised procedures to communicate these records</li> <li>- contribute to the institution's QA cycle</li> </ul>	<p>IVET teachers should be able to:</p> <ul style="list-style-type: none"> <li>- autonomously gather information on the quality of their performance</li> <li>- autonomously make judgements on the quality of their performance</li> <li>- make autonomous decisions on how to improve the quality of their performance</li> <li>- take responsibility for implementing the set QA procedures within their department /institution (EQF level 5)</li> </ul>
<b>NETWORKING</b>			
<i>Activities IVET teachers should be able to:</i>	<i>Knowledge IVET teachers should have knowledge of:</i>	<i>Skills IVET teachers should be able to:</i>	<i>Competences: autonomy and responsibility</i>
<ul style="list-style-type: none"> <li>- develop and engage in institutional networks</li> <li>- liaise/network with external educational networks e.g. schools, examination boards</li> <li>- liaise/network with world of work</li> </ul>	<ul style="list-style-type: none"> <li>- skills needed for effective teamwork</li> <li>- government policies and initiatives</li> <li>- employer priorities and practices</li> <li>- management of change</li> </ul>	<ul style="list-style-type: none"> <li>- work collaboratively with colleagues</li> <li>- provide guidance and support to colleagues</li> <li>- share good practice with colleagues</li> <li>- design, plan and deliver collaborative training programmes</li> <li>- liaise with external bodies to deliver effective training and student support</li> </ul>	<p>IVET teachers should be able to:</p> <ul style="list-style-type: none"> <li>- autonomously liaise and network with internal and external agencies</li> <li>- initiate and manage collaborative networks</li> <li>- personally take responsibility for developing an awareness of the value of networks and together with a general awareness of the supportive professional networks relating to one's pedagogical and subject/ skill areas (EQF level 5)</li> </ul>

**Table 12 Defining VET professionals -Teachers (Marsh and Taylor, 2008)**

The identification and articulation of competences that are required by the TVET teachers not only help them to carry out successfully their responsibilities of the profession, but also serve as an indicator to the TVET teacher education programs. Teacher education programs that are based on theoretical knowledge of learning and teaching and also on the real demand of the actual workplace provide the opportunity for facilitating the TVET teachers' professional development. The categorization of these competence areas could also serve as an input for developing TVET teacher profile and the curricula that need to be in place in their initial and continuing education and training. In this regard and with compliance to the EU frame work, the vocational teacher education study, for example at Jyväskylä University, reflect such coherence. (Jyväskylä Vocational Teacher education college Handbook 2007-2008)

Accordingly, the pre-service vocational teacher education aims at developing teachers' competence in four interconnected areas: namely

- Facilitating learning
- Development of the educational environment
- Cooperation and interaction
- Continuous learning



**Figure 8 Vocational teachers' competence areas (Handbook 2008/2009, Jyväskylä Vocational education Teacher College, 2008)**

## 2.4 Teachers as Adult Learners and Professionals

### 2.4.1 Adult Learning Theories

Adult learning theories provide insight into the characteristics of adult learning and approaches to support their professional development. There are several theories and models that attempt to explain adult learning. These theories and models have their basis in philosophy, psychology and sociology and provide the overall framework for teaching and learning activities (Merriam & Caffarella, 1999). They help to understand the process of learning and the design of learning environments that are conducive to adults. In fact, “there is not one adult learning theory that successfully applies to all adult learning environments” (Frey & Alman, 2003, p. 8), just as there is no one theory that explains all human learning. Existing theories provide frameworks or models, “each of which contributes something to our understanding of adults as learners and help adult educators to understand the adult learners and design programs and experiences that would enhance their learning and developments.” (Merriam & Caffarella, 1999, p. 271)

Merriam and Caffarella (1999) argued that learning is a process rather than an end product and that the focus of theories is on what happens when real learning takes place. Adult learning theory helps adult educators to understand their students and to design more meaningful learning experiences for them. Of these adult learning theories or models, andragogy<sup>21</sup> is often on the forefront in the discussions and debates of adult learning. Knowles described andragogy as “the art and science of helping adults learn” in contrast with pedagogy, which concerns helping children learn (Knowles 1984, p. 43). He also wrote, “I don’t see andragogy as an ideology at all, but a system of assumptions about learners that needs to be tested out for different learners in different situations” (Knowles, 1980, p. 59).

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<sup>21</sup> According to Baumgartner et al. (2003), German teacher Alexander Kapp coined the word **Andragogy** in 1833 to describe Plato’s idea that adults continue to learn in adulthood (Davenport and Davenport 1985; Draper 1998). “Andragogy” fell into disuse until the early 1920s when Eugene Rosenstock, a German social scientist responsible for workers’ education, realized that adult workers needed to be taught in a different way from children (Savićević 1999). European adult educators used the term in the 1950s and Malcolm Knowles popularized it in the United States in the 1960s and 1970s (Zmeyov 1998).

Merriam (2001) and Merriam and Caffarella (1999) also pointed out that there has been a debate as to whether the assumptions of andragogy are principles of good practice rather than a theory, as andragogy primarily describes what the adult learner may be like. In fact, Merriam (2001) stated, "Knowles himself came to concur that andragogy is less a theory of adult learning than 'a model of assumptions about learning or a conceptual framework that serves as a basis for an emergent theory'." (p. 5)

Andragogy, which is grounded in humanistic learning theory, constitutes five basic assumptions to be considered in a formal adult learning environment and practices. According to Knowles (1989) and also Merriam & Caffarella (1999), these five assumptions underlying andragogy provide guidance to facilitate the learning of adults. These assumptions are briefly described here.

*First assumption: The Adult learner has an independent self-concept and can direct his or her own learning.*

This first assumption describes adult learners as autonomous, independent, and self-reliant, and being self-directed. Knowles (1990) suggested, though adults may be independent and self-directed people in other areas, they may initially exhibit a "teach me" attitude in a formal learning environment. This is due to their previous school experiences and adult educators must introduce learning experiences that move the adult learner from "being dependent personalities toward being [...] self-directed". (Knowles 1980, pp. 44-45)

*Second assumption: The Adult learner has accumulated a reservoir of life experiences that is a rich resource for learning.*

The second assumption is based on the need to attach adult learning to the learner's relevant schemata, which are considered as internal knowledge structures. Adult learners want to use what they know and want to be acknowledged for having that knowledge. They can build on previous knowledge and experience by relating new information to past events and experience. Adult educators should strive to get this information from the adult learners and should then relate their experiences to the concepts being learned. It is important for adult educators to recognize the value of experience (Knowles, 1989).

*Third assumption: The adult learner has learning needs closely related to the developmental tasks of their changing social roles.*

This assumption stresses on the relevance of the learning activities to the adult learners and their interest. Lieb (1991) suggested that adult students are goal oriented; thus, objectives and goals should be outlined in the program accordingly. Adult students usually know what they want to learn, and they like to see the program organized toward their personal goals (Knowles, 1989). Lieb also believed that adults are relevancy oriented. They want to see a reason for learning something, and learning should be applicable to work or personal life. Learners need to know why they should learn something and how their learning will benefit them. (Knowles, 1989)

*Fourth assumption: The adult learner is problem-centered and interested in immediate application of knowledge.*

This assumption describes that a "there is a change in time perspective as people mature—from future application of knowledge to immediacy of application. Thus the adults are more problem-centred than subject-centred in their learning". (Merriam & Caffarella, 1999, p.272)

The adult educators primary focus should be on what the learners expect to learn, that may be applicable for achieving their intended goals. Adult learners are practical and need – focused and expect learning opportunities to prepare them to deal with their current challenging and complex tasks in their workplace or personal and social life.

*Fifth assumption: The adult learner is motivated to learn by internal rather than external factors.*

This assumption is about what motivate adults more in pursuing their learning and development activities. Some factors that motivate adults include the promise of increased job satisfaction, self-esteem, and quality of life. Lieb (1991) reported that respect should be shown to all adult learners and they respond positively when they perceive that their learning environment is comfortable and safe.

Andragogy, as a set of assumptions, is not short of criticisms. Pratt (1993, p.21) stated that “andragogy may have contributed to our understanding of adults as learners, it has done little to expand or clarify our understanding of the process of learning, ‘nor has it achieved the status of a theory of adults learning’.” Smith (2002) pointed out that Knowles’ concept of andragogy is a beginning attempt to try to build a theory (or model) of adult learning.

Schapiro (2003) also stated that the weaknesses of andragogy could be revealed through its tendency to ignore such factors as “issues of power and social justice, in society and in the educational process; the need for critical reflection as a necessary component of an adult learning process; the crucial place of dialogue and discussion as means for learning; and a recognition of multiple ways of knowing and learning.”(p. 152)

As andragogy could not possibly show the whole picture of adult learning, there are a number of theories that help develop further understanding of adult learning. Among these adult learning theories which are related to andragogy included here are the experiential learning, self-directed learning and transformative learning.

#### **2.4.1.1 Self Directed Learning**

Self-Directed Learning (SDL) has been one of the high-interest topics in adult education for many decades. Researchers, theorists, and practitioners have tried to investigate into the nature of SDL, its process and characteristics, and the goal and also about the individual learner. Mezirow (1985) argued that this is due to the significance of the concept as it is so central to what adult education is all about. Baumgartner et al. (2003) claimed that the systematic study of self-directed learning in adult education began with the work of Houle (1961), Tough (1971), and Knowles (1975).

Self-directed learning is based on the notion that as a person grows and matures his or her self-concept changes from that of a dependent personality toward that of a self directed individual. Self-directed learning indicates that the locus of control in the learning process lies mainly with the adult learner, who may initiate learning with or without assistance from others (Lowry, 1989).

Research that has been conducted on self-directed learning of adults has shown its importance in the learning and development of adults in their life. Earlier study by Tough (1978), in his adult’s learning project, found that nearly 90 percent of all adults conduct at least one self-directed learning project per year. Typical learners engage in five learning projects, spending an average of 100 hours on each project. Cross (1981) also asserted that an estimated 70 percent of adult learning is self-directed learning.

Despite its criticism of characterising SDL as a linear process, Knowles definition of SDL is one of those which are often cited in literature. Knowles defined SDL “as process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating leaning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies and evaluating learning outcomes.” (Knowles ,1975, p.18)

Merriam and Caffarella (1999) also defined SDL in terms of its goals, process and personal attributes of the learner. They described that the main goals of SDL are

- Enhancing the ability of the adult learner to be self –directed in their own learning
- Fostering transformational learning as central to SDL
- Promoting emancipatory learning and social action as an integral part of SDL

In terms of its process, SDL was defined by Merriam and Caffarella (1999) as a process “in which people take the primary initiative for planning, carrying out, and evaluating their own learning experiences” (p. 293). SDL is also understood as a “personal attribute” through “internal state of psychological readiness to under take SDL” (p. 307). Guglielmino (1977) and Oddi (1986) developed SDL readiness scales that intend to measure the learners’ curiosity, persistence, learning enjoyment, and goal orientations as characteristics to measure readiness to SDL.

Baumgartner et al. (2003) classified models of SDL into three categories: The sequential, interwoven, and instructional models. The sequential models delineate steps in the self-directed learning *process* (Knowles 1975; Tough 1971) whereas the interwoven models (Brockett and Hiemstra 1991; Danis 1992; Garrison 1997; Spear 1988) examine *learner characteristics* such as the learner’s personality in addition to the learning context, which “interact to form episodes of self-directed learning” (Merriam and Caffarella 1999, p. 295). Instructional models (Grow 1991, 1994; Hammond and Collins 1991) represent “frameworks that instructors in formal settings...use to integrate self-directed methods of learning into their programs and activities.” (Merriam and Caffarella 1999, p. 302)

Spear and Mocker (1984) demonstrated the importance of understanding the learner’s environmental circumstances in promoting self-directedness in learning processes. They concluded that the *organizing circumstances* direct the structure, methods, resources and conditions for learning rather than the *individual characteristics* of the learner such as

motivation, creativity, and persistence. Their study brought about more focus on the environmental factors surrounding the learner as the learners' characteristics may have different impacts on their own contexts. The social context of the learner has been given due attention in subsequent works in the theory-construction of SDL.

SDL in workplace and one's professional life has been also a subject of study that attracted many researchers to the field. Raemdonck (2006) stated that self directedness in learning and career process is described as "a *characteristic adaptation* to influence processes in one's work life in order to be able to cope for oneself in the labour market" (p.62). In this context, Raemdonck (2006, p62-66) enumerated following the features attributed to self directedness.

*Self directedness is changeable.*

Self directedness, as characteristic adaptation, change over time and across circumstances in response to biological maturation, changes in the environment, or deliberate interventions (McCrae & Costa, 2003). Self-directedness is thus described as a learned characteristic that is amenable to the educative process and influenced by environmental circumstances (MacKeracher, 2004). This changeable feature is intended to help the individual adapt to the requirements and opportunities of the social environment.

*Self directedness is domain specific.*

In line with studies such as by Candy (1991), Delahaye, Limerick, and Hearn (1994), Grow (1991) and Ponton, Derrick and Carr (2005), self-directedness is understood as a domain-specific concept. One may have a high or low level of self-directedness in different domains depending on personal and environmental factors. A person may demonstrate a high level of self-directedness in his working life but a low level for self-directedness in social life. Even in working life, individuals can behave differently depending on the area of functioning.

*Self directedness is an active approach.*

Self directedness involves self-initiated, deliberate and sustained pursuit of learning and career activities with the goal of enhancing and increasing one's capacity (Anderson, Ones, Sinangil & Viswesvaran, 2001). Self-directedness encompasses an active approach, where the

individual gives direction to current and future learning and career issues and demonstrate persistence in overcoming barriers which would prevent the person from achieving learning and development goals.

*Self directedness centres on the individual's perspective and ability to cope.*

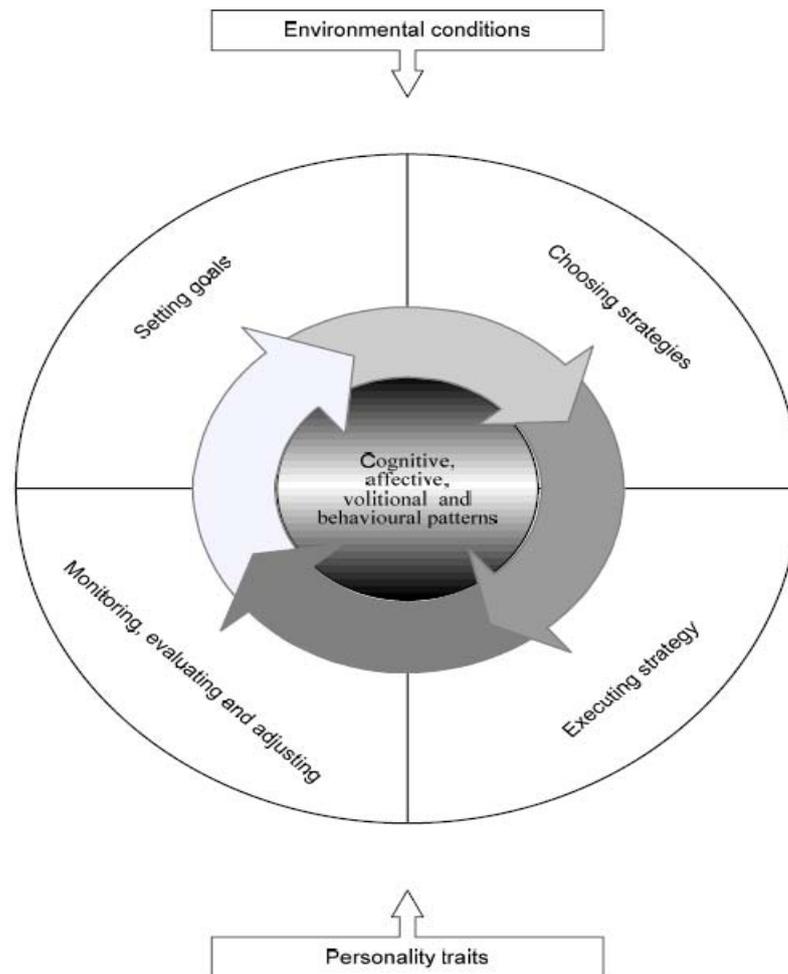
The individual's learning and development goals may or may not be consistent with the organizational goals. Central are the individual's goals and the extent to which these are helpful to the individual to retain and improve his/her ability. Therefore, self-directedness is thus not necessarily a pro-organizational concept. Instead, the individual perspective and his/her ability to cope oneself in the organisation is the main focus.

*Self directedness has a long term focus.*

Self-directedness is perceived as an on –going process, a series of activities, a forward, developmental and continuous movement. The self-directed learner is not only concerned on coping with current problems but also anticipate future challenges and opportunities.

*Self directedness is dynamic.*

Self-directedness is characterized by a dynamic process towards creating constant adaptation to the environment which is expressed in behaviour and regulated by cognitive (beliefs), affective (attitudes), volitional (intentions) and earlier behavioural patterns ( Ajzen & Fishbein, 2005). A characteristic adaptation is thus a dynamic and interactive network of beliefs, attitudes, intentions and behaviour that allows one to interact meaningfully with the social environment (McCrae & Costa, 2003). Moreover, the behaviour which is expressed encompasses a complex and cyclic process of controlling and actively shaping the learning process. (Ref. Figure 9)



**Figure 9 Self –directedness as a character adaptation (Raemdonck, 2006, p 75)**

There are a number of study results in the literature of SDL that point out on how to facilitate or support the self-directed learning efforts of adult learners, particularly the roles of educators in the field of adult education and educational institutions or organizations could play in this regard.

Adult educators have found that some adults are incapable of engaging in self-directed learning because they lack independence, confidence, or resources. Not all adults prefer the self-directed option, and even the adults who practice self-directed learning also engage in more formal educational experiences such as teacher-directed courses (Brookfield 1985).

### 2.4.1.2 Experiential Learning

Building upon the earlier works of John Dewey and Kurt Levin, Kolb (1984) stated learning as “the process whereby knowledge is created through the transformation of experience” (P. 38). His 1984 book, ‘*Experiential Learning: Experience as the source of learning and development*’, has considerable impact on the design and development of adult learning and professional development programs. Accordingly, the components of experiential learning that provide the basis for the adult learning experience are

- Knowledge of concepts, facts, information, and experience
- Prior knowledge applied to current, ongoing events, and
- Reflection with a thoughtful analysis and assessment of learners’ activity that contributes to personal growth.

Merriam and Caffarella (1999) stated that “experiences that provide learning are never just isolated events in time. Rather, learners must connect what they have learned from current experiences to those in the past as well as see possible future implications” (Merriam and Caffarella 1999, p. 223). Thus teaching of adults should be based on their experiences and allow them to create linkage between what they have learned to experiences in the past, so that they can vividly see possible implications for the future.

Brookfield (1995) also emphasised on the significance of experience for adult learning and argued that adult teaching should be grounded in their experiences as these experiences provide a useful resource for their learning and development.

### 2.4.1.3 Transformative Learning Theory

Transformative learning, which is considered as a constructivist theory of adult learning, was strongly influenced by the work of Jack Mezirow (1997). Experience, critical reflection, and reflective discourse are regarded as the main ingredients in the transformative learning process. He proposed that individual transformation includes a change in one’s frame of reference or way of seeing the world. Transformative learning helps adult learners to understand their experiences, how they make sense of "the meaning of their experiences, the nature of the structures that influence the way they construe experience, the dynamics involved in modifying meanings, and the way the structures of meaning themselves undergo changes when learners find them to be dysfunctional." (Mezirow, 1997, p. xii)

Palloff and Pratt (1999) described that "the goal of transformative learning is to understand why we see the world the way we do and to shake off the constraints of the limiting perspectives we have carried with us into the learning experience" (p. 129). Such learning enables the adult learner to "become a more autonomous thinker by learning to negotiate his or her own values, meanings, and purposes rather than to act uncritically on those of others." (Mezirow, 1997, p. 11)

Cranton and King (2003) argued that transformative learning should be the goal of teachers' professional development. They assert that meaningful professional development should go beyond attaining particular skills or knowledge, and should enable teachers to question and challenge their values, assumptions, beliefs about teaching and their perceptions about the world.

If transformative learning is to serve the professional development of teachers, it should include activities that promote critical self reflection on teaching. Mezirow (1991) described three ways in which one can interpret experience through reflection: reflection on the content, reflection on the process, and reflection on the premise. Continuous, self directed professional development requires the incorporation of critical self reflection in the development activities. Transformative learning provides professionals the foundation for their continuous life long learning and development.

According to Cranton and King (2003), professional development activities and approaches should provide opportunities for the learners to critically examine their every day practices and help develop newer ways of understanding them, as to enable a transformative learning to take place about their own teaching practices. They asserted that

“Transformative learning must be a goal of professional development. If we do not consciously think about and reflect on our practice, we become nothing more than automatons following a dubious set of rules or principles that are unlikely to be relevant in the ever changing, complex context of teaching and learning. (p. 32)

In the light of such goal, therefore, it would be important to adopt professional development strategies that support critical questioning of own practice and possibly leading to transformative learning. Such critical self reflection by the teachers on their own teaching

practices and experiences would be a starting point for a continuous self-directed professional development. “Professional development that is transformative in nature provides grounding for continued lifelong learning in the profession.” (Cranton and King 2003, p 37)

## **2.4.2 Teachers’ Beliefs, Perceptions and Motivation**

### **2.4.2.1 Teaching as a Profession**

The different perceptions which societies, policy-makers, and teacher educators have of the teaching profession and of the teachers are influential factors on how teachers are prepared and how their professional development is supported. Views on the role of teachers are culturally and socially embedded, and teachers’ own perspectives of their role and profession affect, and are affected by, the conception of teaching that is prevalent in their societies. (Villegas-Reimers, 2003 p. 31)

Debates on recognizing teaching as a profession and teachers as professionals could be found as unresolved issues in many countries and societies. More than a century ago , William James in his 1891 book *Talks to teachers in psychology* , asserted that the process of teaching as being an art rather than a science and teachers are considered as artists with in - born talent.

Irrespective of the fact that little scientific evidence had been obtained to support this perception of teachers as artist, it still remained one of the common metaphors used when describing teachers and the teaching process. Clement and Vanderberghe (2000) offer many examples that support the idea of teaching as an art , even now in the twenty-first century, when so much is known about the skills and knowledge that teachers need to learn and practice in order to be effective teachers. Many, inside and outside of the teaching profession, still believe that teachers are born with a special gift, and thus professional development is deemed as not of great importance. (Villegas-Reimers 2003, p.32)

There has been no strong evidence in educational sciences to support the validity of linking teaching as an art rather than a science. However, some of the research carried out to test the validity of this metaphor has focused on the ‘indeterminate skills’ of teaching, the hidden curriculum, and the “tacit, implicit, and unexamined facets” of the teaching profession (Delamont, 1995, p. 7).

The implications of the beliefs that assume teachers are ‘born’ stands against the need to educate people as teachers as well as teachers to be engaged in continuous training and development efforts. Moreover, it implies that once teachers are engaged in the profession, their development as teachers will be simply a direct consequence of their practical experience, or their development as teachers will be taken for granted as ‘natural’ process and hence a sustained effort for professional development is rendered as irrelevant or is considered intrusive.

The perception of teaching as a profession and teachers as professionals is also far from a universally accepted fact or concept. There are a number of debates, and quite often disagreements, as to whether teaching fulfils the criteria set in defining such professions as Law or Medicine. Not only are these differences merely in terms of what constitute a profession as such, but also much more influenced by the practices and experiences of teachers and teaching in different countries.

The status of teachers as well as the perception towards the teaching profession depends on such contextual factors such as the cultural, economical, political, social settings in which the teachers are functioning. Hoyle (1995) asserted that there have been debates over the years and throughout many countries as to whether teachers are professionals as opposed to mere ‘workers’, and whether teaching is a profession and not just an ‘occupation’.

Hoyle made helpful analysis of the teaching profession using five criteria that constitute a profession: namely *social function*, *Knowledge base*, *practitioner autonomy*, *collective autonomy*, and *professional values*. The analysis showed teaching as a profession in terms of the *social function* criteria since the tasks of teaching are relevant for the well being of the society to which the services are offered. As to the *knowledge base* of teaching, there are debates in terms of emphasis given for the content and pedagogy (Jackson, 1987). But what is more important, if teaching is to qualify as a profession, is the need for special training and development activities to acquire such a *knowledge base*. Assumptions that support the acquisition of teaching *knowledge base* only through the teaching experience rather than specialized training indicate that teaching not as a profession, but an occupation where any one could be engaged and practice.

Teacher educators and others agree that practices that are found on educational models and theoretical frame works and reflections contribute significantly to the professional development of teachers. However, they stress the need for teacher training and continual

professional development as a critical part of the teacher preparation stage including practical training at schools.

With respect to the *practitioner autonomy* criteria, much depends on the relative autonomy teachers exercise in their country. In countries where teachers have autonomy in terms of defining their jobs and practices, teaching could be regarded as fulfilling this professional requirement. In countries where teachers' autonomy is quite limited and where governments and local administrations organs control *the what* and *the how* teachers function in school setting, it creates difficulty to perceive teaching as profession.

The evaluation of teaching as a profession from the *collective autonomy* point of view shows that,

“Teaching has been less successful than the major professions in achieving self-governing status and independence from the state. In perhaps the majority of countries, teachers are state employees expected to carry out the educational policies laid down by the central government. The degree to which the organized profession is consulted in the shaping of these policies varies over countries and over time”. In most countries, teachers are more likely to be organized into unions rather than into professional organizations, and this, of course, has an effect on the perception of teaching as a profession”(Hoyle 1995, p. 14).

The *professional values* criteria that are used in defining a profession are related to codes of ethics and set of values which are often derived from the accountability of the professionals to their clients. Hoyle argued that the multitude of clients teachers have (for example students, parents, government) and the adoption of explicit codes of ethics in fewer countries indicate to the challenge of perceiving teaching as a profession.

Therefore, based on these criteria and the assessment, it could be seen that the teaching profession might not be readily perceived as a profession in some circumstances and countries. Hence, the argument whether teaching is a profession or not depends also on the contextual situations of the society in which the teachers work.

However, there are stronger evidences that clearly indicate towards the need for the professionalization of teachers than the question of teaching as a profession. Most people agree that the provision of quality of education and reforms in the education sector requires the professionalization of teachers. “Fortunately, the tendency over the last few years has been to

begin to accept teaching as a profession and, consequently, the transformation from teacher-training to teacher *professional development* ...Most of the literature nowadays is focusing on the perception of teachers as professionals". (Villegas – Reimers, 2003, p 36, Darling – Hammond, 1999; Holmes group, 1986)

### 2.4.2.2 Teachers as Adult Learners

Barth (2000) argued that the mantra "*our schools are community of learners!*" often associated with school reforms is a challenging goal to achieve and have a wider implication. Not only it implies that all the adult and young people with in the schools are learners, but also stress the importance of supporting one another learning and development of the members of the community in achieving it. Teachers, within in schools need to be active learners and act as models in this regard to their students as well.

In their book , *Educators as learners: creating a professional community in our schools* , Wald and Casteberry (eds., 2000) stressed that a model of professional development based on collaborative learning of teachers with in the school creates a positive results for all members of the school including teachers , students , school leadership.

While addressing the issues that contribute to the success of teachers' professional development, Corcoran (1995) proposed that, teachers' professional development programs should be "modelled in constructive teaching [...] and demonstrate respect for teachers as professionals and as adult learners." (Coccoran, 1995 in Villegas Reimers2003, p 18)

Lawler ( 2003 , p 17-19 ) asserted that when we view teachers and educators of teachers as adult learners and their professional development as adult education , one can make use of the various theoretical frame works and research results from the field of adult education , adult learning and development for influencing such learning efforts. Similarly, teachers own perceptions of themselves as *adult learners* and as *professionals* have implications to their learning and professional development. Therefore, teachers learning and professional development could be guided by the principles of adult learning. Based on the literature and practices of adult education, Lawler and King (2000) emphasised on six principles that ensure effective teachers' professional learning and development programs. These are creating a climate of respect, encouraging active participation, building on experience, using collaborative inquiry, learning for action, and empowering the learner.

***Creating a climate of respect***

The design and implementation of professional development for teachers need to take into account their characteristics and roles, learning styles, experiences, learning needs and goals, and values. Both the social and physical environments need to be conducive to adult learning to ensure the creation of a climate of respect.

***Encouraging active participation***

Teachers, as adults, do have responsibilities that demand them to be actively engage in their work and life. Teachers would be more effective and efficient when they are actively engage in the learning process (Lawler, 1991). Therefore, besides the creation of a climate of respect, it will be important to create a learning situation where the teachers will be actively engaged in all the stages of the learning processes. Teacher educators or other professionals responsible for teachers learning and development programs need to encourage learners' participation and collaboration, show respect for their experience and prior knowledge.

***Building on experience***

Teachers come to learning and professional development programs with a wealth of experience about their school culture and system , the teaching – learning process , their own knowledge about student learning and assessment ,curricula , and other issues of importance from their professional and personal life. Their experiences are rich resources for their own and others learning and development if these experiences are valued and subsequent learning are to be built upon them. Though every learners experience, personal biography and perspective may not be the same, it is essential to make use of their experience as a starting point for building or influencing their views and understanding about the educational process. In fact, some of the views held by the learners and their earlier experiences may not facilitate new learning and development. However, through sharing of these experience and reflections of these views, teachers may have opportunities to learn from others and reconsider the relevance of their prior views and practices.

***Using collaborative inquiry***

The relevance of cooperative and collaborative planning and learning in adult education has been recognized by many educators in the field. Teachers could work collaboratively in assessments of learning and development needs, setting goals and objectives, group discussions, team work, and taking different roles in the process. Such collaborative inquiry

could also serve as a tool for increasing the motivation of the teachers to be engaged in the learning and development process. (Caffarella, 2002; Brookfield, 1986; Lawler, 2003)

### ***Learning for action***

Learning and Professional development activities should provide teachers with the opportunity to apply the contents of their learning to their actual workplace situations and gain newer experiences that they considered as important. Learning for action implies that the teachers understand these connections between the new learning content and its application, and enable them to take action afterwards.

### ***Empowering the learner***

Cranton (1997) stressed that reflecting and taking action based on learning empowers the adult learner. Empowered learners, as a result of their new learning experience, are able to make choices and take actions to bring about changes in their practices and influence others in their environments. As professional developments are concerned about bringing changes and development, then it would be essential to empower the teachers in order they could make choices and decisions and bring about changes and development.

## **2.4.2.3 Influence of Self Perception and Beliefs on Learning and Development**

Regarding the influence of teachers' perception on their teaching practices, Postareff et al. (2007) stated:

“While teachers approach teaching in diverse ways, they also hold different conceptions of teaching. Teachers' conceptions of teaching have been shown to affect the way teachers approach their teaching. Teachers who conceive teaching as transmitting knowledge are more likely to adopt a teacher-centred approach to teaching, while those who conceive teaching as facilitative are found to use more student-centred approaches (Samuelowicz and Bain 1992; Prosser et al. 1994; Kember 1997; Kember and Kwan 2000; Eley 2006). The need for professional development of teachers to influence their perception and practices is essential as “teachers conceptions of teaching do not necessarily develop with increased teaching experience” (Norton et al. 2005; Richardson 2005; Postareff et al. 2007, p. 30).

Kersaint et al. (2001) addressed the growing recognition that teachers' attitudes and beliefs, and their prior experiences as learners and instructors shape and impact how they engage in

professional development activities and experiences. They stressed that in addition to teachers' subject matter and pedagogical knowledge, their attitudes, and beliefs about themselves and about knowledge, learning, schooling, and the community in which they live are also important and must be addressed in order learning and development activities to bring an impact on their practices. As a result, professional development programs should be designed to include components that address the existing perceptions and beliefs in order for changes in beliefs of teachers to occur through reflection and self-assessment (Jones et al., 1994).

Borko & Putnam (1996) also stressed that active and constructive learning of teachers is heavily influenced by their existing knowledge and beliefs and the specific contexts they are situated. Therefore, the acquiring of new knowledge and skills by the teachers is evidently affected by their pre-existing knowledge and beliefs. Teachers, like other adult learners, are shaped by their diverse educational, life and work experiences in the past and present. These acquired experiences influence their perspective on their future educational event, including their motivation to be engaged in professional development activities. (Lawler, 2003)

A number of researches are found in the adult education literature which shade insights on adult learners' self - perception and their influence for their learning. These researches explored self-perceptions of adults as learners, the relationships between adults seeking learning opportunities, and the influence of self-perception upon self-directed learning and engagement within new learning environments. And furthermore some works attempted to investigate whether self perception may influence adults when faced with new learning opportunities, (for example, Kling 2007; Bauer et al. 2004; Boud and Solomon 2003; Illeris 2003, among others)

Though the results of the researches are specific to particular settings and difficult to generalize for all cases, it is evident that knowledge about adults' self-perceptions and how they see themselves in learning environments may be crucial in ensuring learners successful learning and development in their professional development activities.

Boud and Solomon (2003) reported cases where describing oneself as a 'learner' may imply less competence in the completion of their work. Bauer et al. (2004) showed that 'evidence exists that adults conceptualize their learning according to their epistemological beliefs', yet they concluded that 'no significant interrelations were found between epistemological beliefs and the appraisal of the workplace as supportive for learning' (p. 7).

Illeris (2003) stated that ‘if something occurs that the individual experiences as a defeat, humiliation or other negative experience...very quickly a thick wall of defence can be mobilised’ (p. 174). Also in this connection Velez (2006) concluded that self perception (and self worth) as a concept which precedes the act of motivation and the difficulty of motivating the learner extrinsically that lack intrinsic belief in themselves.

Research findings show that is it possible to alter the self-perceptions of adults with negative self-images (as learners) and, in doing so, increase their motivation to learn. Hence, self-perception, although developed over many years, may not necessarily remain static. (Klein et al., 2004)

Like wise Velez (2006) indicated that self-worth (akin to self-perception) is not a quality given, but it is an attitude that is cultivated. It would seem important, therefore, for all adult educators to consider that self-perception may be fluid rather than static and that adult learning and development programs and also adult educators may have influence upon the adult’s self-perception as a learner. As Illeris (2003, p.174) stated, ‘adult education can lead to extensive, enriching development for the individual if they come with a positive motivation’. Having an awareness of how best we can ensure a safe learning environment, how we can promote effective learning and how we can enhance self-perception will be invaluable for adult educators. Therefore, self-perception plays an important role in explaining teachers’ motivation to either participate or not participate in learning and professional development activities. (Kersaint 2001; Ulrich 1987)

### **2.4.3 Motivation Issues in Professional Development**

Motivation is one of the issues that need to be considered as an important component when dealing with the professional development of teachers and adult learners in general. Engagement in own learning and professional development are visible outcomes of motivation. Learners who desire to engage in professional development activities are affected by multitudes of factors that are dependent on each individual learner, the learning content, context and process. Broadly speaking, motivational factors to learn comprise of intrinsic and extrinsic elements that initiate and sustain learning behaviour.

Extrinsic motivation depends on perceptions of gain from others in the form of rewards or in terms of the avoidance of sanctions. Freiberg and Knight (1987) and other research works

have shown that extrinsic rewards are important for teacher motivation and morale. In their research, Freiberg and Knight showed that the extrinsic incentives provided to teachers have significantly influenced positively their perception and motivation to engage in professional development activities developed by their schools. Besides personal financial rewards, provision of grants for special projects, conferences and workshops, summer studies, and appropriate school or work environment were found important motivating factors.

The work environment as a motivational factor is also an important dimension in teachers' motivation. Overbaugh's (1990) research demonstrated strong relationship between the teachers' job effectiveness, job retention and the work environment. In this research and also in others, it was reported that a work environment that allows teacher to work professionally enhance their motivation and morale. In this regard Sahin (2004) wrote

“The physical setting of the educational environment must allow teachers to carry out their activities with comfort, effectiveness, and self-esteem. It is reasonable to expect that the more professional the environment, the higher the competency level of teachers will be. It is believed that teachers with high expectations will have higher student success, and highly motivated teachers will motivate students for achievement.” (p. 49)

Intrinsic rewards such as self-respect, responsibility, and a sense of accomplishment are reported in many research works to be very effective in motivating teachers. Personal and professional development is also identified as a significant intrinsic motivator (Ellis, 1984). The research work by Weld (1998) also showed that in order schools to attract and retain high quality teachers, fundamental changes are necessary to avoid the following conditions in the workplaces:

- the sense of being isolated
- the lack of administrator or principal support
- lack of recognition of teachers as professionals ,and
- lack of or inadequate professional development opportunities.

In a similar line, Overbaugh (1990) and others indicated that such factors as the feelings of achievement of professional respect, competence and self worth are important intrinsic motivational factors. More over, as part of the intrinsic motivation for teachers learning and professional development, the degree of autonomy and empowerment that teachers are given are also very important.

The intrinsic perspective to motivation explains that to be curious and active, to initiate

thought and behaviours, to make meaning from experience, and to be effective at what we value are considered to be part of the human nature irrespective of diversities in contexts or cultures. (Woldkowski, 2003, p 40; Lambert and McCombs, 1998)

Professional development programs could also be more effective through developing intrinsic motivation in the learners. There are a number of conditions that help or guide to the creation of a learning environment where the adult learner would be motivated intrinsically and as result show more engagement than resistance to learn. For example, Woldkowski (2003, p 40) enumerated four conditions to create such an environment. These are focused on the creation of

- a learning atmosphere in which participants feel a sense of respect and belongingness
- favourable disposition towards the learning experience through personal relevance and choice
- challenging , thoughtful learning experiences that include the learners' perspectives and values
- an understanding that learners are effective in learning something that they value.

Therefore, both extrinsic and intrinsic motivational factors play critical roles in teachers' work lives, professional development and their morale. In terms of the link between teachers' morale and motivation, Dunaway (2007) argued that

“Clearly, morale and motivation are intrinsically linked. One cannot discuss morale without motivation. Place one in front of the other as in morale produces motivation or reverse the two as in motivation produces morale, and both make perfectly good sense. For the discussion here, they are used not interchangeably but as one intrinsically connected to the other. Regardless of how they are used, the key idea is this: motivation and morale are internal cognitive operations capable of being influenced by the external environment. Performance, then, is a reflection of how motivation and morale are influenced by the external environment” (Dunaway 2007, p.2).

Wentworth (1990) described teachers' morale as to the quality of their lives within a community. High morale is closely linked to being known and appreciated, having professional knowledge valued, and being given the freedom to act. These also include learning, growing, making mistakes, reflecting on them, and moving on. On the other hand, poor teachers' morale may arise from professional lives that have little meaning; from frustration and the inability to change what is happening.

## 2.5 Teachers' Learning and Professional Development at Workplaces

### 2.5.1 Teachers' Learning at Workplaces

Teachers' learning and development at their workplace could be described as participation of teachers in professional development activities within their schools, both individually and in collaboration with others, that help them develop professionally. These activities could include a wide range of individual and group activities such as reading, studying, experimenting, reflecting, and supporting others, sharing experiences, team working, engaging in extracurricular activities and the like. In an attempt to identify in what ways teachers actually learn in their work places, three different theoretical learning principles are considered here that aid to define teachers' learning in their work places. (Moore and Shaw, 2000)

The first learning principle that is dominant in school improvement and organizational development theories is that *teachers' learning is expressed as a participation in activities in the schools* (Kwakman, 2003). The idea that cognition is situated in nature is prevalent in both the cognitive psychological and professional development perspectives of teachers' learning and professional development. Many authors argue that learning and knowing to be integrally and inherently situated in the everyday world of human activity (Kawkmán, 2003; Candy, 1991; Darling-Hammond, 1998; McLaughlin, 1997; Putnam & Borko, 2000; Scribner, 1999). Thus, teachers' learning and development is also understood as embedded in their school work activities (McLaughlin, 1997). Both perspectives stress the significance of integrating the teachers work activities and learning processes as a necessary condition for improvement and development at an individual as well as at an organizational level. (Hargreaves, 1997; King & Newmann, 2000; Scribner, 1999; Wenger & Snyder, 2000)

Jarvis's (1987) idea that stressed that learning is not only individual but also social in nature, anchors the second learning principle. The recognition of this principle implies that *teachers' learning at workplace is collaborative in nature and bound culturally to the context* in which it takes place. In fact, it is also important to take into account the individual self-directed learning in which teachers as adult learners take their own responsibilities and initiatives to engage themselves in self-directed learning projects (Candy, 1991; Merriam & Caffarella,

1991). Therefore both individual and collaborative learning contribute to the professional development of teachers. Kawkman (2003) emphasized that

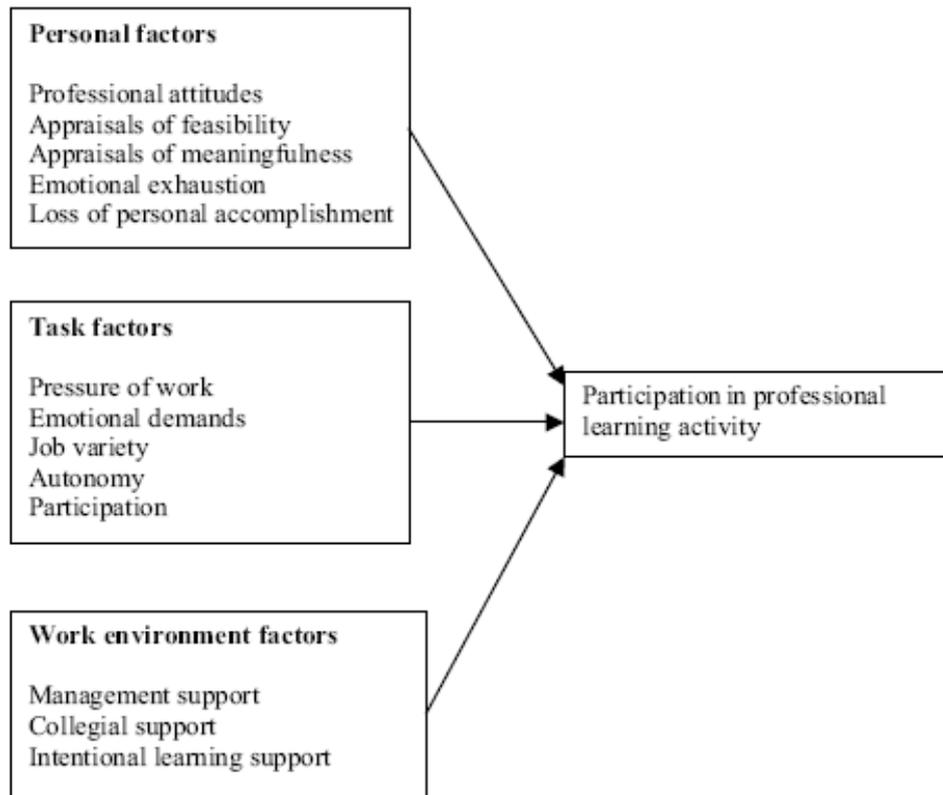
“There is a growing call for more collaboration in order to stimulate teacher learning. The reasoning behind this call for collaboration is that feedback, new information or ideas do not only spring from individual learning, but to a large extent also from dialogue and interaction with other people. Moreover, collaboration is assumed to create a learning culture and helps to build a community in which further learning is supported and stimulated.” (p .152)

The third learning principle is based on the purpose of teachers' learning which stresses learning *as a necessity for them to develop professionally* and thereby improve their services. The need for teachers to continuously develop professionally necessitates the process by which the teachers need to be engaged in learning and development activities that contribute to their professional development. The demand for improved performances and provision of better services require in part the need for the teachers to acquire new competences through learning and development. Hence, teacher learning is regarded as professional learning. (Hoyle & John, 1995)

Kawkman (2003) grouped the various teachers' learning activities in schools in four categories: *reading, experimenting, reflecting and collaboration*. The first three categories basically refer to the individual level while collaboration is considered as group level activity. According to this categorization *Reading* focus on activities in pursuit of keeping one self up to date with the changes and developments in the respective profession , in terms of content , methods and the wider societal changes . *Experimenting* refers to the practicing of some thing new by the teacher that may provide an opportunity to learn. *Reflection* is considered to be the cornerstone of professional development which precedes teachers' recognition and changes in their routine behaviours (Schön 1983). *Collaboration* not only provides teachers with feedback and new information from colleagues but also serve as means for supporting individual learning and development efforts.

Based on the notion that generally teachers' learning is influenced by both personal and contextual factors at work place, different researchers have tried to single out the major factors that affect learning at work places (Clardy, 2000; Scriber 1999). Owing to the complex nature of the learning process and the diversity of each of the specific contexts, a list of these factors could not be drawn that could be generalised to all situations. However, in an attempt to discern relevant factors that affect teachers' participation in professional activities,

Kawakman (2003) used the frameworks from adult learning theories as well as from the social psychological theory of work stress. According to her analysis, the three major factors that affect the participation of teachers in professional development activities are categorized as *personal, task, and work environment* factors. The factors under each of these major categories are depicted in Figure 10.



**Figure 10 Factors affecting teachers' participation in professional development (Kwakman, 2003, p 158)**

## **2.5.2 The Role of Colleagues in Teachers' Professional Development**

Wenzlaff and Wieseman (2004), in their article entitled *Teachers Need Teachers to Grow*, stated that interaction and collaboration among teachers as the major factors that influence their effective learning and professional development. They argued that learning and growing in teaching involve the construction and reconstruction of practical theories and personal practical knowledge. Interactions with the people in one's environment are major

determinants of both what is learned and how learning takes place.

Many writers agree that an important foundation for thinking about teacher learning is the construct of teacher beliefs about schools, teaching, and learning. These beliefs that teachers hold about themselves and their profession influence their motivation to learn and act in different ways. How a teacher learns a particular set of knowledge and skills, the nature of interaction with peers, and organizational supports and physical and social contexts become fundamental parts of what teachers learn (Ponticell, 1995; Putnam & Borko, 2000; Pajares, 1992).

Bell (1998) described that teachers' social interactions with others in the workplace and beyond as part of the personal and social construction and re- construction of knowledge of teaching. Park et al. (2007) argued that "among those social interactions, interaction with colleagues greatly influences the development of individual teachers' knowledge of teaching, since teachers share similar school tasks and concerns about teaching more with their colleagues than others. (Park et al., 2007, p 370)

A similar idea was discussed by Hatano (1993) who asserted that learners are more likely to receive more information and advice from their peers through horizontal interaction than through vertical interaction from higher authorities such as trainers, or external expert. Thus, he highlights the critical role of colleagues in the knowledge construction of teachers as adult learners. He further suggested that such interactions result in learning through verbalization, discussion, argumentation, and negotiations with the other teachers. Gee (1991) called such learning in a social discourse as acquiring an "identity kit" that help members of the social group to be part of it, and actively engaged in pursuit of their individual and collective goals.

Park et al. (2007) noted that teachers interaction with colleagues at school would help the development of the collective teacher knowledge in the given teacher community which becomes an essential element of its culture. Such collective knowledge of teachers emancipate from the particular social, cultural , and educational context in which the community of teacher would find themselves and this commonly held knowledge is also applicable to the same context . Such knowledge shapes the teachers' perceptions, behaviours and work strategies in their daily activities. Schubert and Ayer (1992) termed this collective knowledge of as "*Teachers Lore*" and claimed that it is the dominant way by which teachers

construct, reconstruct, and share their professional knowledge to others. Teachers reinforce the learning and development of their colleagues through such process of collaboration, reflection, sharing, showing emotional support, team working and other means.

However, many researches found out that the potential for teachers' learning and development through the collegial support is not well utilized or had a minimal impact on their development owing to a number of contextual factors specific to the schools or teacher communities in question. For instance, researches conducted by Clandinin (1986), Sagor (1997), Scribner (2003), and Sato & Kleinsasser (2004) in various contexts revealed that teachers

- may lack a professional tradition of sharing expertise
- could often be reluctant to articulate professional knowledge and experiences because of a culture of isolation
- interactions often did not focus on deeper examination of their behaviours and beliefs, and practices but addressed mundane matters
- are mainly concerned about student behaviour, managing activities, and completing activities within the time available than critically reflecting on their own and their colleagues' practices.
- conversations are dominated by issues of classroom management, school tasks, and the progression of classes.
- may not share ideas about the challenges they face in the teaching – learning process and their own learning and development needs
- often interactions tend to reinforce existing practices, and maintain the status quo and hence discouraging teachers' motivation to experiment and learn from new practices.

Therefore, collegial support to the learning and professional development of teachers requires an environment that fosters the culture of learning and strategies that are aimed at facilitating collaboration and critical reflections. School systems and work practices should create opportunities and conditions that help teachers to collaborate and support one another.

In fact, a number of factors may have contributed to the limited collegial interaction and the creation of sustainable communities of professionals at schools. Taking in to account the specific nature of the context in which the schools and teachers find themselves, it will be essential to develop processes, models and other intervention strategies that help create an

atmosphere conducive to increased collaboration, critical reflections, and professional learning of teachers.

Emphasizing on the relevance of considering the specific condition of each school in the selection of appropriate measures to enhance teachers' development, Guskey (1995a) wrote

“The uniqueness of the individual setting will always be a critical factor in education. What works in one situation may not work in another [...] because of the enormous variability in educational contexts, there will never be ‘one right answer’. Instead, there will be a collection of answers, each specific to a context. Our search must focus, therefore, on finding the *optimal mix* – that assortment of professional development processes and technologies that work best in a particular setting.” (p. 117)

## 2.5.3 The Role of School Culture and Leadership

### 2.5.3.1 School Culture

Fullan (1987) noted that among the crucial factors that help professional development of teachers successful include the organizational culture at school level, the role of the leadership in the school and the external agencies like local and federal governments and their policies and reforms. Similarly others, for example Futrell et al. (1995), Darling-Hammond and McLaughlin (1995), strongly argue that teachers professional developments that are not embedded in some major reforms of structures, policies and organizations will rarely achieve the desired changes in teachers practices and their development, be it at school, regional or national level. Villegas-Reimers (2003), citing several cases from different countries, asserted that on one hand, teacher professional development initiatives that are were not accompanied with the necessary reforms in structure, culture and policies have been not successful. On the other hand, educational reforms that do not include teachers and their professional development could not effectively achieve their goals either. These evidences suggest that the influences of these contextual factors on the learning and development of teachers to be critical.

Glatthorn (1995) also noted that the importance of a collaborative school culture, and the support of school leadership among the necessary conditions for effectively implementing

teacher development programs. Lieberman (1994) and also Bush (1999) asserted that the necessary conditions for teachers' professional development to be successful in school settings should include

- developing norms of collegiality, openness and trust
- creating opportunities and time for disciplined inquiry
- providing opportunities for teachers' learning content in context
- re-thinking and redefining leadership in schools to include teachers
- creating and supporting networks, collaborations and coalitions
- preparing teachers to become leaders of their own professional development.

The issue of school culture is of such magnitude that it requires a careful scrutiny as it affects the learning and development of all the individual members of the school as well as their collective learning, development and practices. The school culture affects how members of the school think, feel and act as part of the system. The literature in management science, organization theory, educational sciences and other disciplines have shown that the culture of an organization to be one of the critical elements that influence organizational change and development, and its transformation to a learning organization. (Argyris and Schön, 1996; Senge, 1990a; Drucker, 1996; Black, 2003)

Peterson ( 2002 ) defined school culture as the set of norms, values and beliefs, rituals and ceremonies, symbols and stories that make up the 'persona' of the school. While there is no such thing as *one best culture*, common features that are attributed to successful school cultures and professional learning communities include

- a widely shared sense of purpose and values
  - norms of continuous learning and improvement
  - a commitment to and sense of responsibility for the learning of all members
  - collaborative, collegial relationships, and
  - opportunities for staff reflection, collective inquiry, and sharing personal practices
- (Stein, 1998; Lambert, 1998; Fullan, 2001; DuFour & Eaker, 1998; Hord, 1998)

## 2.5 Teachers' Learning and Professional Development at Workplaces

In such school cultures teachers, students, and school administration value learning, work to enhance curriculum and instruction, and focus on students. All of these elements build commitment, forge motivation, and foster learning for the teachers and students (Peterson & Deal, 2002).

Richardson (2001) described school culture as the accumulation of many individuals' values and norms; their consensus about what's right, and their expectations as a collective entity. Accordingly, culture is considered as a socially constructed and learned ways of behaving and believing that could be influenced and changed.

Wagner and Hall-o'Phelan (1998) and Philips (1993) noted that the presence of the following three behaviours as determinant of a conducive or healthy culture in a school for teachers' learning and professional development: *Professional collaboration, collegiality and Self determination /efficacy* of its members. Research results into school culture, change, and improvement also tie collegiality and collaboration to positive school outcomes (Levine and Lezotte, 1990; Fullan and Hargreaves, 1991).

### 2.5.3.2 Professional Collaboration

Though the importance and significant role of individual as well as collaborative learning are widely recognized in the literature, there are differing emphases given to the two types of learning in professional development. Kwakman (2003) asserted that there are more call for collaborative learning than the individual based learning to stimulate teacher learning in teachers' professional development. She cited the works of many authors (Hargreaves, 1997; King & Newmann, 2000; Jenlink & Kinnucan-Welsch, 2000; Lieberman, 1996; Little, 1993; McLaughlin, 1997; Moore & Shaw, 2000) that argued the significance of a shift to a more collaborative learning as the dominant paradigm in effective professional development. (Kwakman, 2003, p151)

Darling-Hammond and McLaughlin (1995) have put also more emphasis on the collaborative learning aspect and described that professional development activity as dominantly a collaborative process. They argued that collaborative learning provides far more possibilities for the acquiring of new knowledge, skills and experience than the individual learning due to the interaction among teachers and between teachers and others. Collaborative learning also facilitates the process of building a community of learners and the culture of learning in the

schools. Thereby, the community of learners and the culture of learning further enhance future learning and facilitate sustainable learning of the teachers in the schools.

A school with a collaborative culture is one where its members work together effectively and are guided by a commonly set and shared purpose and vision. Collaborative school culture creates the opportunity to build professional capacity for change and improvement of the school practices and performances. Drawing on the works of Fullan and Hargreaves (1991) and others, Peterson (2002) pointed out the characteristic features of schools with professional collaborative cultures. Accordingly, schools with professional collaboration exhibit relationships and behaviours including

- more complex problem-solving and extensive sharing of knowledge
- stronger professional networks to share information
- greater risk-taking and experimentation
- a richer technical language shared by teachers in the school that can transmit professional knowledge quickly
- increased job satisfaction and identification with the school
- more continuous and comprehensive attempts to improve the school

Schools with high collaboration among its members show trustful and open relationships, a commitment to valuing people as individuals as well as valuing the groups to which individuals belong. In such schools

- consensus exists on the educational goals, but differing views are openly voiced and are also considered as opportunities to foster new dialogue and further improvement
- leadership is dispersed; many teachers are important part of the decision making process
- mistakes, failure and uncertainty are openly shared, discussed, and examined in order to provide support and help.
- members take sense of pride in their membership and workplace is considered as places for hard work, commitment, and dedication
- interdependence is valued and fostered
- disagreements are openly voiced more frequently and more strongly as purpose and practice are discussed
- teacher receives respect and consideration as a person
- satisfying and more productive work environments exist

- teachers develop the collective confidence to respond to changes and aspire to improve their practices. (Nias et al. 1989 ; Fullan and Hargreaves, 1991 )

Saphier and King (1985) also listed similar characteristics of a collaborative school culture in terms of norms and expectations that support change and improvement. These include

- Collegiality
- Experimentation
- High Expectations
- Trust and Confidence
- Tangible Support
- Reaching out to Knowledge Base
- Appreciation and Recognition
- Caring, Celebration and Humor
- Involvement in Decision Making
- Protection of What's Important
- Honest and Open Communication

### **2.5.3.3 Professional Collegiality**

The importance of professional collegiality has been discussed in studies of teacher professional development from a number of different perspectives. Reinken (1998) explored teachers' professional collegiality from three perspectives that are dominant in the literature. These perspectives describe professional collegiality from sociological, organizational, and teachers' work and change dimensions. According to the sociological perspective, professional collegiality is viewed as the relationship between members of the same profession who have a sense of belongingness together and identify with one another in a common undertaking. Its focus is from the culture of professional collegiality dimension. Members show closeness, intimacy, shared fate, and understanding. It emphasises on the development of shared beliefs, attitudes, norms, Values and the formation of formal and informal associations. (Freidson, 1984)

The second perspective, the organizational perspective of professional collegiality, is found in the literature about school improvements and changes. In this perspective professional collegiality is perceived as an organizational characteristics and focus on the etiquette dimension of collegiality. It emphasises on the design and interventions in developing

appropriate organizational characteristics that facilitate and improve professional collegiality through the school culture and social organization. It assumes that improvements and changes in schools could be effected by fostering greater collegiality through changes in school cultures and structures. The focuses are too often in the creation of clear school goals, objectives and missions that could create cohesion among teachers.

The third perspective, which is related to the *behavioural* dimension of collegiality, focuses on the action and interaction of teachers and others guided by the culture and etiquette. It describes collegiality in terms of behaviours teachers' exhibit as they develop collegiality which range from weak form (teachers work as isolated activity) to that of strong form which demonstrate the interdependence of teachers work.

Barth (1990) described collegiality as a presence of the following four specific behaviours that the teachers in the school demonstrate.

- Teachers in schools talk about practice. These conversations about teaching and learning are frequent, continuous, concrete, and precise.
- Teachers in school observe each other engaged in the practice of teaching and administration. These observations become the practice to reflect on and talk about.
- Teachers engaged together in work in curriculum by planning designing, researching, and evaluating curriculum.
- Finally, teachers in schools teach each other what they know about teaching, learning, and leading. Specific knowledge is revealed, articulated, and shared. ( Barth, 1990, in Arnold , 2005b , p. 32 )

Arnold (2005b) also noted that the development of professional collegiality in schools depends on, among other factors, on what he calls the *social-emotional resources* of the teachers and the leadership as well. In this connection, Kurse et al. (1994) emphasized that professional collegiality is to be promoted in schools which focus on the following aspects:

- Openness to improvement , change and innovation
- Trust and respect
- Cognitive and skill base
- Supportive leadership
- Socialization (Kurse et al. ,1994, in Arnold, 2005b, p. 38 )

## 2.5.4 Developing Schools as Learning Organizations

### 2.5.4.1 Characteristics of Learning Organizations

Barth (2000), in a preface to a book entitled *Educators as Learners: Creating a professional Community in Your School*, described metaphorically the significance and the impact of the learning of teachers in their workplaces as follows.

“For when the adults within the school-house commit to the heady and hearty goal of promoting their own learning and that of their colleagues, several things follow: They leave the ranks of the senior, wise priesthood, the learned, and become the first –class members of that community of learners. And when the adults come to take their own learning seriously, value and promote it, students take note. And when students see some of the most important role models in their lives learning, they too will learn, even achieve. Hence adult’s learning in our schools is a basic, not a frail.” (Barth, in Wald and Castelberry, 2000, P.V)

Schools exist to promote the learning of all of their members. Indeed, the central purpose of a school is to invent and then to provide the conditions under which profound levels of human learning can flourish. That is why we have them. To paraphrase the legendary coach Vince Lombardi: ‘In schools, learning isn’t the most important thing; it’s the ONLY thing.’ (Barth, 2000, in Wald and Castelberry, 2000)

According to Peter Senge (1990) learning organizations are “organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to see the whole together” (p.3). He further argued that, in the face of ever changing situations, organizations will be successful if they “discover how to tap people’s commitment and capacity to learn at *all* levels’ (Senge ,1990, p. 4 , in Smith ,2001 )

Though the people in organizations have capacity to learn, the organizational structures and culture may not be conducive to engage in learning activities, to reflect on their experience and facilitate cross-learning. It is also true that people in the organizations may not have the necessary tools and resources as well as the guidance to better understand and proactively engaged in learning and development activities in order to make sense of changes in the both external and internal environment.

However, successful organizations that not only survive but continually expanding their capacity to create their future require a fundamental shift of mind among their members in order for the people to act upon the structures and systems of which they are a part. This fundamental shift, according to Senge, is a “shift of mind from seeing parts to seeing wholes, from seeing people as helpless reactors to seeing them as active participants in shaping their reality, from reacting to the present to creating the future.”(Senge, 1990, p. 69)

It is therefore significant to recognize that fundamental changes in organizations and people are attributed to their learning. Both people and organizations have the potential to learn, but not all organizations are learning organizations and all people may not actively engage in their learning and development.

Both individual and organizational learning may be understood at different levels. Senge (1990) distinguishes between *adaptive leaning* (learning for the organization to survive) and *generative learning* (learning that enhance capacity to create). He claims that *adaptive learning* is important and necessary but must be coupled with *generative learning* in order the organization to be a learning organization. Similarly others have also stressed the different levels of learning that occur in individuals and organizations. For example , Argyris and Schön ( 1996 ) distinguish between *single loop* and *double loop* learning; Ciborra and Schnieder ( 1992) classify learning as incremental and second order learning ; Moingeon and Edmonson ( 1998) define the *learning how* and the *learning why* . In these classifications , higher order learning requires the questioning of assumptions held, goals, policies, routines and upheld values, reframing problems and the subjectivity of meaning associated with organizational problems. (Smith, 2001)

Senge (1990) identifies five dimensions that help distinguish learning organization from those which are not. These are Systems Thinking, Personal Mastery, Mental Models, Building Shared Vision, and Team Learning. Accordingly, the presence and mastery of all these dimensions within the schools help them to become innovative learning organizations where not only all its members learn but also the school itself learn as an organization. has provided the The descriptions of these five dimensions as elaborated by Smith (2001) are presented as follows.

### ***Systems thinking***

Systems thinking is termed as the *fifth discipline*, and also as *the corner stone of the learning organization*. Senge provided the application of systems theory to organizational issues and

processes. Systems thinking provides the framework that the component parts of a system can best be understood in the context of relationships with each other and with other systems, rather than in isolation. The only way to fully understand why a problem in organizations occurs and persists is to understand the part in relation to the whole.

Not only this dimension integrates the other four dimensions of the learning organization but also underscore the complex nature of organizational problems and processes. Senge argued that too often a rather simplistic solutions or frameworks are applied for problems which are inherently complex. Focusing on the parts rather than seeing the whole and failing to see organization as a dynamic process do not lead to a better appreciation of systems and taking more appropriate actions.

He further argued that the notion that cause and effect are relatively near to one another often lead to actions that produce improvements in a relatively short time span, but when viewed in systems terms short-term improvements often involve very significant long-term costs. Such a short term approach to organizations problems can severely damage its long-term viability. The systems viewpoint is, however, oriented toward the long-term view and often delays and feedback loops are important aspects of it. (Smith, 2001)

### ***Personal mastery***

Senge described personal mastery as “the discipline of continually clarifying and deepening our personal vision, of focusing our energies, of developing patience, and of seeing reality objectively” (Senge, 1990, p.7). Personal mastery goes beyond competence and skills, although it involves them. It goes also beyond spiritual opening, although it involves spiritual growth. Mastery is seen as a special kind of proficiency. It is not about dominance, but rather about calling. Vision is vocation rather than simply just a good idea. (P. 141)

He further explained that personal mastery is not something that one possess or achieve , but rather it is a life –long process learning mode of people who are fully aware of their ignorance, incompetence and their growth areas while being self –confident in themselves. He believed that personal mastery entails developing personal vision; holding creative tension between our vision and reality; recognizing structural tensions and constraints, and our own power with regard to them; a commitment to truth; and using the sub-conscious.

Personal mastery is a prerequisite to organizational learning. “Organizations learn only through individuals who learn. Individual learning does not guarantee organizational learning. But without it no organizational learning occurs.” (Senge, 1990, p. 139 in Smith, 2001)

### ***Mental models***

This dimension refers to the “deeply ingrained assumptions, generalizations, or even pictures and images that influence how we understand the world and how we take action” (Senge, 1990, p.8). People are often not aware of the impact of these mind sets on their behaviour and thus a fundamental part of their task is to develop the ability to reflect-in and on-action.

The discipline of mental models starts with turning the mirror inward; learning to unearth our internal pictures of the world, to bring them to the surface and hold them rigorously to scrutiny. It also includes the ability to carry on ‘meaningful’ conversations that balance inquiry and advocacy, where people expose their own thinking effectively and make that thinking open to the influence of others. (Senge 1990, p. 9)

If organizations are to develop a capacity to work with mental models then it will be necessary for people to learn new skills and develop new orientations, and for there to be institutional changes that foster such change. “Entrenched mental models thwart changes that could come from systems thinking” (Senge,1990 p, 203). Moving the organization in the right direction entails fostering openness, empowering people while retaining coordination and control. (Smith , 2001)

### ***Building shared vision***

It is not enough for organizations to develop a vision that is inspiring and foster a sense of long –term perspective , but importantly it need to be shared . Senge argued that when organizations have a genuine vision that is shared, people excel and learn.

The discipline for translating personal vision into shared vision which serves as guiding principle and practice is very critical element of the learning organization. “The practice of shared vision involves the skills of unearthing shared ‘pictures of the future’ that foster genuine commitment and enrolment rather than compliance. In mastering this discipline, leaders learn the counter-productiveness of trying to dictate a vision, no matter how heartfelt.” (Senge, 1990, p. 9)

Rather, vision spreads because of a reinforcing process. "As people talk, the vision grows clearer. As it gets clearer, enthusiasm for its benefits grow". There are 'limits to growth' in this respect, but developing mental models can significantly improve matters. Where organizations can transcend linear thinking and grasp system thinking, there is the possibility of bringing vision to fruition." (Senge, 1990, p.227)

### ***Team learning***

Team learning builds on personal mastery and shared vision but more over it require that people need to act and learn together. When teams learn together not only can there be good results for the organization, members will grow more rapidly than could have occurred otherwise. Such learning is viewed as 'the process of aligning and developing the capacities of a team to create the results its members truly desire' (Senge, 1990, p.236).

"The discipline of team learning starts with 'dialogue', the capacity of members of a team to suspend assumptions and enter into a genuine 'thinking together'. To the Greeks, *dia-logos* meant a free-flowing of meaning through a group, allowing the group to discover insights not attainable individually [...] also involves learning how to recognize the patterns of interaction in teams that undermine learning." (Senge, 1990, p. 10)

Senge argues that when dialogue is joined with systems thinking, there is the possibility of creating a language more suited for dealing with complexity, and of focusing on deep-seated structural issues and forces rather than being diverted by questions of personality and leadership style. Indeed, such is the emphasis on dialogue in his work that it could almost be put alongside systems thinking as a central feature of his approach. (Smith, 2001)

### **2.5.4.2 Schools as Learning Organizations**

Many have suggested that nothing less than a fundamental redesign of the school system and culture will begin to address the hurdles faced by teachers and students in succeeding at school (Boyd & Shouse, 1997). Coleman (1997), for example, noted that the highly bureaucratic nature of public schools stifles creative problem solving and blocks receptivity to large-scale and transformative system reform. He described schools as "administratively driven organizations" with long feedback loops from the top of the school leader to that of the component subsystems. Coleman considered schools with decentralized authority structures and norms of accountability and social support, which he labels as "output-driven organizations," as having more promise than ones with traditional bureaucratic forms for

increasing teacher and student performance.

Bowen et al. (2007) noted that with growing concerns about the ability of many schools to respond to the needs of students and teachers, many voices in the school reform movement have discussed the need for schools to operate as "learning organizations," which addresses the importance of faculty and staff working together to solve problems through networking and team learning. (Orfield et al., 2004; Senge et al., 2000, Fullan 1999)

Like other systems, schools evolve cultures that reflect rules and strategies for accomplishing their mission and maintaining internal integration (Schein, 1992). Over time, these rules and strategies operate on autopilot for both school employees and students. They become a mental map for "how things are done around here." These rules and strategies may be difficult hurdles for encouraging and incorporating the change required for the development of school culture that promote the learning of its members.

The degree to which schools function as learning organizations may not only influence the willingness of school members to embrace new innovations for promoting student achievement, but also their personal well-being, their sense of efficacy in working with students, their work satisfaction, and their evaluation of the school as a high-performing organization. A number of empirical investigations offers support for these types of positive effects from schools functioning as learning organizations (for example, Lick, 2006; Orthner et al., 2006). Understanding schools as learning organizations offers the potential to unlock the creative and dynamic processes that schools require to undergo fundamental and significant change initiatives. (Bowen et al., 2007)

Schüßler (2009) noted that the perception of schools as learning organizations entails the need for considering both the internal structure of the school as well as its external environment. This leads to the understanding of school learning culture as "the entirety of learning and development potential, which is arranged through the interaction of the members in interactional and communication processes, on a lesson, collegial and organisational level." (Arnold and Schüßler (1998, p. 4) in Schüßler 2009, p. 8)

Brandt (2003), based on the various literature on learning organizations, suggested a list of characteristics (though not as a checklist) that school community members need to consider in order to help distinguish whether a school is functioning as a learning organization or not.

Accordingly, schools as learning organizations need to

- have challenging but achievable shared goals
- have supportive organizational cultures
- have an incentive structure that encourages adaptive behaviour
- be "open systems" sensitive to the external environment, including social, political and economic conditions
- have members who can identify the organization's stages of development
- gather, process, and act upon information in ways best suited to their purposes
- have an institutional knowledge base and processes for creating new ideas
- exchange information frequently with relevant external sources
- continually get feedback on their services and refine their basic processes

The emphasis on the need for schools to function as learning organization is also associated with the current challenges in school management to be more innovative in a number of fields. In this context, Schüßler (2009, p.28) identified five areas that need to be considered and dealt by schools. These are:

- Development of the school as a learning organisation
- Creating more leeway for manoeuvre by making it autonomous
- Promoting quality development in schools
- Continuous further development of learning and school culture
- Change from school administration system to school management

Another concept that is closely discussed with the development of schools as a learning organization is the description of school as a *Community of Learners*. Barth (1990), in his book entitled *Improving Schools from Within*, stressed the significance of learning communities for mutual development. Here more focus is given to teachers' collegiality and their ability to work and learn as a professional team as the necessary prerequisite to bring systemic changes in the schools. Barth (1990) and Kruse et al. (1994) focused in the importance of developing and sustaining team work and learning through active intervention in team development processes, teachers' competence development, and the support of structural and social processes with in the school.

Kruse et al. stressed that “there must be support within the school for teachers who want to take risks and try new techniques and ideas. Otherwise, serious and lasting change cannot be sustained.” (Kruse et al. 1994, p.4 in Arnold, 2005b) They listed number conditions to be met in order professional teams to be effective. Accordingly, they suggested that professional communities would be strong when teachers in a school demonstrate the following five critical elements: reflective dialogue, de-privatization of practice, collective focus on student learning, collaboration, and shared norms and values. In a similar way, a number of structural conditions need to be met in schools for professional communities to develop and grow. These necessary structural factors include: time to meet and talk, physical proximity, interdependent teaching roles, communication structures, teacher empowerment and school autonomy. The social and human resources that enhance professional community in schools include: openness to improvement, trust and respect, cognitive and skill base, supportive leadership, and socialization. (Kruse et al., 1994, in Arnold, 2005b)

### **2.5.5 Role of Leadership**

One of the factors that are often discussed in the literature which influence teachers’ learning and professional development is the school leadership. Lunenburg and Orstein (1996) defined leadership as persuading others to pursue a common goal, influencing others’ actions and opinions, and building cohesive teams.

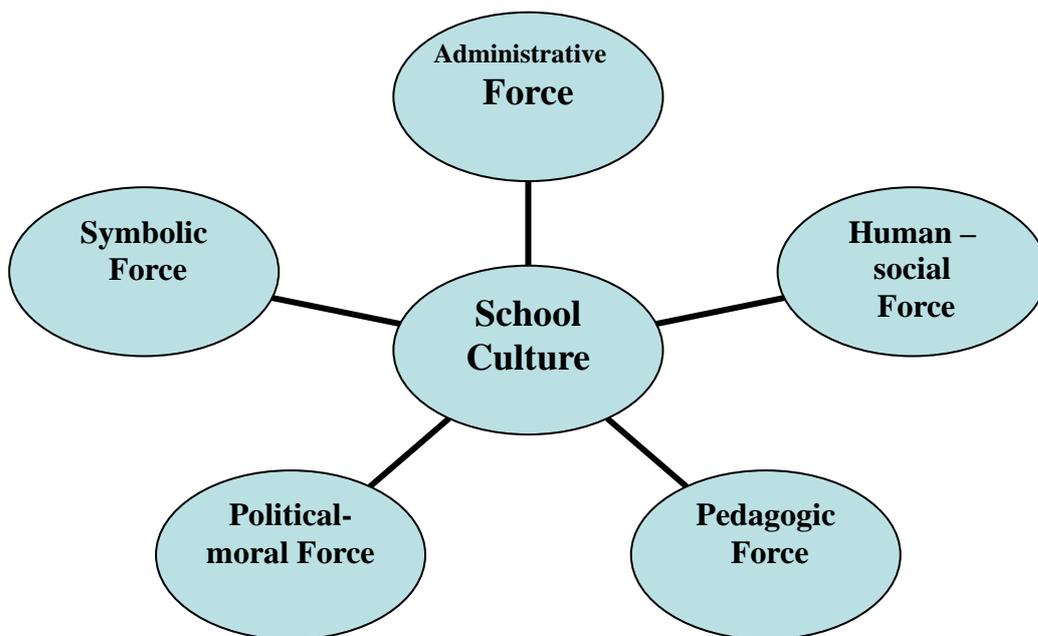
Numerous studies have shown the critical role that school and educational leaders play in the professional development of teachers and in the development of a collaborative culture at workplaces. Effective leadership at school level provides both the learning opportunities and the learning space for teachers to engage in professional development and teachers would be able to organize, design and implement different developmental activities. (Fernandez, 2000; Clement and Vandenberghe, 2001; Bush, 1999)

In order to support teachers professional development at school levels , Moore ( 2000) suggested that school leaders need to plan ahead , establish routines , tap internal resources , hold staff meetings for professional development , observing and guiding the change and development process with in the school .

Sergiovanni (1984) also describes five skills that school leadership need to have in building effective schools. These are *technical skills* (or managerial skills such as planning,

scheduling, delegating ) , *human skills* ( for example, skills in active listening , group dynamics , conflict management ), *educational skills* ( including knowledge about the teaching learning process) , *symbolic skills* ( knowledge and commitment to core institutional values and ways of articulating and representing them ) , and *cultural skills* which are related to skills in building norms and cultures often associated with successful schools.

Similarly, Bolman and Deal (1997) described that successful school leaders need to have ‘the five forces’ that help them run their school as effectively as possible. They described these forces as administrative, human-social, pedagogic, political-moral, and symbolic forces. These forces of successful leadership are briefly described in terms of what a school administration need to undertake to ensure successful leadership and are depicted in Figure11.



**Figure 11 The five forces of successful leadership (Dubs 2009, p 23, based on Bolman & Deal, 1997)**

Force	Features in a successful school leadership
<p><b>Administrative</b> (leadership in the Bureaucratic context)</p>	<ul style="list-style-type: none"> <li>- a well structured organisation and clear administrative procedures</li> <li>- allocation of responsibilities to individuals or groups including delegation of authority and responsibilities</li> <li>- clear decision-making powers , quick decisions making and communication</li> <li>- strong service orientation in the school administration</li> <li>- evidence of attempts to improve reputation of the school</li> <li>- identification and securing resources and proper utilization</li> <li>- well maintained school facilities and compound</li> </ul>
<p><b>Human- social</b> ( leadership in the Human Resource context )</p>	<ul style="list-style-type: none"> <li>- High interpersonal and team building skills</li> <li>- frequent and intensive interaction with all school members ( individually as well as in groups /teams)</li> <li>- accessible and with closer social distance</li> <li>- build the confidence of school members and provide more responsibilities</li> </ul>
<p><b>Pedagogic</b> ( leadership in the Pedagogic context )</p>	<ul style="list-style-type: none"> <li>- high degree of professionalism (theoretical pedagogic knowledge and skills, and expertise with practical teaching experience )</li> <li>- support and encourage innovations</li> <li>- a holistic performance orientation</li> <li>- monitoring and providing timely feedback in the teaching – learning process</li> <li>- creating a pedagogically optimistic and supportive climate</li> </ul>
<p><b>The political- moral</b> ( leadership in the ‘internal political’ context )</p>	<ul style="list-style-type: none"> <li>- recognition and management of different forms of power with in the school</li> <li>- high skills in negotiation and conflict resolution</li> <li>- provision of participatory management and decision making opportunities</li> <li>-show dedication and priority to the school strategic objectives over other issues</li> </ul>
<p><b>Symbolic</b> ( leadership with symbols and rites )</p>	<ul style="list-style-type: none"> <li>- pay sufficient attention to school ceremonies , rituals and other symbols to enhance positive work environment</li> <li>- know and focus on the stakeholders expectations</li> <li>- manage uncertainty and ambiguity in processes and events and reduce emotional anxiety</li> <li>- winning support through vision that challenge the status quo</li> <li>- represent the desired school culture</li> </ul>

**Table 13 The five forces of successful leadership (Dubs, 2009, p. 23 - 28 based on Bolman & Deal, 1997)**

Cibulka et al. ( 2000) noted that there are shifting views on school leadership from that of an individual characteristics, skills or traits, to that of a dynamic process involving more than one individual and define leadership rather as a shared and collaborative activity as opposed to individual activity and pursuit.

## *2.5 Teachers' Learning and Professional Development at Workplaces*

They asserted that teachers learning and development in school could be facilitated when the school leaders

- Develop and sustain a shared vision
- Facilitate collaboration through participative management
- Enable the school to adapt to ever changing environment through strategic planning
- Be able to secure resources from multiple sources
- Address the individual and collective needs for learning and development
- Allow , design and support opportunities for collaborative learning
- View teachers as learners and hence as resources that need to be developed for the success of the school
- Understand that school culture is a resource that needs to be managed in order to build a high performing school.

Shared leadership and decision making allows all members of the school community to play a role in understanding the need for learning, development and change. It also means that members of the school have the information and the power to make decisions and enact changes. Shared leadership requires an operational structure that allows more people to lead the thinking of the school and to participate in making decisions at all levels in matters that are important to them. To build a practice of shared leadership, a school needs to form teams and give them significant responsibility, schedule regular meeting times, improve methods of communication, and find ways to implement shared decisions.

Lummis (2001) discussed some of the characteristics observable in schools with shared leadership and a culture of collaboration. These include:

- School governance structures engage the entire faculty through teams, committees, and full faculty meetings to decide on key instructional, programmatic, and budgetary issues of the school.
- The entire school community develops a shared vision to move the school forward.
- Teams of teachers plan and implement curriculum and assessments for students.
- Teams work collaboratively to examine multiples sources of data to identify challenges and then use an inquiry process to develop school-wide solutions.
- Teams of teachers and others use protocols for looking at students' and teachers' work.

- Study groups meet often to investigate the challenges the school faces.
- Full faculty discusses recommendations made by study groups and reaches consensus on how to implement recommended changes.
- All teams know what the other teams are working on through regular progress updates and publication of the minutes and agendas.
- School-wide challenges and goals are known by teachers, and other members of the school community

## 2.6 A Systemic Constructivist Approach to Professional Development

The continual changes in the field of technology, economy and the move towards a more knowledge-based society implied that practitioners in the field of TVET and HRD professionals are forced to re-examine their ways of providing services to the trainees and employees.

Arnold and Pätzold (2009) noted that as a result of these dynamic and continuous changes, currently TVET and in-company competence development have been faced with a paradigm shift in perspective. They asserted that “there has already been increasing debate in recent years, both inside companies as well as in the education community, about systemic approaches to professional competence development.” They argued that such a systemic approach to professional development implies that development activities need to be *situational* and focus “more towards examining how competence development is “embedded” in the company micro-social context.” (Arnold and Pätzold, p 336. in Rauner and Maclean, 2009)

Arnold and Pätzold (2009) described the implications of such changing view of competence development for TVET research as well as its practices (ref. Table 10). These implications include:

### *Changes in content of the development*

This signifies the importance of shifting towards more cross-occupational content rather than specific and isolated skills developments. Such cross occupational competences allow people to adapt and utilize them in various settings and even in different professions. The development of a critical attitude about one’s environment (constructive scepticism) becomes a central requirement.

## 2.6 A Systemic Constructive Approach to Professional Development

### *Changes towards lifespan perspective*

Not only competence developments need to be tailored to meet the demands of people with wide ranges of background and experience, but should value these experiences and diversity as a source of learning and development. More importantly, competence development need to be seen as an on-going, life long processes and hence this demand that trainees need to be equipped with competences that support their future learning in a sustainable manner. This also brings the need for adult learning perspectives to be central in competence development.

### *Changes from occupational profiles to more complex system of demands*

Competence development should focus on various aspects of change in relation to the occupational profile. These include taking in to account the wider local, regional and international circumstances, socioeconomic trends and other external environmental factors. The complexity associated with such social perspectives clearly poses difficulties and challenges in anticipating the future changes and incorporating them into the development process.

### *Developing a system perspective as a unit of analysis*

This change not only broaden the stakeholders involvement in the development process but also demand the inclusion of both the local demands and that of the overall needs in the wider environment. This demands a complex interplay between being localized and at the same time incorporating a globalised perspective in the professional development activities.

In relation to further education and training research, Arnold and Pätzold (2009) pointed out also the significance of a constructive approach. They asserted that

“The adult education perspective, besides other aspects, stress the utilization of a constructive approach to learning (Reece/ Walker, 2003, 91f.), which already plays a big role in adult education research and proves fruitful especially with respect to competence development and transformative learning (Mezirow 1991)”. (p. 338 in Rauner and Maclean, 2009)

The need for a *systemic approach* to professional development that is grounded in the constructivist perspectives has been also discussed in various contexts. In connection with the professional development of teachers of adults, King and Lawler (2003) advocated for an integrative approach to professional development. They gave emphasis to a systemic approach where the various issues, contexts and future trends need to be considered holistically in the development of a conceptual and active vision towards the future of

professional development of teachers. According to King and Lawlers' integrative approach, professional development

- is adult education
- is learner –centred
- is transformative learning
- needs to address motivation
- needs to address technology learning. ( King and Lawler , 2003 , p. 12)

They further argued that adopting an integrated perspective to teacher professional development not only help school performances but also promote the development of the teaching profession.

Kriz (2008) emphasised on the importance of developing a systemic-constructivist learning environments that enable the competence development of professionals. He argued that

“teachers must therefore reduce their reliance on traditional externally driven knowledge transfer and competence methods.[...] More suitable for supporting such increasingly complex learning environments are self –organized forms of learning in which discussion , the practice of reflection , and questions are not exceptions but are the main part of the education and learning. In such settings learners take over the initiative and share responsibilities for designing learning processes (Brown, 1997). learning experiences need to have the capacity to enhance learners' personal development as they gain capacity to question the validity of acquired knowledge and develop a sensitivity toward a social processes” ( p. 3)

In relation to teacher learning and development, Sears and Hersh (1998, p10-11) discussed the contextual teacher education program as a learning situation which

- is problem focused and /or develops teachers problem solving abilities
- uses multiple real -life contexts such as workplaces and the community in which to teach and foster learning
- addresses learning as situated , socio-cultural , and distributed
- fosters self- regulated learners
- anchors teaching and learning in teachers' diverse life context
- employs blended and on-going assessment
- uses interdependent learning groups to facilitate learning from each other
- models contextual teaching and leaning strategies

## 2.6 A Systemic Constructive Approach to Professional Development

The American Federation of Teachers (AFT, 2002), in its guideline for teachers professional development, described teachers professional development as an essential element of a *systemic* reform for teachers that help them “to move away from comfortable, long-established practice toward the uncertainty that accompanies change.” (p.3)

Accordingly, such professional development should

- deepen and broaden knowledge of content.
- provide a strong foundation in the pedagogy of particular disciplines.
- provide knowledge about the teaching and learning processes.
- be rooted in and reflect the best available research.
- should have contents aligned with the standards and curriculum the teachers use.
- contribute to measurable improvement in student achievement.
- be intellectually engaging and address the complexity of teaching.
- provide sufficient time, support, and resources to enable teachers to master new content and pedagogy and to integrate this knowledge and skill into their practice.
- be designed by teachers in cooperation with experts in the field.
- take a variety of forms
- be job-embedded and context specific.

The criteria for achieving sustainable lifelong learning on the basis of constructivism (Reinmann-Rothmeier / Mandl 1996) provides the foundation for a systemic constructivist approach in teacher learning and professional development and the learning environment that facilitate it. Reinmann – Rothmeier and Mandl (1996) have developed five criteria for achieving sustainable life long learning (ref. Table 14). These criteria require that learning to be an active, self-directed, constructive, situational, and social process and learning arrangements and environments need to be conducive to these processes.

Therefore teacher professional developments that are anchored with the systemic and constructivist approach<sup>22</sup> provide learning and development opportunities for adult learners in their professional life. It is imperative that teachers’ professional development programs also adopt such approach to support teachers’ development efforts in today’s complex and dynamic work environment.

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<sup>22</sup> Besides the learning and professional development, the application of systemic constructivist approach has been used in a number of fields including consulting and Transactional Analysis (TA), therapy (Loria, 1991; Stewart and Joines, 1987), personal psychology (Kelly 1995) , science of simulation and gaming theory, ( Kriz 2008), and in other fields.

<b>Criteria for achieving sustainable life long learning</b>	
<b>Active</b>	Learning is only possible through the learners' active involvement. This implies that they are interested in or develop an interest in what they do and how they do it.
<b>Self directed</b>	Learners are in charge of the direction and control the processes in each learning situation. Even though the extent of self-direction and control varies according to each learning situation, learning without any self-guidance whatsoever is quite unthought-of.
<b>Constructive</b>	Learning is always constructive: without the individual experience and knowledge background and without the individual's personal interpretation, in principle, cognitive processes do not take place.
<b>Situational</b>	Learning always takes place in specific contexts, so that every learning process can also be considered as situational.
<b>Social</b>	Learning is always a social process: on the one hand, learners and all their activities are always exposed to socio-cultural influences, and on the other hand, learning is always an interactive event.

**Table 14 Learning and the learning capacity of adults on the basis of constructivism (Reinmann –Rothmeier and Mandl, 1996, in Arnold, 2005a, p 130)**

## 2.7 Summary

The theoretical perspectives adopted in this research are based on the systemic constructivist approach to professional development. The main features of a constructive approach to teachers' professional development posit that professional development need to be based on *constructivism* and consider teachers as *active learners* (Lieberman, 1994; McLaughlin and Zarrow, 2001; Dadds, 2001; Darling-Hammond and McLaughlin, 1995; King and Newmann, 2000; Villegas – Reimers (2003), and *reflective practitioners* (Darling-Hammond and McLaughlin, 1995; Schifter et al. 1999) who are engaged in a *long-term process* whereby they learn from series of learning events and experiences. (Cohen, 1990; Ganser, 2000; Dudzinski et al., 2000)

Teachers' professional learning and development should be context – *specific process* and where schools are transformed into *communities of learners*, and communities of inquiry (McLaughlin and Zarrow, 2001; King and Newmann, 2000; Jenlink and Kinnucan- Welsch, 1999; Lieberman, 1994; Wood and McQuarrie, 1999). Professional development need to be embedded in a sustained *culture building process* intimately linked to *school reforms* which require trusting, respecting and empowerment of the *teachers as professionals* (Guskey, 1995b;

Loucks-Horsley, 1998; Cochran-Smith and Lytle, 2001). Teachers' development activities are considered as more of collaborative *activities* portraying the social nature of learning ( Jarvis, 1997; Clement and Vanderberghe , 2000 ; Grace, 1999) and development models are results of search for *an optimal mix* rather than an attempt to achieve one – best model or set of methods and techniques that are applied in various settings. (Scribner, 1999; Guskey, 1995a)

The criteria for achieving sustainable lifelong learning on the basis of constructivism (Reinmann-Rothmeier / Mandl, 1996 in Arnold 2005a) provide the foundation for a systemic constructivist approach in teacher learning and professional development and the learning environment that facilitate it. King and Lawler (2003) also call for the need for a broad, integrative approach to professional development whereby teachers' learning and professional development should be a learner –centred adult education that promotes transformative learning.

In relation to further education and training research, Arnold and Pätzold (2009) stressed on the changing view of the competence development and pointed out the importance of the adult education perspective besides other aspects that utilize a constructivist approach to learning. Kriz (2008) also emphasised on the importance of developing a systemic-constructivist learning environments that enable the competence development of professionals where self –organized forms of learning in which discussion, the practice of reflection , and questions are not exceptions but are the main part of the education and learning.



# CHAPTER THREE

## TVET TEACHER EDUCATION PRACTICES

### *Introduction*

This chapter provides the practices on teacher education in different contexts. Experiences of some developed and developing countries regarding their teacher preparation and professional development, both in the pre-service and in-service teacher education programs have been included. The different orientations and approaches countries use in the professional development of their teachers provide an understanding of the context –specific nature of the teachers’ education and professional development.

In terms of TVET, the widely differing models of school –to- work transitions at international levels are discussed in this chapter. A brief overview of the status of TVET in Africa and in particular the main strategic issues that African nations face are examined. The last part of this chapter deals with the Ethiopian National TVET strategy and its development towards outcome based system.

### **3.1 Teacher Education Programs**

A 2004 UNESCO report on TVET teacher education and training for sustainable development stressed the role TVET plays as an integral component of development and that of the significance of teachers’ learning and professional development as follows.

“We have considered the emerging challenges of the twenty-first century, a century that will be an era of knowledge, information and communication. Globalisation and the revolution in information and communication technology have signalled the need for a new human-centred development paradigm. We have concluded that Technical and Vocational Education (TVE), as an integral component of lifelong learning, has a crucial role to play in this new era as an effective tool to realize the objectives of a culture of peace, environmentally sound sustainable development, social cohesion and international citizenship [...] TVET Teachers at vocational schools play a key role during this permanent modernization process. The modernization of

their qualifications, both in the university studies and continuous professional development, is of high importance for the achievement and future ability of vocational schools, and therefore of the education system as a whole. ” (Bünning and Zhao, 2006, p. 169)

The implications of teaching as a profession and the teachers as professionals have direct consequences on how teachers are perceived, prepared and continually developed in their career. It also affects how teachers perceive themselves and their profession as well as their relationships with their clients. In terms of teacher preparation and professional development, these issues bring focus on the initial teacher education programs and their subsequent professional development activities of the teachers and the teacher educators. As professionals, teachers need to engage in the learning and development process to enhance their own competences and their services to their clients. The content, process, and the context under which teachers learn and develop in the profession depend on multitudes of factors.

Depending on their circumstances , it is expected that different teacher education programs may give different emphasis on what specific skills , knowledge and experiences teachers need to acquire in their initial ( pre-service ) and continued professional development ( in-service ) programs.

Teacher education programs in different countries and settings, even within the same country, diverge on the areas of emphasis and priority they accord to their programs. According to many authors, some of these skills, knowledge, values, and dispositions teachers need to possess, include

- General pedagogical knowledge: regarding learning environments, teaching strategies, classroom management; and knowledge of learners and learning.
- Subject-matter knowledge: content and substantive structures of the respective discipline.
- Pedagogical content-knowledge: a conceptual map of how to teach a subject; knowledge of instructional strategies and representations; knowledge of students’ understanding and potential misunderstandings; and knowledge of curriculum and curricular materials. (Villegas – Reimers, 2003; Grosso de Leon, 2001; Reynolds, 1992; Jegede, Taplin and Chan, 2000; Glaser, 1987)
- Knowledge of student context and a disposition to find out more about students, their families and their schools.
- A repertoire of metaphors (to bridge theory and practice).
- Knowledge and skills of evaluation of learning process.

- Knowledge of strategies, techniques and tools to create and sustain learning environment /community, and the ability to use them effectively.
- Knowledge, skills and dispositions to work with learners of diverse cultural, social and linguistic backgrounds (Alidou, 2000; Gay and Howard, 2000; Weisman, 2001).
- Knowledge and attitudes of political and social justice
- Knowledge and skills on how to implement technology in the curriculum. (Pianfetti, 2001)

The nature and approaches of teacher education programs are influenced by the prevailing culture and values of the society, the society’s perception of teachers and teaching, the overall objectives of the education system, and on the expected role of teachers, among others. Calderhead and Shorrock (1997) classified the nature of the teacher education programs in five broad categories based on the emphasis they give in their programs and the underlying approach. These orientations are shown in Table 15.

<b>Orientation</b>	<b>Emphasis in the teacher education program</b>	<b>Characteristics</b>
<i>The academic</i>	Teachers’ subject expertise	<ul style="list-style-type: none"> <li>• quality of the teachers’ own education is considered as their professional strength</li> <li>• provision of a solid liberal arts education is the key factor</li> </ul>
<i>The practical</i>	Artistry and classroom technique of the teacher	<ul style="list-style-type: none"> <li>• the practical experiences in the classroom is the key ingredient</li> <li>• the apprenticeship model of preparation is strongly favored</li> </ul>
<i>The technical</i>	The knowledge and behavioral skills of the teachers	<ul style="list-style-type: none"> <li>• associated with micro-teaching and competence-based approaches</li> <li>• inspired by the behaviorist model of teaching.</li> </ul>
<i>The personal</i>	The interpersonal relationships in the classroom	<ul style="list-style-type: none"> <li>• dominated by the humanistic approach</li> <li>• Experimentation and discovery of personal strengths.</li> </ul>
<i>The critical inquiry</i>	Promote the development of critical and reflective practices in teachers as agents of social change.	<ul style="list-style-type: none"> <li>• schooling as a process of social reform</li> <li>• Schools as promoting democratic values and reducing social inequities.</li> </ul>

**Table 15 Orientations in teacher education programs (Villegas – Reimers 2003, p. 42- 43)**

### **3.1.1 Pre- Service Programs**

Villegas – Reimers (2003) has reviewed the experiences of many developed and developing countries regarding their teacher preparation and professional development, both in the pre-service and in-service teacher education programs. Her extensive literature review showed that there are considerable variations in the forms and contents of the pre- service and in – service programs of teacher education and professional development programs offered in many countries around the world. The programs differ in terms of their duration, content areas, focus on practical training, institutional context, financing, places where these programs are offered, and entry and completion requirements, among others.

Accordingly, pre-service programs or Teachers’ initial trainings are offered in teacher education colleges, universities and other institutions which are established for such purpose. In countries like Germany, the Netherlands, USA, Japan, pre-service teacher education is provided at the universities where as pre- service teacher education for primary school teachers, for example, in UK, India and Israel, are offered at special teacher education institutions.

Initial teacher education in some countries is provided as short programs of around two years’ duration. In other countries, for example in Germany, Chile, and Venezuela, pre-service programs could span between four and five years period of university education. Teachers in some developing countries are prepared in secondary, post-primary and post-secondary education programs which take between six to nine months and a few years (McNamara, 1990; Govinda and Buch, 1990; Ben-Peretz, 1990; Tisher and Wideen, 1990; Villegas-Reimers, 1998; Villegas-Reimers, 2003).

Content-wise, pre-service programs show variation from country to country and between different programs and levels of the teachers expected to teach after completing the trainings. Ben-Peretz ( 1995) and also Cobb ( 1999 ) showed that most of the teacher education , in both developed and developing countries , offer courses and experiences related to the major subject area , educational science courses, professional studies (like pedagogy and methodology courses), developmental psychology and practicum. In fact the degree of emphasis in these different components of the program and time allotment for each of them varies considerably.

### *3.1 Teacher Education programs*

The debates on whether to emphasize the subject-matter content or the pedagogy are too common and often contested. Baker (1999) argued that the overall tendency in most countries in the 1990s was to provide more emphasis to subject-matter content in the pre-service programs and to focus on the pedagogy and the practicum aspects during the school practicum and induction programs of the new teachers and in subsequent on-the-job professional development programs.

In many countries still the focus of pre-service programs is on content without pedagogy and /or practice. “ For example in Ethiopia, as in many other African (Bekalo and Welford, 1999) and Latin American countries (Villegas-Reimers, 1998), many of the teacher-preparation institutions (including universities and colleges) which offer a certification program do not offer to undergraduates the opportunity to experience a period of classroom teaching under supervision. (If they do, this period is very short.) Bekalo and Welford (1999) focused specifically on the preparation of science teachers in Africa and reported that few, if any, opportunities for practical work are offered in their pre-service preparation. As a result, once these teachers are hired in schools to teach, science is taught in lecture format with little emphasis on the practical applications of such knowledge.” (Villegas –Reimers, 2003, p 48-49)

According to Jackson and Leroy (1998), there is a trend around the world to increase the period pre-service teachers spend on practicum which provide them with the opportunity for a supervised practice teaching in actual school settings. The duration for the practicum part of the pre-service program varies from country to country. It may take as short duration as few months (for instance in Japan, New Zealand) to that of a full year program as is the case in such countries like Germany, Belgium France and others (Cobb, 1999). However, it is also worth mentioning that in some countries where the practicum period is relatively shorter (like in Japan), there are arrangements for a continued in-service programs that are focused in improving teaching skills under supervision. (Hawley and Hawley, 1997)

It has been observed that a considerable number of teachers, in many developing countries and also in some develop countries enter into the profession of teaching without attending teacher education programs (Marcondes, 1999; Villegas-Reimers, 1998). In such cases, the majority of the candidates entering the teaching profession are among the least qualified of all the students who are entering the professional workforce. The absence of well trained or qualified teachers to satisfy the demand, the problems related to the admission criteria in to the

profession, teachers turnover, and the failure of the teacher's education programs to attract new teachers in to the teaching profession as compared to other professions may be considered as some of the reasons for the employment of teachers with out pre-service teacher training into the education system.

Particularly in developing countries, national and continental goals (for instance, Millennium Development Goals (MDG), and Education for All (EFA)) have pressured governments to set ambitious goals to achieve while compromising on the quality of education and teachers' competences. For example, in Malawi and in many African countries, because of "Universal Primary Education, a large number of untrained teachers were hired in order to meet the large demands created by the expansion of access to schools. The same happened in Eritrea, where unqualified teachers were deployed to fill the positions of teachers needed to instruct very large class. The same has been reported in many Latin American countries." (Villegas- Reimers, 2003, p 15; Andrews, Housego and Thomas, 1990)

Similarly, experiences of employing untrained teachers have been reported in Asian countries as well in the quest to respond to the demand for access to education particularly in rural areas. Also in Spain, the ministry of education has authorized for the lifting of admission criteria to teacher education programs in order to attract many candidates to the teacher education programs. Staff turnover also contribute and force the employment of teachers who have no pre-service training. For instance, Gregorian (2001) reported that 30 per cent of all teachers, and 50 per cent of teachers in urban communities in USA resign within the first five years of their employment.

As these particular examples and experiences discussed here show, the pre-service teacher programs in different part of the world have considerable challenge to meet expectations. The effectiveness of pre-service teacher education programs have been negatively affected by a multitude of factors. The list of such factors is long and is in fact also context specific. However, among the major problems identified in the pre-service teacher education programs in different countries include

- weak link between teacher education programs and school practices
- low admission criteria and unmotivated candidates
- lack of relevance and quality of the teacher education curricula
- much emphasis on theory and little or none on practice
- short duration of the programs

- inadequate preparation of teacher educators
- low status of the teaching profession and low salaries and incentives for teachers which limit attracting new teachers and maintaining the employed ones
- overall lack of leadership and limited facilities and resources

(Villegas-Reimers, 1998; Warwick and Reimers, 1995; Sharma 1992; Marcondes 1999; Goodlad 1990)

There are a number of initiatives and reform programs underway to improve the pre-service teacher education programs and play significant role in teachers' professional development. For instance, the Asia – Pacific Economic Co-operation (APEC) conducted a study on the pre-service teacher education of twelve members and found that there are change programs in pre-service teacher programs towards strengthening the relationships established between the teacher training institutions and schools, allocation more time for practicum and also increase in the duration and the quality of the programs. (APEC, 1999)

### 3.1.2 In-Service Programs

The definition of in-service training may vary from country to country depending on their teacher education system. But in general, in -service education and training could be described as the training and professional development activities engaged in by teachers after their initial professional certification. In-service training is particularly directed at improving teachers' professional knowledge, skills, and attitudes in order that they can carry on their duties and responsibilities in more effective way (Bolam, 1982). In fact, in situations where teachers do not have a pre-service training, the in-service trainings are their primary teacher education opportunities and may be understood as initial teacher training programs.

In-service programs could be organized and offered in a variety of settings. In some countries these programs are offered at schools (e.g. Germany, Japan, Spain, and UK) where each school decided on the content and process of its program. These programs are also offered in Universities, teacher colleges and other institutions which run such programs as part of their activities. Regional and national ministries of education also organize and administer such programs. Teachers unions and professional associations and also other institutions may organize professional development activities for teachers (Benejam and Espinet, 1992).

Greenland (1983) classified the purposes of the teacher in-service programs in four general categories

- for upgrading teachers to teach to a higher or new level
- to create capabilities for teacher in order to play new roles as senior teachers, principals, teacher educators and the like
- for providing teachers with the minimum qualification required for professional certification (mainly for those with out teacher education)
- to enable teachers to implement changes in curricula and other changes and reforms in the education system

Eraut (1995b) classified the purpose and relevance of the in-service programs in to three categories. Accordingly, in-service programs are meant for

- Human resource development: to ensure adequate provision of required teachers with required capabilities for the school system.
- The management of planned change: preparing teachers not only as subjects of change but also as objects of change to effectively carry out reforms and changes in the education system.
- Self-development by schools and teachers: enabling teachers to actively engage in identification of training needs and change initiatives, to plan and implement them through their active involvement.

Berry (2001) argued that, on one hand in various countries the need for more new teachers coupled with the limited number of candidates interested to join teacher education programs demand for a wide range of in-service programs. These programs which range from short duration ‘crash course’ in pedagogy to a long term continued professional development programs need to be designed and offered to those newly employed teachers with only subject matter knowledge.

On the other hand, such a ‘*short cut*’ approach (or an *alternative approach to teacher certification program* as is termed in some countries, e.g. USA) may stand against the good intentions of preparing teachers through the pre-service and in-service programs. Due to the short duration of the in-service trainings, it may be difficult to provide sufficient time and opportunities for the teachers to develop skills, knowledge and attitudes necessary to effectively perform as teachers. A USA national study, in which 14, 0000 teachers participated, revealed that teachers who had been certified in alternative in-service programs showed a

lower levels of educational accomplishment (Berry, 2001). Thereby suggesting that in cases where an alternative certification is not avoidable, such programs need to provide due emphasis to stronger academic and pedagogical courses, intensive field experience, and an obligation that candidates meet state or national requirements prior to their commencement as teachers. There are, however, few successful experiences in preparing unqualified teachers through a sound in-service programs offering intensive courses, using combination of distance education and face-to face teaching, and school-based training.(Ferguson, 2000 ; Henning , 2000; Ross, 2001)

Jarvinen and Kohonen (1995) described induction programs as planned and systematic programs of sustained support provided to beginning teachers as part of their in-service program and professional development activities. Experiences from different countries show that excellent induction programs provide learning and development opportunities for newly employed teachers. Such programs may include

- introducing to school environment and socialization process
- mentoring
- actively engaging in discussion groups
- observation of more experienced teachers teaching
- keeping personal journal or written record of the induction program
- provision of additional support and resources for both the new teacher and the mentor
- assignment of less work load to provide time for attending in-school or out-of-school trainings
- participating in didactic seminars, school experiences such as observing and giving lessons
- involving in project works (APEC, 1999; Hawley and Hawley, 1997; Jarvinen and Kohonen, 1995, Holloway, 2001).

The specific contents of in-service training and education of teachers varies from country to country and even among programs within a given country. In general, in service programs may contain courses in subject matter, pedagogy and teaching methods in order to strengthen and further expand upon their knowledge, skills and experience they gain from their initial pre-service training and the teaching experiences. Moreover, such components like group

interactions and team work, conducting action-research, and problem-solving and reflecting on experiences have been part of the professional development activities that are included in the in-service programs. In developed countries with strong initial teacher training and employing qualified teachers, the in-service programs give much focus on the 'process' of these programs rather than their 'content' as such. ((Benejam and Espinet, 1992; Baker and Smith, 1999; Showers *et al.*, 1987)

A number of authors have studied the nature and effectiveness of in-service programs as part of the on-the-job professional development activities. Despite the benefits of the in-service programs to teachers' development, there are number issues that need to be address to increase their effectiveness. Some of the concerns and criticism about these programs include

- the content of in-service courses may not cater for the training needs of the participant teachers
- limited involvement of participating teachers in course design and presentation
- teachers do not have a systematic way of communicating to program administrator and teacher educators
- teacher educators of in-service programs may be inadequately prepared
- in-service programs are theory-oriented and have limited practical aspects
- opportunity to access these programs are often limited
- there are few resource materials related to the field available to teachers after the programs
- lack of clarity on the aims and objectives of the program on the part of the participating teachers
- many in-service activities do not target the main goal of improving the professional competence of teachers;
- in-service training providers transmit the knowledge and skills they have, regardless of their relevance to the recipients;

## 3.2 Teachers' Professional Development Models

Ingvarson (1998) stressed on the need to clearly differentiate between professional development models and professional development systems. Villegas- Reimers (2003) described professional development models as specific process and opportunities that are designed to facilitate the professional development of teachers where as a system of professional development is of a wider perspective that involves

- the goals, objectives and purposes of professional development
- the context in which professional development is to take place
- the personal and professional characteristics of the participants of the system
- the models, techniques, and procedures to be implemented
- the costs and benefits of professional development
- a determination of who is to make which decisions
- a process to evaluate and assess the effectiveness of professional development on different constituencies
- a determination of infrastructure support for professional development.( Villegas – Reimers , 2003 , p 16 )

Kraft (1998) proposed the following sources of teacher learning and professional development which involve both the individual and collaborative efforts. These are

- consultation with other teachers and colleagues in the school and working together as cluster schools in the surrounding
- own study and research in the field of specialization and subject didactics
- observation of other teachers ( in live classroom , training )
- further studies in the respective fields ( higher degree or qualification)
- practical experience in the industries and companies
- continuous further trainings (workshop, seminars at varying level, internal and external)
- pedagogical and didactical training with emphasis to the field of specialization

- use of professional counsellors , mentors , consultants for professional development
- performance evaluation as opportunity and forum for professional development
- learning and development obtained directly from for the teaching experience itself

The focus of this section is in particular on some of the teacher professional development models which could be applicable at different levels: individual, group and organizational levels. Many writers, (for example Guskey,1995a; Fullan ,1987;Corcoran,1995) noted a number of factors that must be taken into account when designing and implementing teacher professional programs. These includes

- recognition of learning and development as being both an individual and an organizational process.
- recognition of teacher professional development as a long term process of learning rather than a one-time event
- integration of various development initiatives and creation of synergy
- respect for teachers as professionals and as adult learners
- provide sufficient time , continuous follow up and opportunities for reflection, feedback on learning outcomes
- focus on team development and team work
- actively engage teachers in articulating development needs and control of the learning process
- stimulate and support site-based initiatives
- recognition of the critical roles of schools organizational culture, structure and leadership

There are different teachers' professional development models that are used in different countries and contexts. These methods or techniques may be appropriate in particular circumstances and may not be effective in other situations. Often the use of a combination of these models may provide a wider opportunity for learning and development. The characteristics of the context, the development goals, and other enabling factors influence the choice of professional development methods and techniques. Some of the teacher professional development models based on individual, group and organizational level are presented in Table

16.

Organizational partnership models	Small group or individual models
<ul style="list-style-type: none"> <li>• Schools' networks</li> <li>• Teachers' networks</li> <li>• Distance education</li> <li>• Professional development Schools</li> <li>• Other university-school partnerships</li> <li>• Other inter-institutional collaborations</li> </ul>	<ul style="list-style-type: none"> <li>• Case-based study</li> <li>• Self-directed development</li> <li>• Co-operative or collegial development</li> <li>• Observation of excellent practice</li> <li>• Teachers' participation in new roles</li> <li>• Skills-development model</li> <li>• Reflective models</li> <li>• Project-based models</li> <li>• Portfolios</li> <li>• Action research</li> <li>• Use of teachers' narratives</li> <li>• Generational or cascade model</li> <li>• Coaching/mentoring</li> <li>• Clinical Supervision</li> <li>• Students' performance assessment</li> <li>• Workshops, seminars, courses, etc.</li> </ul>

**Table 16 Teacher Professional Development models. (Villegas –Reimers, 2003, p. 70)**

## 3.3 TVET: International Perspectives and Practices

### 3.3.1 Models of TVET in the International Context

The significance of TVET to the global economy is undoubtedly immense. About two third of the workforce in the world, who are skilled workers, have been trained by teachers and trainers of TVET. Despite such relevance, TVET in many countries has a low social acknowledgment and the teachers and trainers in TVET are far from being recognized as professionals (Grollmann and Rauner, 2007). Not only the debates in many countries surrounding whether teaching is a profession or not, but also the disparity in perception between technical and vocational education and that of the academic education has further diminished the recognition that TVET and TVET teachers deserve.

In this regard, Grollmann and Rauner wrote:

“The empirical importance of vocational learning is overshadowed by the big emphasis society puts on academic education and credits. Despite the fact that there are gradual differences regarding this structural problem, nevertheless this is one of the universal core problems. The “Parity of esteem” between vocational and general education is still wishful thinking but could never be established. Still in the international discourse the prevailing orientation is that vocational education is some thing old and traditional fitting to the needs of the pre-industrial and industrial societies but not to the so called knowledge societies and economies or that it is at best a solution for low-achieving students” (Grollmann and Rauner, 2007, p. 2).

An overview of the TVET systems around the world reveals a system of complex and diverse structures and orientations. According to Rauner ( 1999) , the global TVET system could be broadly categorized in four models depending on the emphasis and process that is given for the transitions from general education to vocational training ( first transition ) and from vocational training to the world of work ( second transition ).(Grollmann and Rauner, 2007)

These four models along with their particular characteristics and typical examples of countries where they are dominantly practiced are described as follow.

#### ***The direct transition Model***

This model is characterized with the absence of a separate vocational training prior to joining the world of work. Trainees who completed the general education will be directly engaged in company –based training and human resource development programs based on the needs of the companies where they are employed. It is a process where there is only one transition from general education school to work or the labour market. This model represents the dominant school-to- work transitions in countries like Japan.

#### ***The hardly regulated transition Model***

In this model, the transition from general education school to vocational training is not well organized and established. Often the young people will face an extensive search and a longer transition period. The vocational trainings mainly serve as an entry into an employment system but could be only a temporary solution for one’s search for a job. This model could be found in UK and other countries with a stronger academic orientation in their education system.

#### ***The regulated transition Model***

This model represents a process where the transition from general education to world of work takes place through a regulated apprenticeship system. Vocational education serves as a bridge between general education and the world of work. The vocational trainee is both a trainee in his vocational school and as the same time will be an employee in the company as an apprentice. There is a high correlation between the vocational training and the practices in the world of work, thereby increasing the future employability of the apprentice. This model is typical in such countries like Germany, Austria, Switzerland, and Denmark.

#### ***The shifted transition Model***

This model is characterized by a transition from general education to a system of school-based vocational training, thereby shifting further the transition to the world of work. After the general school, students will join a school - based vocational training in a specific occupation or training field. The completion of the study in such vocational school leads to the award of a certificate for an occupation by which the trainees will look for employment opportunities in the world of work. Countries with a system of school-based vocational training follow such a school- to-work transition model.

Arnold et al. (1998) also classified the different types of vocational training system in the international context into four models; namely the Informal, Market, Co-operative and the School models. The different characteristics, advantages and disadvantages, and examples of countries that adopt each of these models are presented in Table 17.

<b>Type</b>	<b><i>Informal model</i></b>	<b><i>Market model</i></b>	<b><i>co-operative model</i></b>	<b><i>School model</i></b>
<b>Description</b>	Trainees acquire more or less comprehensive professional abilities, knowledge and skills by engaging in the workplaces	The companies plan, organise and realise their own professional workforce education and training autonomously	State and local authorities co-operate in the planning order as well as realisation and control of the professional education and training	It is carried out in schools or training centres and teachers mainly follows state curricula
<b>Role of government</b>	None, at most indirectly by legislation and education regulations	Government plays at most a marginal role, it takes over the role of the "observer " in the vocational training system	Government sets for the co-operating partners (school, companies, chambers, craft custodies, etc.)... more or less extensive basic conditions and supervises the observance of standards	Government authorities plan, organise, realise and control only the professional training and after more or less all over the country introduced standards
<b>Advantages</b>	High receptiveness of this model in poorer countries (the worldwide biggest education system)	Specified vocational training, practice oriented , cost saving for public institutions	Practice oriented , save costs for public institutions	Wide professional basic education
<b>Disadvantages</b>	Narrowly function-related qualification without supplement around specialised theoretical or general elements	Acquisition of qualifications specific for a company lead to low mobility and high dependence of employees	Too narrow and too early specialisation of the apprentices, often quick exhaustion of the demand of the companies	Educational authorities respond too slowly to current demand of the economy
<b>Suitable for</b>	Takes place in particular in developing countries or in self- initiated marginalised areas	Those with high previous training level and wide professional basic education	Rapidly changing technologies	more quickly changing technological vocations , but worse in low income countries
<b>Example</b>	African , Latin American and Asian countries	Japan , USA , UK	Germany	France , Italy

Table 17 Types of vocational training system in the international context (Arnold, Lipsmeier, and Ott, 1998)

### 3.3.2 TVET Professionals

At international level, TVET teachers and trainers who are engaged at various level and types of the vocational education could be broadly grouped in six clusters as depicted in Table 18.

Teaching/training profile	Types of TVET institution	Main functions
Teachers or lecturers	Formal TVET schools and colleges	Education and training of technical and vocational courses
Instructors and laboratory assistants	Formal TVET schools and colleges	Supporting / training in vocational laboratories and workshops
Trainers in companies , Tutors and others	In-companies and enterprises	Integrating TVET function into their jobs and training the apprentices and other trainees
Instructors and trainers	Training institutions supported by government and public authority	Provision of training for social inclusion and basic occupational competences for various target groups
Instructors and trainers	Employers' organization , company training centres , private training companies , chambers of commerce	Upgrading skills , training in new or demand based training

**Table 18 TVET professionals (Grollmann and Rauner, 2007)**

Besides those TVET professionals that are directly engaged in the day-to-day teaching and training, there are other support staff that aid the various interrelated activities associated with TVET. Among them are guidance and counsellors, social and youth workers, management and administrative personnel, human resource development professionals, general subject teachers, and others.

In some countries the vocational teachers may be responsible to cover some of the roles of the support staff, thereby expanding their duties and responsibilities. But in other countries TVET teachers concentrate fully on the core process of teaching and training.

Grollmann and Rauner (2007) argued that historically the establishment of specialist teaching profiles in TVET in the international level could be traced back to the major changes in the society. The main drivers of professionalization include the lack of skilled workmanship in an industrialized economy and the need for social integration into a changing societal order. The professionalization process of TVET professionals differ from country to country and are a

complex process, which is subject to the labour demands, graduate teacher profiles and policies of each country.

### 3.3.3 TVET Teacher Education Models and Qualifications

The practices in many countries show that TVET professionals work in different types of TVET institutions based on policies and regulations in these countries. Their recruitment, teacher education program they attend, as well as the formal level of qualifications that are expected for employments vary accordingly.

From an international perspective, Grollmann and Rauner (2007, p.17) classified the TVET teacher education pathways into four broad models. Based on their categorization, these models are described below.

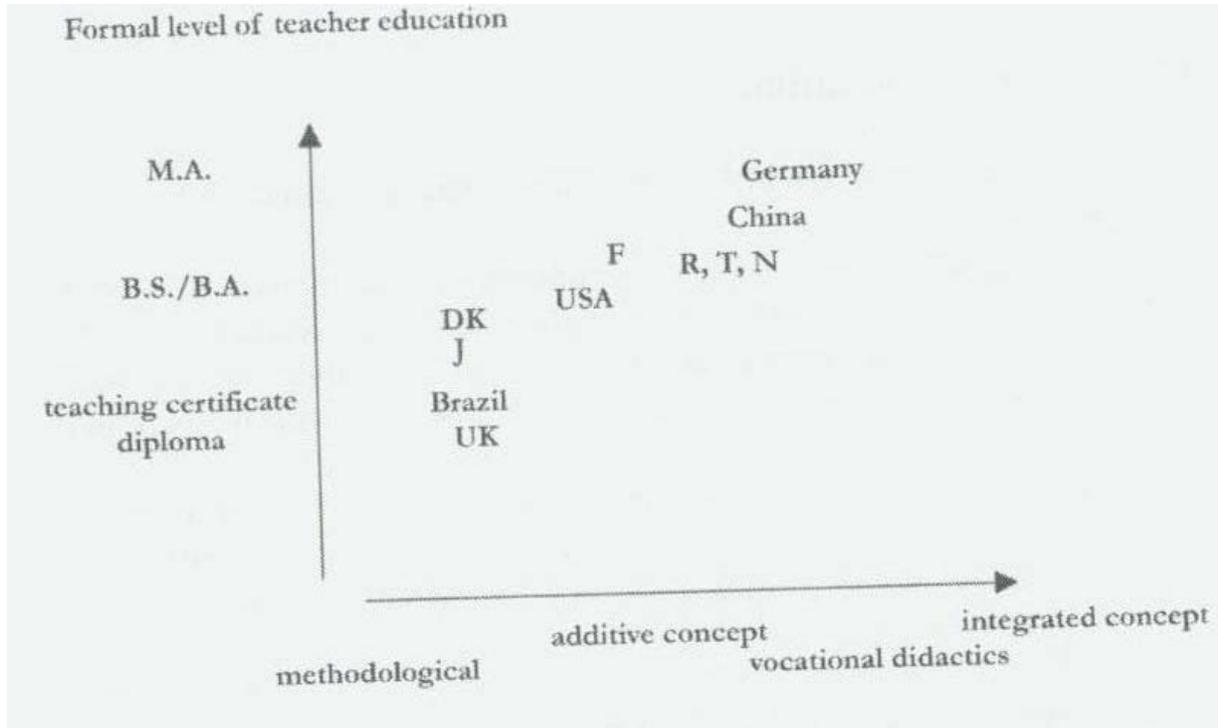
*Practitioners/ occupational experience – based model:* In this model people with practical work experience in the respective vocational fields are recruited and provided teaching and training methodologies and management courses and awarded a certificate that will qualify them as TVET teacher.

*Add- on teacher education model:* In this model TVET teachers are recruited after completing their first ( Bachelor ) degree in the vocational subject and then are admitted to a teacher education program that focus on provision of general teaching knowledge and skills to qualify as TVET teacher.

*The concurrent study model:* In this model, both the vocational subject and the teacher education course are offered concurrently to earn a first (Bachelor) or second (Masters) degree and to qualify as TVET teacher. In most cases, the vocational subject study is based on the core courses offered in the respective engineering or technology, or vocational disciplines and the teacher education programs also provide vocational didactics in addition to the other educational sciences.

*Integrated /competence- development model:* This is a comprehensive model that is based on the integrated conception of vocational disciplines , which require the vocational subject as derived from the world of work rather than on the respective engineering / technology or vocational disciplines. The TVET teacher preparation is highly oriented towards integration of real work experiences and facilitation of learning and development in the vocational fields. Teachers often attain higher formal qualification (first or second degrees) before their

employment as TVET teacher. Figure 12 depicts some of the countries that adopt these models in their TVET teacher preparation and employment.



**Figure 12 Pathways and qualifications of TVET teachers in some countries (Grollmann and Rauner, 2007, p 18)**

(Key: DK= Denmark; F= France; J= Japan; R= Russia; T= Turkey; N= Norway)

However, these four models do not cover or include all the different types of the TVET teacher education and qualifications that are present in the world. Quite diverse pathways are used in many countries depending on their own context. In some countries there could be different systems of TVET teacher education and employment within the same country. It is also evident that TVET teachers with out any type of teacher education and training may be employed and later offered induction training and in –service programs that focus on the development of teaching skills.

Despite differences in the specific context in which TVET teachers are recruited, trained, and employed, there are generally similar challenges that TVET professionals face in different countries. Some of these challenges are

- impact of the globalization
- the rapidly changing technology

- difficulties in the school-to –work transitions
- increased and diversified demands from the client groups
- the blurring delimitation of the traditional vocational profiles
- adopting better teaching –learning processes and methods
- carrying out newer roles by TVET teachers as coaches , mentors , facilitators
- the perception of TVET in the overall education system and the society
- demographic factors both in the society and the teaching force
- other local factors inherent in the TVET system, organizational issues, working environment and motivation. (Grollmann and Rauner , 2007)

### **3.3.4 TVET in Africa**

TVET in Africa are delivered at various types of institutions and levels based on each country model and system. TVET schools, polytechnics, enterprises, and other training centres run by private, public, non-governmental organizations, non- profit organizations and church-based training centres offer services to wide ranges of trainees. Even though the formal TVET is on the increase, by and large, in Africa the informal sector provides the largest training opportunity for people to acquire vocational and technical skills. For example in Ghana, 90% of TVET skill trainings occur through traditional apprenticeship in the informal sector. The private sector TVET is dominantly focused on the skill development in the Business education and service sector trainings (like secretarial sciences, dress making, accounting, marketing, purchasing) which may not require huge capital outlays to establish and run these institutions. (AU commission, 2007)

Mostly formal TVET are school –based and are offered for students after their completion of either the primary school education ( 6-8 years of education , for example in Kenya , Burkina Faso ) or the after the general/ Basic Education ( 9- 12 years of education in countries like Nigeria , Mali , Ethiopia , and Swaziland ). Some countries, for instance Egypt, also offer post-secondary TVET. The formal TVET sector is administered by government ministries including the ministries of education, Labour, Agriculture, Health and other institutions depending on the respective country’s TVET system.

Different countries have established national coordinating offices and supervising agents for the TVET in the form of Qualification Authorities ( in south Africa ) , National Council of

TVET( in Ghana ) National training Authorities ( in Tanzania ) , National TVET council and commissions ( in Ethiopia ) , supreme council for HRD ( in Egypt ) to oversee and regulate TVET . (Abraham, 2003; AU 2007)

In general, TVET delivery in Africa could be characterized by the following socio-economic environment and contextual situations:

- weak national economies, high population growth, and a growing labour force
  - shrinking or stagnant wage employment opportunities especially in the industrial sector
  - huge numbers of poorly educated, unskilled and unemployed youth
  - uncoordinated, unregulated and fragmented TVET delivery systems
  - low quality
  - geographical, gender and economic inequities
  - poor public perception
  - weak monitoring and evaluation mechanisms, and
  - inadequate financing, poor management and ill-adapted organisational structures.
- (AU, 2007, p.6-7 )

At a continental level, there is an increased awareness on the critical role that TVET plays in the fight against poverty reduction and its contribution to national development. TVET has become increasingly an integral part of many of the governments' strategic plans for poverty reduction and alleviation, and sustainable development. The African Union, on its part, has developed a general framework and policies towards revitalizing TVET in Africa. Within this strategic policy framework, the main strategic issues that African Governments need to address in their national TVET policies are discussed (AU, P8-9). Some of these strategic issues are presented below.

***Poor perception of TVET by society***

In most countries, the society perceives TVET as fit for only the academically less endowed. In many countries, students entering the vocational education stream find it difficult, if not impossible, to proceed to higher education. There is the need to make TVET less dead-end.

***Linkage of TVET to the labour market***

The ultimate aim of vocational training is employment. TVET programmes, therefore, have to be linked to the job market. In this way, the socio-economic relevance of TVET can be enhanced.

### ***Linkage between formal and non-formal TVET***

It should be possible for students who drop out of the school system to learn a trade to re-enter the formal vocational school system to upgrade their skills, either on part-time or full-time basis. Similarly, regular vocational school students should be able to acquire relevant practical skills in the non-formal sector.

### ***TVET teacher training***

The delivery of quality TVET is dependent on the competence of the teacher; competence measured in terms of theoretical knowledge, technical and pedagogical skills as well as being abreast with new technologies in the workplace.

### ***Gender stereotyping***

Some vocational training programmes like dressmaking, hairdressing, and cookery are associated with girls - very often girls who are less gifted academically. In Benin, for example, such girls are derogatorily referred to as following the “c” option of the secondary school curriculum: *la serie “c” – couture, coiffure, cuisine!*

### ***Linkage between vocational and general education***

In general, vocational education and training forms a separate parallel system within the education system with its own institutions, programmes, and teachers. This situation tends to reinforce the perception of inferiority of the vocational track. It is therefore important to create articulation pathways between vocational education and general education.

### ***Traditional skills, business management and entrepreneurial training***

TVET programmes in Africa should help develop indigenous skills associated with the manufacture of traditional artefacts and crafts. As employment opportunities in the formal sector shrink, the acquisition of business management and entrepreneurial skills for self-employment becomes a major imperative in the design of vocational training programmes.

### ***Harmonisation of TVET programmes and qualifications***

TVET can contribute to uniting the peoples of Africa. This is possible if individual country training programmes and qualifications can be harmonised into a coherent system of mutual recognition of competencies. Portability of TVET qualifications across national frontiers can become a factor in the integration of Africa. (AU, 2007, p 8 – 9)

The AU strategy to revitalize TVET in Africa also aims at improving the delivery of TVET , increasing the employability of graduates , improving the coherence and management of TVET through national supervisory bodies and qualification frameworks , enhancing the status and attractiveness of TVET ; and an orientation in TVET towards a continuous , life –

long learning and development.

Development projects and national programs towards the improvement TVET systems are underway in many African countries, including Ethiopia.

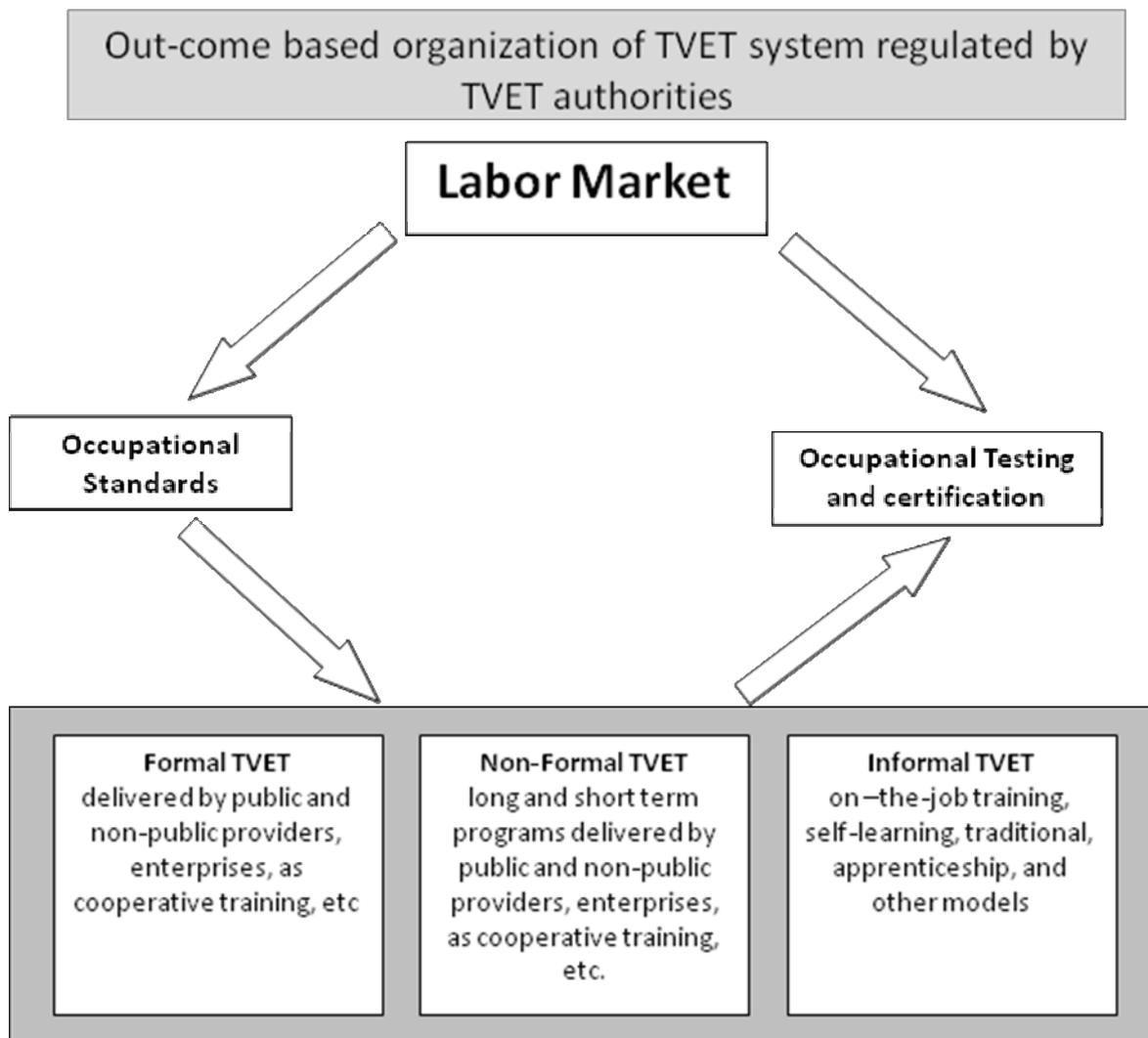
### 3.3.5 Ethiopian National TVET Strategy

The main objective of the Ethiopian national TVET strategy is “to create a competent, motivated, adaptable and innovative workforce in Ethiopia contributing to poverty reduction and social and economic development through facilitating demand-driven, high quality TVET, relevant to all sectors of the economy, at all levels, to all people in need of skills development” (MoE, 2006, p10).

The conceptual principles underlying the Ethiopian TVET system include

- aiming at a comprehensive and integrated TVET system
- increased stakeholder involvement
- strong Public-Private-Partnership
- out-come based organization of the TVET system where the competences needed by the labour market become the benchmark for TVET
- decentralization of the TVET system
- efficiency in the TET system through integration of various modes of delivery and cost –effective delivery of training.

According to this national TVET strategy, it is sought that the TVET system is governed by an outcome – based organizational system as depicted in Figure 13. The development of occupational standards at the national level is envisaged to promote transparency of the required competences and qualification among trainees, training providers, employers and other stakeholders. The occupational testing and certification, conducted at accredited public and private testing centres, are aimed at ensuring that TVET occupational standards are met according to pre-defined criteria. It is anticipated that the Ethiopian TVET Qualification Framework defines the levels of the qualifications and facilitate the horizontal and vertical permeability between different levels and training fields.



**Figure 13 Out-come based organization of TVET system (MoE, National TVET strategy, 2006)**

The TVET teachers' education and further training is one of the core issues in the national TVET strategy. In a broader term, the strategy recognizes the significance of a highly qualified, motivated and creative teachers and instructors, and focused on the need to develop the TVET staff accordingly. Special emphasis is given for continuous development of TVET teachers and instructors and thereby facilitating life-long learning.

TVET teacher education and further training at post-secondary level is the responsibility of the higher education system. It is also assumed that not only the universities within the higher education system, but also government agencies for TVET, companies, other training centres and organizations should work collaboratively to enhance the further training and professional development of the TVET teachers.

### *3.3 Teachers' Professional Development Models*

TVET reform initiatives are being undertaken in various programs led-by the Ministry of Education, regional government Education bureaus and TVET commissions. One of these programs at a national level is the Engineering Capacity Building Program (ECBP) which is supported by the German government. The program, which started officially in 2005, has four reform components: the University reform, The TVET system reform, Quality Infrastructure system development, and the Private sector development.

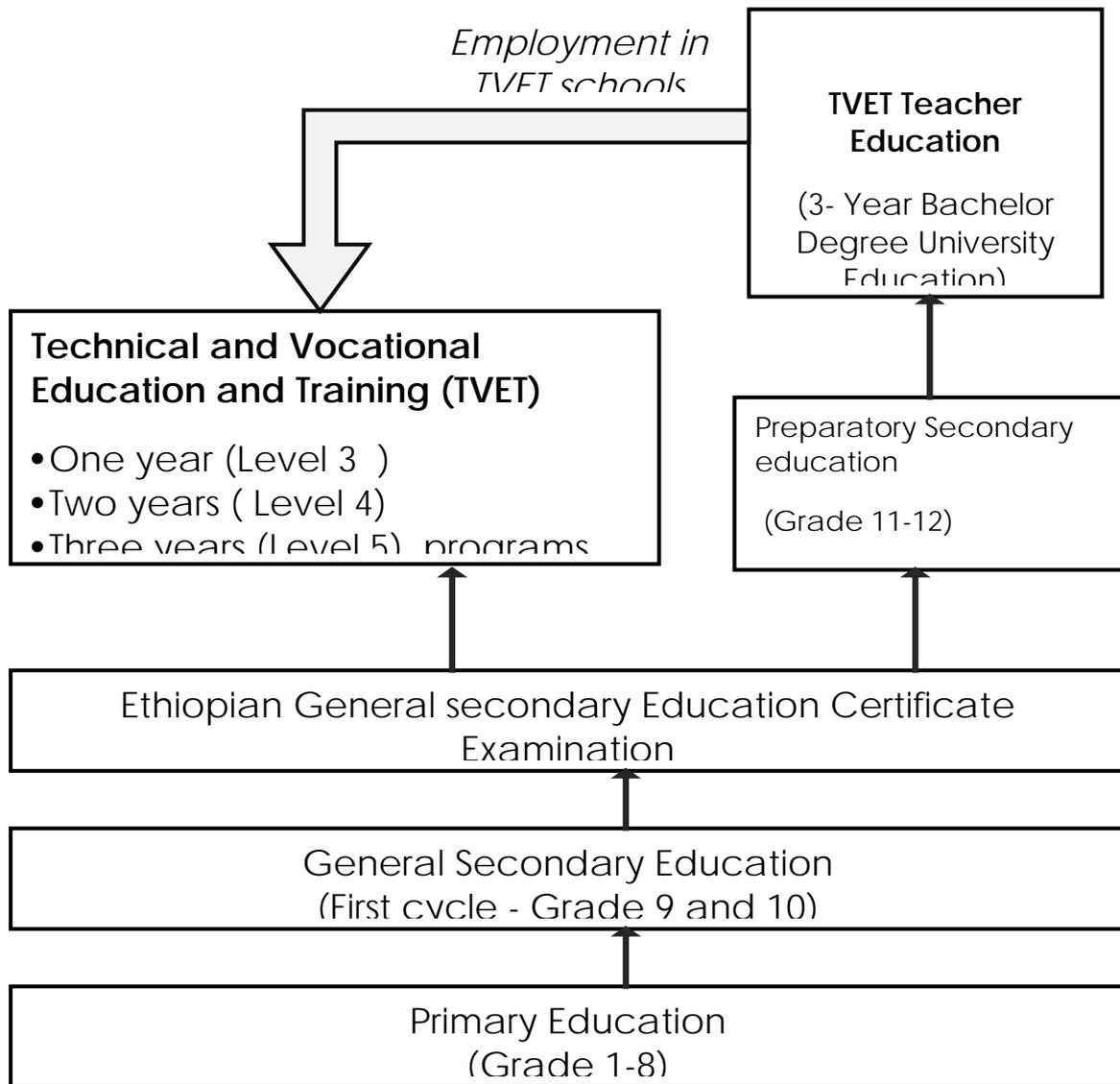
The TVET system reform component in the ECBP focuses on the development of an efficient, competent and outcome-based TVET system capable of producing demand-oriented professionals for the labour market. One of the key issues in this reform program is the improvement of the pre-service TVET teacher education and further training. In this respect, it has focused on the development of new curricula for the TVET teachers to be offered in the Ethiopian Universities where TVET teachers' education programs are provided.

The first TVET teacher education at bachelor degree level in the country was started in 1993 at Nazareth Technical College (Adama University). Currently there are at least six government universities which offer the TVET teacher education in various fields at Bachelor degree level. These include universities of Adama, Addis Ababa, Bahir Dar, Hawassa, Jimma, and Mekelle. The TVET teacher education in these universities is 3-year Bachelor degree programmes.

Students who have successfully completed the preparatory education (grade 11-12) are admitted to the government universities through a nationally - centralized system of student placement by the Ministry of Education. Some of these students are assigned to the TVET teacher education programs in these universities to undergo the three-year programs that lead to the award of a Bachelor degree. Based on the availability of vacancies, graduates from the TVET teacher education programs are employed by the regional education bureaus to work in the TVET institutions. Figure 14 shows TVET teachers' education and employment in Ethiopia.

The three- year TVET teacher education program consists of courses offered in three categories: Major Technical /vocational subject, general or supportive subjects, and the pedagogical courses. The relative weight given for each of these categories may slightly vary among the universities. In most cases, of the total credit hours required for the completion of the Bachelor degree program, approximately 70% are allotted for their major subject, 13% for the general and supportive courses, and 17% for the pedagogical courses.

The TVET teacher education programs take six semesters of each 4 months. The major subject, general/ supportive, and pedagogical courses are offered concurrently every semester.



**Figure 14 TVET teachers' education and employment**

As part of the TVET reform program, new TVET teacher study programs in three engineering fields are being designed in collaboration with different departments and faculties of government universities under the auspices of the ECBP. As pilot programs, the designed curricula focus only on three areas: mechanical engineering, construction technology, and Electrical Engineering (ECBP, 2008). These newly designed programs show some fundamental departure from the current TVET teacher education programmes offered in the universities. The major differences include focus on new target group for admission, use of international standards, and extension of duration of study.

The main target group for admission to these new programmes are students who have completed the 10+3 level TVET training in the respective fields. This is a major shift as only those students who have completed their university preparation programs from the academic streams were allowed to TVET teacher education programs in universities. The syllabus for the newly designed TVET teacher programs explicitly state that

“The main target groups are graduates from the vocational track in the secondary education cycle who has already gained practical experience in technical fields. For certain groups bridging courses will be provided to enrich the general education. Graduates who have completed grade 12 of the secondary education cycle and obtained university entry qualification can also apply for the study programme, but must demonstrate one year practical experience before finishing the study programme.” ( ECBP, 2008, P.6 )

The study programmes incorporate also the international experiences in TVET teacher education and credit transfer systems. Particularly the designed programmes introduce the European Credit Transfer System (ECTS) as stipulated in the 1999 Bologna Declaration. They also take into account the 2004 Hangzhou Declaration which defines an international framework for the education of TVET teacher and trainers. The new study programs also require for the extension of the duration of the TVET teacher Bachelor degree program from the current three year to four years. The fourth year in these programs is exclusively meant for teaching practice at TVET schools and writing their thesis.

### **3.4 Summary**

This chapter has drawn from studies and reports on vocational education and TVET teacher education programs and practices at international, continental and national levels. Empirical research results in teacher education reforms and professional development experiences conducted in different countries and continents were taken into account to draw important implications for the improvement of the Ethiopian TVET teachers’ education system. (UNESCO/ ILO on TVET , 2001 ; Grollmann and Rauner ( 2007) ; Rauner ( 1999) ; Arnold et al. 1998 ; African Union TVET strategy , 2007 ; MoE/ Ethiopia TVET strategy , 2006 , Hangzhou Declaration , 2004)

Teacher education programs in different countries diverge on the areas of emphasis and priority they accord to their programs. These differences on emphasis on what specific skills ,

knowledge and experiences teachers need to acquire in their initial (pre-service) and continued professional development ( in - service ) programs are influenced by the prevailing culture and values of the society, the society's perception of teachers and teaching, the overall objectives of the education system, expected role of teachers, among others. (Berry 2001; Villegas – Reimers , 2003 ; Bünning and Zhao , 2006 ; Pianfetti , 2001; Calderhead and Shorrocks ,1997 ; Ferguson ,2000 ; Henning 2000 ; Ross, 2001)

An overview of the TVET systems around the world reveals also a system of complex and diverse structures and orientations. Depending on the emphasis and process that is given for the transitions from school-to –work, Grollmann and Rauner (2007) classified TVET systems at international level in to four models. These models are *the direct, the hardly regulated, the regulated, and the shifted* transition models. Arnold et al. (1998) also classified the different types of vocational training system in the international context into four models; namely the Informal, Market, Co-operative and the school models.

Similarly, the various TVET teacher education pathways in different countries are categorized into four models: namely the *Practitioners/ occupational experience – based model, Add- on teacher education model, the concurrent study model, and Integrated /competence-development model*. The characteristics features, processes, and the qualifications of TVET teachers in these models are also discussed in this chapter. (Grollmann and Rauner, 2007)

In Africa, the informal sector provides the largest training opportunity for people to acquire vocational and technical skills. The socio-economic environments and contextual situations that characterize TVET in Africa which are discussed in this chapter provide insights, challenges and opportunities into the continent's TVET system.

Reforms in the TVET system of Ethiopia are being undertaken through various programs led by the Ministry of education, regional education bureaus and TVET commissions and other institutions. The national TVET strategy envisions the creation of a competent workforce through TVET that support the poverty reduction and socio-economic development of the country. It aspires to develop an outcome – based TVET system in which the labour market play the key role in terms of the development of vocational occupational standards and the occupational testing and certification at the national level. Government and other TVET authorities are expected to regulate and provide support. The system takes into account the

formal, informal and non formal TVET providers as integral elements of the TVET system.

The formal TVET system in Ethiopia follows the school-based model and TVET teachers are educated in the universities. TVET teacher education in Ethiopia at a Bachelor degree level started in 1993 and all previous TVET teachers trainings were below this level. The Bachelor degree TVET teacher programs are three- year university education which offers courses in three categories: Major Technical /vocational subject, general or supportive subjects, and the pedagogical courses. Owing to different problems within these programs, curricula reform initiatives are being taken to overhaul the TVET teacher education system of the country including the extension of the duration of the TVET teacher programs to four years. (MoE, 2006; ECBP, 2008; AAU, 2008)



# CHAPTER FOUR

## RESEARCH METHODOLOGY

### *Introduction*

This chapter deals about the methodology used in this research. It comprises four sections. The first section focuses on the choice of the appropriate research strategy based on the research objectives and questions. A brief discussion on the quantitative and qualitative research strategies in social research is presented. The Qualitative research approach is chosen for this work and its justifications are included.

The second section of this chapter details out the data collection method and procedures followed to get the data for the research questions to be answered. The In-depth interview method is used to get primary data for the research. A short explanation of in-depth interview as a data collection method followed by the process involved in the actual data collection phase were elaborated.

The third section focused on the methodology used for analysing the data. The qualitative content analysis approach is adopted and used in this research. An overview of the theoretical frameworks for the classical content analysis and qualitative content analysis are presented. Then follows the detail procedures used in applying the qualitative content analysis method are discussed. Examples of the coding and categorization process are also presented. A brief summary of the chapter is given in the last section.

## **4.1 Choice of Research Strategy**

### **4.1.1 Qualitative and Quantitative Research Strategies**

Broadly speaking the orientation to conduct social research could be divided as qualitative and quantitative research strategies. Many authors have defined the qualitative and quantitative research in various ways providing differing emphasis on the different characteristics of these strategies. According to Denzin and Lincoln (2000) Qualitative research is described as follows.

“Qualitative research is a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible. These practices transform the world. They turn into a series of representations, including field notes, interviews, conversations, photographs, recordings, and memos to the self. At this level, qualitative research involves an interpretive, naturalistic approach to the world. This means that the qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of the meaning people bring to them.” (Denzin and Lincoln, 2000, p. 3)

Bryman (2004) described quantitative research as a research strategy that usually emphasizes quantification in the collection and analysis of data. It is deductive and objective in its nature and incorporates a natural science model in its research process largely influenced by positivism. He described the differences between the qualitative and quantitative research strategies by contrasting them in terms of their relationship between theory and research, epistemological, and ontological issues. The main points of the comparison are presented in Table 19.

<i>Orientation</i>	<i>Quantitative research Strategy</i>	<i>Qualitative research strategy</i>
Role of theory in relation to research	gives emphasis to the testing of theories and predominantly involves a <b>deductive</b> approach to the relationship between the theory and research. It is confirmatory in nature.	more focus on the generation of theories, and uses an <b>inductive</b> approach. It is <b>exploratory</b> in nature
Epistemological	built upon the practices and norms of the natural scientific model, particularly that of the <b>Positivism</b>	by rejecting positivism it emphasizes on the ways individuals interpret their social world( <b>interpretivism</b> )
Ontological	adopts the view that social reality as an external, <b>objective</b> reality	social realities are viewed as social constructs ( produced by social interactions ) and in constant state of revision ( <b>constructivism</b> )

**Table 19 Comparison between qualitative and quantitative research strategies (Bryman, 2004)**

### **The Qualitative versus Quantitative debate**

In fact, the main difference between qualitative and quantitative is not along the exploratory-confirmatory or inductive-deductive dimensions, but from their differing epistemological and

ontological assumptions. Epistemologically, many qualitative researchers believe that the best way to understand any phenomenon is to view it holistically in its context and to become immersed in it, and any quantification of the reality leads to looking at the small part of it while distorting the fuller and complete image. Similarly, the assumption that there is only one single unitary reality apart from our perceptions neither falls in the realm of the qualitative researchers nor embraced in their ontological assumptions. Qualitative researchers also argue that the uniqueness of each individual and the context should be an important consideration in the study of the subjects as opposed to the aggregation approach in quantitative methods.

The polarity discourse between the qualitative and quantitative approaches, too often focused on philosophical aspects, are at times appear to be non conciliatory and gets quiet unpleasant and resort to mutual ignorance on parts of the extreme advocates ( or the “ paradigm warriors”). But Dey and Nentwichin<sup>23</sup> described that

“In recent years the "naked hostility" (Burton & Kagan,1998) between qualitative and quantitative researchers has been partly mitigated, due partly to the growing recognition that no single methodology can provide a universal, exhaustive understanding of the phenomenon at hand; still, we can hardly depict the current situation as affirmative, respectful or cooperative. After all, given that some of the initial antagonism has continued, the least detrimental approach to date appears to be mutual ignorance.”(Dey and Nentwichin, 2006 p. 2)

In relation to the qualitative and quantitative debate, and following his in - depth analysis of the history of science, Kuhn ( 1961) argued that “large amounts of qualitative work have usually been prerequisite to fruitful quantification in the physical sciences.” Kuhn (1961, p. 162) In search for pragmatic solutions and ground for mutually inclusive approach than mutual exclusiveness, many researchers and practitioners promote “a paradigm of choices” (Patton, 1986) or "mixing methods" (Brannen, 1995). While some say that mutual ignorance disrupts the dialogue on and negotiation of epistemological and ontological differences, that very engagement forces us to decouple the philosophical grounding of research from

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23 Dey and Nentwichin (2006) in their article, *The Identity Politics of Qualitative Research. A Discourse Analytic Inter-Text1*, provide an insight into the earlier and continued discourse on the Qualitative Vs Quantitative debate and its influence on the identity performance of the qualitative research. Not only the scope of the semantics used and the “meanings” associated to them, the different type of dichotomies (or binaries) used to describe or explain the similarities and difference between the methods have also contributed to the misunderstanding of the essences of the methods.

questions of methodology.

Bryman (2004) stated that researches that involve the integration of quantitative and qualitative research have become increasingly common in recent years and there are a number of publications on how these two approaches could be combined in a given setting. For instance, Mayring (2001) has suggested in an elaborative step-wise manner, how the combination of quantitative and qualitative analysis could be achieved at five different levels.<sup>24</sup> Many other authors have adopted or followed the integration approach of the methods.

### **4.1.2 Choice of Qualitative Research Strategy**

Cognizant of the fundamental differences between qualitative and quantitative research approaches as well as the ongoing debates, this research adopts a qualitative approach as an appropriate research strategy. This choice emanated from the characteristics of the research objectives and the types of questions to be answered in this research. The nature of the research is an exploratory type in which results would be obtained through an inductive way.

Further more, in order to get in-depths understanding of the TVET teachers' individual learning orientations, process, contexts and as well their perceptions, beliefs, and reflections on their own learning and professional development, a qualitative inductive approach particularly suit the attainment of the research objectives. Responses for the research questions requires exploring reasons, collection of personal meanings and perceptions which can be best captured by a study of a qualitative nature than a quantitative one. Hence, it is found more suitable to choose a qualitative approach to get a deeper understanding of the problems, the responses, and the contextual situations in which the teachers are found.

It is sought that the qualitative approach provides a better description of the context, process, and insights of the TVET teachers learning and their professional development. Such an approach also provides researchers an opportunity to observe, and access the data in their natural settings. The data collected in such approach are typically rich with details and insights which could further help the data analysis and interpretation process.

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<sup>24</sup> Philipp Mayring (2001) discussed the combination of qualitative and quantitative steps of analysis on five levels with supportive example and illustrations. These levels are on the technical level, at data level, at personal level, at design level, and in regard to the logic of the research.

## 4.2 Data Collection Method

The primary data collection method chosen for the purpose of this research is through conducting a qualitative in-depth interview with TVET teachers selected from four TVET schools. According to Kvale (1996), qualitative research interviews help to understand the phenomena or research problem from the subjects' point of view through unfolding the meaning of peoples' experiences, uncovering their lived experiences and beliefs prior to scientific explanations.

In-depth interviewing, as one of the qualitative research technique, involves conducting intensive individual interviews with a small number of respondents to explore their perspectives on a particular idea, program, or situation (Boyce and Neale, 2006). This type of interview is often not rigidly structured and therefore permits the interviewer to encourage the interviewee to talk at length about the topic of interest. It focuses often on questions to explain the reasons underlying a problem or a practice in a target group and ultimately helps to elicit rich, detailed data that can be used in analysis (Lofland and Lofland, 1995).

Generally, in-depth interviewing is one of the most useful methods that help to capture and describe social processes, to explore differences in experiences and learning outcomes among interviewees. It also provides opportunity for each of the individual interviewees to describe the phenomena under study in his own way and language without being constrained, overcoming limitations which are prevalent in other methods , for example , in quantitative methods which uses scales for responses or closed question interviews.

A one-on-one in-depth interview creates an atmosphere conducive for the interviewees to express their thoughts, feelings, and perceptions which otherwise may be difficult under a group setting. Further more, such an interview helps reveal the underlying motives, perceptions, behavior and attitude of the interviewees.

For the interviewer, it allows the possibility to probe further into some of the issues raised by the interviewees including those responses or new ideas which are unexpected and interesting. It also gives the interviewer the chance to use his own knowledge and interpersonal skills to query further on issues that are of interest in the research, change the order and flow of the questions and ask additional questions as needed.

Though indispensable, carrying out in-depth interview or the subsequent analysis of the interview data are far from simple. The interviewing process requires a thorough preparation of the interview guide and skilfully conducting the interview. Some of the advantages and disadvantages of in-depth interviews are provided in Table 20.

<b>Advantages</b>	<b>Depth:</b> In-depth interviews can uncover valuable insights, and enable you find out “the real story” from the people in the know.
	<b>Disclosure:</b> Respondents are most likely to open up on a one-on-one basis
	<b>Quality of Data:</b> Skilled interviewers are able to illicit rich information by probing for greater detail. Questions can be added on or altered in real-time if needed.
	<b>Short timelines:</b> Data can be collected faster than other research methods- usually within few weeks.
<b>Disadvantages</b>	<b>Challenging and time consuming:</b> Qualitative data can be ambiguous, resulting in a more difficult analysis, particularly for less experienced analysts.
	<b>High interviewing skills:</b> It is important to have a well trained, highly skilled interviewer conducting this type of interview. Using less skilled interviewer increases the possibility of bias.
	<b>Small numbers:</b> Given the length of each of the interview and the volume and depth of data obtained, the number of in-depth interviews one will complete for a research project will be small ( there is no standard number of interviews , but a total of between 10 and 15 interviews would not be uncommon).

**Table 20 Advantage and disadvantages of the in-depth interview (Wallace 2006, p 4)**

According to Wallace (2006), the major steps that are involved in conducting in-depth interviews are the development of a sampling strategy, preparation of an interview guide, conducting the interview, and the analysis of the data. These steps are also followed in this research and details of each of the stages are presented as follows.

### 4.2.1 Developing a Sampling Strategy

The initial phase of data collection involved the development of a sampling strategy and options to choose from in making decision whom *should be interviewed*. This was a critical stage as it was very significant to determine whose ideas, perceptions, experience, and attitudes will be most important to answer the research questions and help achieve the research objectives.

A considerable number of different populations were initially considered for the in-depth interview including the TVET teachers, TVET school administrators, education officers and experts, technical and vocational teacher training institutes staff, and others. It may not be possible to capture the ideas of all these key stakeholders of the TVET system in one study of this nature. Hence, it was necessary to make a selection and focus on a particular group to pursue the study. Eventually given the aim of the research, the TVET teachers are at the center of this study and undoubtedly were the prime choice to start with their perceptions and opinions on their own professional development. Other groups may not adequately describe and explain the various issues related to the teachers' learning and development better than the TVET teachers themselves. Improvement in the learning and professional development of the TVET teachers need to be based on their beliefs, needs and priorities. Therefore, the TVET teacher population was chosen for the primary data collection. Hence the in-depth interviews are conducted with the TVET teachers from different TVET schools.

As supplemental information, discussion with some of the TVET school leaders and education officers, and also with experts at the Ministry of Education were conducted and study reports and policy documents related to the current and past status of the TVET in Ethiopia were used. These additional sources of information helped to further understand and get a wider picture of the issues related to the TVET teachers learning and development.

As the need to get a random sample of the target source of information is not an important factor when conducting in-depth interview, attempt was made to get a diverse mix of the TVET teachers (or interviewees) in order to capture the different views, insights and opinions through a non random purposive sampling. The selection of the potential interviewees was based on their diversity in length of service, performance, and field of training. The data obtained from this sample cover the various opinions and perspective among the TVET teachers and provided better insights and information to answer the research questions. As the intensive one-on- one interview requires much time for interviewing, transcription and the subsequent analysis, the number of interviews was also limited to twelve.

Selection of the interviewees was made with the support of the Deans, vice Deans or other representatives of the TVET institutions. Initial contacts with the administrations of four TVET colleges/ institutions were made. Three of these institutions are located in the capital city, Addis Ababa, and the other one in Adama, 100km south east of the capital. These TVET

institutions are Addis Ababa, Wingate and Entoto TVET colleges from Addis Ababa and Adama TVET College. These institutions are selected due to their long year of experience as TVET institutions and for logistical reasons as well. During the first meetings with heads of the institutions, the general aim of the research and the methods for data collection were explained. A request for their support in facilitating the selection of the TVET teachers to be interviewed was made. The schools leadership involved expressed interest in the research work and responded positively to cooperate. In subsequent meetings, it was possible to get the list of the TVET teachers willing to be interviewed, along with their brief biographies, and subject area of teaching and contact addresses. The overall profile of the interviewees include

- Consisting of twelve TVET teachers from four TVET schools (three from each schools)
- have teaching experiences in TVET schools ranging from 3- 38 years
- all have at least a Bachelor degree in technical or vocational fields and some of them are currently pursuing their Masters degree studies
- eight of them are from technical occupations and four are vocational subject teachers
- five of them have not attended teacher education programs in their university studies
- three of them have teaching experience at elementary and junior high schools prior to their employment as TVET teachers.
- four of them have been working in the industry as semi-skilled workers before their employment as TVET teacher.

Two separate meetings were held with each of the interviewees at their work places depending on their schedule and preference. The first meeting was an introductory meeting and an opportunity to explain the aim of the interview and getting their consent to be interviewed. The interviewees also provided further biographical data followed by an observation to their workshops or classrooms. All selected interviewees have expressed their consent to be interviewed. Date and time for the interview were agreed. The interviews took place in Addis Ababa and Adama in the period between May 2008 and June 2008.

## **4.2.2 The In-depth Interview Guide**

An in-depth interview guide was prepared well before the interviews were conducted. The In-depth interview guide study has three parts. The first part provides the steps for a personal introduction and a brief description of the purpose of the research. Some biographical data of

the interviewees are recorded and their consent is also reconfirmed. This part of the guide also include description of the confidentiality of the recorded data provided as well its strict use to the research is confirmed to further encourage interviewees to openly express their opinion on the issues to be discussed.

The second part of the interview guide consist a set of open-ended interview questions which eventually formed the basis of the interview content and direction. In fact, depending upon the interviewees' response, additional probe questions were asked. This opportunity has provided much better understanding into the many issues the interviewees raised. During the data analysis phase cautions were made to the fact that different interviewees have responded to questions that have not been asked to others. At times direct comparisons of responses are no possible due to these differences in the questions asked.

The constructions of the open ended questions was mainly based on the research questions and is formulated in such a way that the responses by the interviewees will likely give relevant information or provide insights into the problem and answers to the research questions. Each interview question was asked to all the interviewees and their responses contributed to the achievement of the research aim.

The last part of the interview guide served for recording observations by the interviewer during and or immediately after the interview, and other comments that might be useful. Following the end of the interview, detail notes on the overall interview process, and other remarks comments were written in this final part of the guide.

The preparation of such in-depth interview guide helped not only to list down interview questions to be asked but also support as a guide in the its administration and implementation of each stages during the interview process. It provides a more systematic and comprehensive approach to the process and also maintained consistency between the interviews and hence also contributing to the reliability of the findings from the data obtained through this method. (Boyce and Neale, 2006)

### **4.2.3 Conducting the Interview**

The interviews were conducted in places that the interviewees have chosen. Actually all of the interviews were conducted in their workplaces (their office, open spaces in the school

compound and at staff lounges). The interview environment was conducive and rarely was little distractions. The interviewees were conducted in *Amharic* - the national language of Ethiopia, instead of the English language of which the research is to be written. All the interviews are recorded on a digital audio recorder and later transcribed. The transcribed responses were then translated into English language for use in the ATLAS.ti data analysis software. The choice of using the local language was meant to facilitate better communication and allow interviewees to express their ideas and reflections and hence limiting the use of the English language not to be a barrier in the communication. The use of the local languages in-depth interview is not only common but also helps to minimize the Language-of-interview effects on the data to be collected. (Lee 2001; Marcos et al., 1973; Wallace 2006)

Besides the questions in the interview guide a number of probe questions were asked based on the ideas expressed or remarks made by the respondents. These questions further provided relevant data for a deeper understanding of the responses as well as to reveal more ideas than anticipated in relation to the research questions. The order in which the questions were asked was not uniform. It varied on the interviewee's response and the flow of ideas during the interview.

The interviews were planned to take 45 minutes each. Actually the durations of the interviews varied from 35 minutes to 1:15hrs. The average duration for the interviews was 50 minutes. There were six main questions and additional sub questions that were used depending on the responses from the interviewee. The main interview questions were the following.

- *How do you perceive yourself as adult learner and as a professional?*
- *How do you engage yourself in learning and professional development activities?*
- *What contextual factors enhanced or hindered yours (and other TVET Teachers') learning and professional development?*
- *Which competencies are found critical for your learning and professional development?*
- *What factors need to be considered to enhance and sustain your learning and development of (and also other TVET teachers) in your context?*
- *What other opinions do you like to give on the issues discussed?*

## 4.3 Method of Data Analysis

The data analysis method used in this study is Qualitative Content Analysis (QCA) approach. Brief description of the classical content analysis in social research and the development and the essence of qualitative content analysis are presented in the following sections. Mayring's (2000a) step-model of inductive category development method is followed in the coding and categorization process.

### 4.3.1 Classical Content Analysis

Content analysis is one of the "the longest established method of text analysis among the set of empirical methods of social investigation" (Titscher et al. 2000, p.55). It has a long history in research, dating back to the 18th century in Scandinavia (Rosengren, 1981).

The development of the content analysis method is often associated with the fast growth of the communication media in the first half of the twentieth century. It is theoretically based on such communication models of Harold D. Lass Well and later on that of Shannon and Weaver. (Mayring, 2002, p.114; Titscher et al., 2000, p.55)

Mayring ( 2000a) has noted that precursors of content analysis even before these models were evident through the use of different approaches to analysis and comparison of texts in hermeneutic contexts (e.g. Bible interpretations), early newspaper analysis, graphological procedures. Some authors argue that Freudian dream analysis can be seen as early precursors of content analysis (Kohlbacher, 2006).

Content analysis at its earlier stage was positioned more of as a quantitative method. It was understood as related to those methods that concentrate on directly and clearly quantifiable aspects of text content, and as a rule on absolute and relative frequencies of words per text or surface unit." (Titscher et al. 2000, p.55)

Ryan and Bernard (2000) stressed that, the coding process in content analysis as the *heart and soul* of text analysis while its key tool being its system of categories. Earlier definitions of the method also emphasize its quantitative characteristic. For example, Berelson( 1971) defined the content analysis as "a research technique for the objective, systematic, and quantitative description of the manifest content of communication , and comprises a technique for

reducing texts to a unit-by-variable matrix and analyzing that matrix quantitatively to test hypotheses." (Berelson, 1971, p.18)

However, contemporary definitions and applications of content analysis are not only limited to quantitative but also to qualitative methods as well. In the 1950s, particularly after the publication of Berelson's book *Content analysis in communication research* in 1952, controversies and critics were leveled at the quantitative content analysis. One of these critics, Kracauer (1952, pp. 637f) , pointed out that it is not by counting and measuring that patterns or wholes in texts can be demonstrated but by showing the different possibilities of interpretation of multiple connotations (Titscher et al., 2000, p.62, Gläser & Laudel, 2004, p.192 in Kohlbacher 2006). Similarly, Ritsert (1972) asserted that the quantitative analysis lacks the consideration of such relevant aspects like the context, the text latent structures of sense, distinctive individual cases, and also things that do not appear in the text (Kohlbacher 2006).

Mayring (2000a) described the weakness of the quantitative content analysis as a superficial analysis which do not give due attention and respect to the latent contents and contexts but focusing working with simplifying and distorting quantification procedures.

Many believed that the strong criticisms towards the quantitative content analysis and its inherent shortcomings led to the development and inclusion of the Qualitative Content Analysis (QCA) as part of the content analysis in social research (Altheide, 1996; Mostyn, 1985; Rust, 1980; Wittkowski, 1994).

### **4.3.2 Qualitative Content Analysis**

Philipp Mayring is credited as the Pioneer in developing and using Qualitative Content Analysis in the 1980s. He tried to overcome the limitations of quantitative content analysis through the use of “a systematic, theory-guided approach to text analysis using a category system”. In his own words, he asserted that “the qualitative approach preserves the advantages of quantitative content analysis as developed within communication science and to transfer and further develop them to qualitative-interpretative steps of analysis.” (Mayring, 2000a in Titscher et al. 2000, p62)

According to Mayring (2000a), qualitative content analysis is defined as

“An approach of empirical, methodological controlled analysis of texts within their context of communication, following content analytic rules and step by step models, without rash quantification.” (Mayring, 2005, p. 5)

Similarly, QCA is understood as

“A research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns.” (Hsieh and Shannon, 2005, 1278)

Bryman (2004) also described QCA as

“An approach to document analysis that emphasizes the role of the investigator in the construction of the meaning of and in texts. There is an emphasis on allowing categories to emerge out of data and on recognizing the significance for understanding the meaning of the context in which an item being analyzed ( and the categories derived from it ) appeared.” (Bryman, 2004, p 541)

QCA method provides a holistic approach within the particular context of the qualitative data that may be collected in the any form of recorded communication. The QCA method requires the aspects of the interpretation like the codes and the categories to be developed and formulate them as closely as possible to the qualitative data as possible. In order to support such category development, Mayring developed two procedures that aid researchers to follow step- by-step in the development of the categories and the analysis of the data. These two procedures are the inductive category development and the deductive category application.

In this research, the inductive category development procedure is used rather than the deductive application of categories procedure. One of the reasons to do so is to label and categorize elements of the interviews transcript within codes and categories derived and as closely related to the text material rather than trying to fit the text into a theoretically predefined construct of a category system. Such coding and categorization provided the opportunity to intimately work and look for possible meanings and interpretations of the text under its own specific context. Secondly, through the iterative process of coding, the procedure provided further chance to create new codes and categories, to modify others and establish links among them based on the content of the text. This in turn will help redefining and changing the definitions and properties of codes and categories to create the best possible fit with the actual data. Moreover, the use of a deductive category application would have denied the chance of capturing new codes and categories which were not anticipated earlier

but may be present in the text. Therefore, the use of an inductive category development procedure provided the flexibility and depth of analysis to investigate the text data.

The step model of inductive category development is depicted in Figure 15. Mayring (2000a) emphasized that the central point of the procedure is the formulation of the definition of the criteria for the codes and categories based on the research question as well as the theoretical framework relevant to the research. The content of the text is then worked through by using the definition of criteria and the categories are developed in a “tentative and step- by-step” manner and are eventually reduced to main categories through an iterative procedure to ensure their reliability. (Mayring, 2000a)

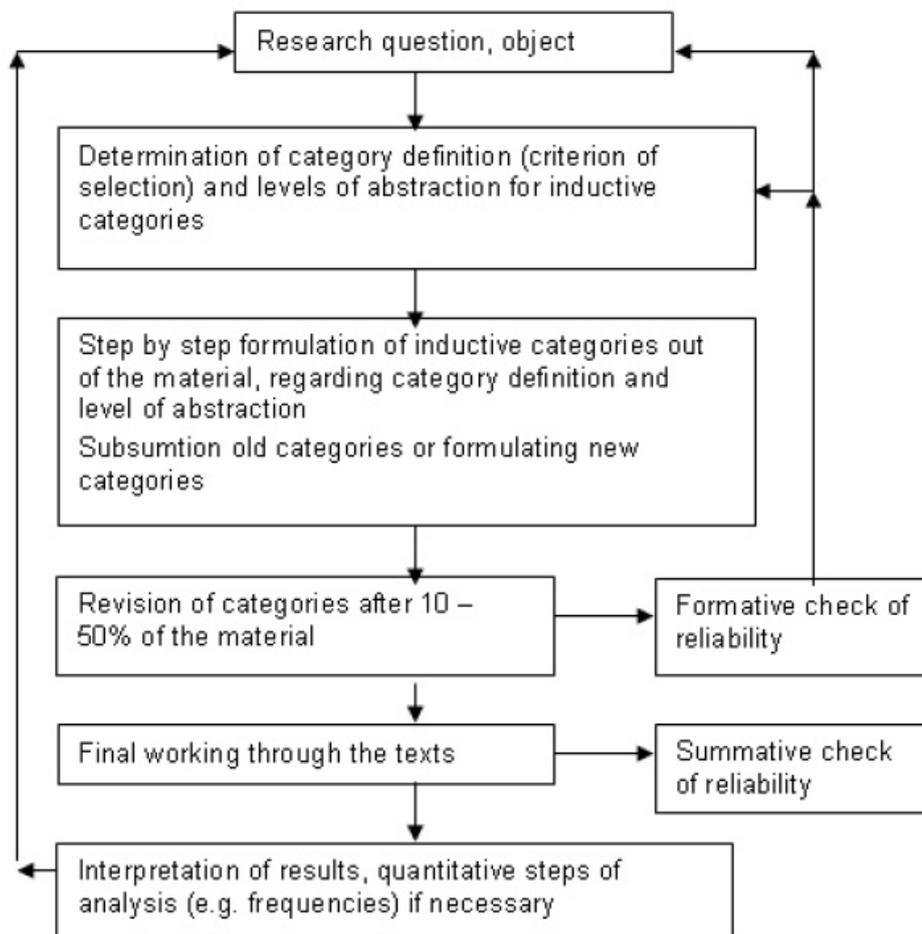


Figure 15 Step model of inductive category development (Mayring, 2000a)

This study made use of the steps along with the iterations and the feedback loops as depicted in Figure 15. The object of the analysis was the text of the transcribed interview of the twelve teachers from four TVET schools. The responses of the interviewees for the interview questions were recorded in a digital audio recorder. The responses of all the twelve interviewees were then transcribed. The interview transcription was done following the denaturalization approach (Oliver et al. 2005), where all the speech was depicted verbatim. During the transcription much emphasis was given to the accurate transfer of the content of the speech into text format. Oliver et al. (2005) showed that such an approach has found particular relevance in variants of ethnography (Agar 1996; Carspecken 1996), grounded theory (Charmaz 2000) and critical discourse analysis (Fairclough 1993; van Dijk 1999).

### 4.3.3 The Coding and Categorization Process

#### *Qualitative Data Analysis software ATLAS.ti<sup>®</sup>*

The whole transcribed text document of the interviews were loaded as a rich Text Document on a Visual Qualitative Data Analysis and Knowledge Management software (ATLAS.ti<sup>®</sup> V5.0) as a primary document in the form of “Hermeneutic Unit” for the coding process. The software assists by offering variety of tools for the creation, management and production of outputs based on the quotations, memos, codes, categories, families and networks.

#### *Unit of analysis*

The unit of analysis used in this research for the coding process was not a specific linguistic unit such as a word, phrase, sentence or paragraph but rather a theme. Minichiello (1990) described coding using a theme as the unit of analysis in such a way that the coder is looking for expression of ideas in the text. These ideas could be expressed by words, sentences or any combination and size as long as they describe the idea the code stands for. He also asserted that in QCA it is often customary to use a theme as a unit of analysis.

#### *Inductive Category formulation*

Preliminary stage (the first 25% of the transcribed text)

The transcribed text material is read and re-read to get acquainted with the contents and to develop initial thoughts and understanding of the response to the interview questions. This initial step was relevant but at the same time the diversity of the responses appears rather incomprehensible to classify them into few codes and categories. Initial temptations to categorize all the responses into some sort of quick and logical category system was challenged and proved formidable and practically difficult task. Eventually initial criteria of

definition are formulated, based on the content of the transcribed text, the research problem, and the theoretical framework that is considered relevant to the research.

The preliminary coding process considered three interviews (25%) out of the total of twelve interviews. Based on the initial criteria of definitions and descriptions, this portion of text material is worked through line by line and codes are assigned to the themes (units of analysis) in the text. As the coding process proceeds based on the initial definitions of criteria, the text yield a number of codes that fit into these definition as well other codes that requires either a new definition or the redefinition of the existing ones in order to accommodate them. Along this coding process, different codes with close themes emerged and are subsumed into different subcategories, and categories. Typical example of the codes and categories that have been created based on their definitions, properties and criteria are shown as a sample in Table 21.

#### ***Formative check of reliability***

After the first 25% of the interview material has been coded, further coding the rest of the transcribed text revealed that some of the initial definitions and codes needed to be modified and new ones included. The coding experience during the primary stage in this research showed the challenging task of maintaining the consistency of the codes and categories. However, the consistency of the codes and categories was maintained by defining them in such a way that “they are internally as homogeneous as possible and externally as heterogeneous as possible.” (Lincoln and Guba, 1985)

Practically, the interrelatedness and inter connectivity of the various concepts and themes in this study make the categorization process difficult. The desire to make each of the categories mutually exclusive during the coding process required the use of a higher level of abstraction by considering the overall system in terms of fewer components. This led to the loss of details and the consideration of the various themes within the bigger categories uncovered. Similarly, a lower level of abstraction led to the creation of many more codes and categories that not only complicate the analysis and but also blurred the focus of the study. This is one area for taking precaution while coding because it may be likely to be carried what Schilling described it as “drifting into idiosyncratic sense of what the codes mean”. (Schilling, 2006)

Such dilemmas may not be uncommon in the qualitative content analysis. In fact, in a quantitative approach, these may be avoided by setting such criteria like the mutual exclusivity of the categories as a necessary condition in order to avoid violation of some statistical procedures when dealing with a number of confounded variables (Weber, 1990). However, many researchers recognize that in qualitative content analysis the development of clear categories could be difficult and fuzzy boundaries between categories may be possible (Tesch, 1990). In other words, a body of text or part of it may belong to more than one code or category depending on the definition of the boundaries and content of the theme.

In this study, due consideration is given to ensure the consistency of the categories and at the same time maintaining the interrelationship between the categories. The coding of the sample text and the formative check of reliability for the category system were critical stages in the coding process since they provided clarity on the process itself and the redefinition of codes, criteria and their properties. The comparison of the definitions, criteria of the codes and categories against the research questions and the text material provided a better chance to re-examine the underlying assumptions of the coding process.

During the formative check of reliability, the coded sample text was once again read and each of the coded themes was checked for the appropriateness of its inclusion in its present code or category. The significance and the relatedness of the established codes in understanding and providing insight into the research questions were checked all the way in this stage. This rechecking provided further insights into the complexity of the process and an opportunity to fine tune and get better clarity on definitions and criteria in the light of the research questions, the context of the text and the interview questions. Sufficient consistency and reliability have been achieved at this stage to continue the coding of the rest of the material.

#### ***Coding the entire text***

Based on the coding rules developed and modified in the formative check of reliability, the remaining 75% of the text was coded. This stage of the coding process has been much easier and more structured. However, the coding at this stage also encountered at times some challenges of adhering to the initial coding rules established as new themes, concepts and relationships were discovered in the text. It required creating some new codes and also further modifications to the existing definitions to accommodate the new themes included into an existing code or category system.

Categories	Subcategories	Subcategories / Codes	Definition / Description ( inclusion and exclusion ) and properties	dimensions	Quotation ( Example)
Learning activities	Group learning activities	Observation	- Includes individual teacher making a visit to see how others are teaching to learn through discussions afterwards - Excludes performance assessment visits by heads of department	- Rarely occur - Negatively perceived	<i>"...But it is not formally possible and not common to go and observe a colleague teaching his students. We often refrain from such observation for fear of evaluation and negative criticism...."</i> ( I1.14)
Socio-cultural context	Society perception		This includes perceptions , opinions and feelings held by members of the society towards teachers and the teaching profession as expressed by the teachers	biased	<i>" ... In general, as the bias towards the teaching profession in the society is high, the teacher education programs could not instill a sense of commitment to the profession."</i> ( I 2 . 131 )
TVET Teacher competence	Technical competence	Industrial experience	Included in this code are experiences of TVET teachers in industries and businesses in a form of paid work or practicum to acquire practical experience to develop competencies	- limited skills - highly needed / demanded	<i>" .. More involvement of teaching staff in research, design and production in relation to the industry and use of the experience from such activities into the teaching process would enable develop necessary competences."</i> ( I 3 , 228 )
Self directed learning	Self assessment	Reflection	- This code includes individual teacher own assessment of the result of a self-directed learning process in terms of planning , strategy development , implementation and evaluation of achievements of learning goals.	- significant	<i>"...Through my effort, I am now a better teacher than at the beginning. I constantly try to look back and reflect on my experience and learning in the past semesters and make improvement. I think reflection plays a significant role as source of development. But the practice of reflection as such in teams or in large group is uncommon."</i> ( I 3 , 160 )

**Table 21 Examples Descriptions, properties and dimension of Categories**

Effort has been made to code the text consistently in a relatively regulated pace. This approach of coding helps to avoid inconsistency and the frequent temptation to change or violate the coding rules because of too fast or too slow speed in the process in coding. Miles and Huberman (1994) and others alert researchers that not only the speed of the coding process influences the consistency and the depth of the coding but also coders' understanding of the categories and coding rules may change subtly over the time, which may lead to greater inconsistency. (Weber, 1990)

##### *Summative check of reliability*

After the entire text has been coded, a check for consistency was made again for all the categories and their elements. All the data grouped under each of the categories were examined for their consistency and reliability. Some categories and codes were subsumed and others were split depending on the content of their theme in relation to the research questions.

This summative check also helped to further refine the category system by considering the whole picture of the data. Regrouping of codes, subcategories and categories were also done to align the data to a category system that fits most to the research question and the context of the material. Relationships among categories were explored and categories were subsumed into core categories and under four broad thematic areas. These thematic areas: *The teacher as an adult learner and professional, the context, the process, and the content* of the TVET teacher learning and professional development. Such categorization paved the way for the next stage in the data analysis process: the presentation of results and their analysis in terms of the research questions and objectives.

## **4.4 Summary**

The research objectives and the types of the research questions implied an exploratory nature of the research. As the research attempts to uncover in-depth understanding of the TVET teachers' perceptions, beliefs, individual learning experiences, process, and contexts as well their reflections, a qualitative inductive research approach deemed suitable and is adopted for the attainment of the research objectives.

The data collection method chosen was a qualitative in-depth interview method (Kvale, 1996; Loftland and Loftland, 2002; Boyce and Neale, 2006). One-on-one in-depth interviews were conducted with twelve TVET teachers selected from four TVET schools from Addis Ababa

and Adama cities in Ethiopia. Responses of all the twelve interviews were recorded on a digital audio recorder. The interview transcription was done following the denaturalization approach (Oliver et al. 2006), where all the responses were depicted verbatim.

The data obtained from these interviews were analyzed using the Qualitative Content Analysis method (Mayring, 2000a; Bryman, 2004). The inductive category development procedure, as formulated by Mayring (2000a) is used in this study. An ATLAS.ti<sup>®</sup> V5.0, a Visual Qualitative Data Analysis and Knowledge Management software, is used for the coding process of the transcribed text document. The unit of analysis used in the coding process was a theme (Minichilo, 1990). The content of the text is then worked through by using the definition of codes and categories were developed in a tentative and step-by-step iterative procedure to ensure their reliability.

Based on the initial criteria of definitions and descriptions, 25% of text material was coded during the preliminary stage of the inductive category formulation. A formative check for reliability based on the research questions and initial definitions and criteria were made. Then the whole transcribed text was coded and summative check for reliability was conducted. At the end of the process, fourteen major categories under four thematic areas were identified. The four thematic areas are the PROCESS, The CONTENT and CONTEXT of the teachers' learning and professional development, as well as INDIVIDUAL teacher as a learner and professional.

The presentation of empirical results of the research and the subsequent analysis of the results were carried under each of the categories. The relationships between each of the categories are explored in constructing an understanding and developing responses for each of the research questions under investigation. The empirical results obtained were compared with the relevant theoretical frameworks from the body of literature, and other empirical research results from different contexts. The findings of this research were also analyzed with respect to the different international practices and the national educational policies, strategic plans and reform programs being undertaken in Ethiopia. The empirical results obtained and their analyses are presented in chapter five.

# CHAPTER FIVE

## PRESENTATION OF EMPIRICAL RESULTS

### Introduction

The empirical results presented in this chapter are obtained from the analysis of the data of the interviews of the TVET teachers. These data were analysed following the procedure of Qualitative Content Analysis as discussed in chapter four. The data were sorted and grouped into various codes, sub categories, categories and major categories. At the end of the categorization process, fourteen major categories were identified each with its own sub categories. Furthermore, these categories were collated under four thematic areas for presenting the results in a coherent and systematic way. The main thematic areas are

- The TVET **teacher** as an adult **learner** and **professional**.
- The TVET teacher learning and development **process**.
- The **context** of TVET teacher learning and professional development.
- The **content** of TVET teacher learning and professional development

Table 22 shows the four thematic areas and the fourteen categories obtained using the QCA procedure. Accordingly the empirical results for each of the categories are presented in this chapter.

<i>Thematic areas</i>	<i>Major Categories</i>
<i>The individual teacher as a learner and professional</i>	<ul style="list-style-type: none"> <li>• Self-perception as adult learner</li> <li>• Self-perception as Professional</li> <li>• motivation to learn</li> </ul>
<b>The process</b> <i>of teachers' learning and development</i>	<ul style="list-style-type: none"> <li>• Self-directed leaning process</li> <li>• Individual learning activities</li> <li>• Group learning activities</li> <li>• Teacher development programs</li> </ul>
<b>The Context</b> <i>of teachers' learning and development</i>	<ul style="list-style-type: none"> <li>• Socio -cultural factors</li> <li>• Economic factor</li> <li>• Reforms in TVET</li> <li>• work environment</li> </ul>
<b>The Content</b> <i>of teachers' learning and development</i>	<ul style="list-style-type: none"> <li>• Technical Competence</li> <li>• Methodological Competence</li> <li>• personal / social Competence</li> </ul>

**Table 22 Major categories under each thematic area**

## *Chapter 5 Presentation of Results*

In the first part of this chapter, the empirical findings with respect to the research question about teachers' own perception as adult learner and professionals are presented. Teachers' own perception about themselves as adult learners, and as a professionals are discussed. The factors influencing their motivation to learn and actively pursue professional development activities are also presented. The implications of these factors to their learning and development are also included.

The second part is the summary of the main empirical results on the learning process and activities undertaken by the teachers. The research results on how the teachers engage in individual and group learning and professional activities are presented. Main issues presented include the self directedness of the teachers in their own learning, the learning activities at work places, and group learning activities. Teachers' reflection on the influence of their teacher education and professional development in their pre-service and in-service programs are presented.

The empirical findings related to the contextual factors that enhanced or hindered the learning and development of the TVET teachers are presented in the third part of the chapter. Particularly results related to the contextual factors including the socio-cultural, economy, work environment as well as Reforms in the TVET system are included.

The last part of this chapter discusses the empirical results related to the identification of competences that the TVET teachers consider as important for their own learning and professional development. It also presents the findings related to the factors that inhibit the teachers from acquiring competences that are necessary for their learning and development. The results in this last part are summarized in three competence categories: namely technical, methodological, and personal / social competence. A list of competences that are identified by the TVET teachers to further enhance their methodological, and personal and social competences are also presented.

## 5.1 Teachers as Adult Learners and Professionals

### 5.1.1 Self –Perception as a Learner

The teachers reflected contrasting views regarding their perception of themselves as a learner and as a professional in their work place. Their responses are collated under the self – perception category.

In relation to the question how the TVET teachers perceive themselves as a learner, most of the teachers interviewed found it *difficult to readily perceive themselves as learners* and do not continually engaged in learning and development activities as “learners”. Furthermore, most of the respondents preferred not to be perceived as a learner by others, including their colleagues and students. They reasoned out that claiming *or being perceived as a learner* may lead to being seen as a *less competent* person by colleagues and others which negatively impact on their self image. A respondent described the dominant perception as follow:

“Expressing own lack of knowledge and skills may result in friends and colleagues undermining you. Each one of us here seems to fight against a possible embarrassment.” (I.3, p. 202)<sup>25</sup>

Most respondents agreed that the perception of teachers *not perceived as learners*’ is also widely espoused by the society at large. A respondent expressed his view on the society’s perception as follows.

“I think it is a deeply rooted attitude that is upheld in our society regarding adults. Adults are considered as one who knows what is right and wrong, what is important and not important. The learning of new things and practices by adult people are not often expected. And it is even more so when it comes to teachers.” I.5, P. 303

Most respondents agreed that irrespective of the individual perception as a learner or not, learning and development may happen as they are engaged in teaching process. Most acknowledge they do learn and develop *to varying degree* at their workplace and beyond. Their learning and development often happen mainly *unintentionally* and as a result of their

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<sup>25</sup> The responses of the interviewees were coded by the letter, I, followed by the particular paragraph number the quotation is found in the primary document. For example, I.3, p 202 refers to the response of Interviewee number 3 and the quotation is located in paragraph number 202 of the transcribed text.

teaching *experience*. They emphasised that own perception, as a learner or not, may *not necessarily be a barrier for learning and developing in the workplace*.

"In the process of teaching [...] I just find myself doing things differently and notice that I have done it better than the previous time." I.5, P.294

Many of them acknowledged the significance of learning and developing themselves but practically the circumstances in their workplace inhibits the opportunity to be engaged *actively* in learning and to seek out learning opportunities by themselves.

Many of the respondents described their difficulty to openly acknowledge their shortcomings *for fear of being embarrassed* in front their colleagues and students. Such *emotional stress* has limited their opportunity to learn as well as their readiness to learn. Most teachers expressed that it is almost like a taboo to say "*I don't know this or that*" in front of their students. As a result, many teachers are far less open about their learning needs and remain passive even when opportunities are available to discuss learning needs. Such suppression of needs and emotions are believed to hinder their individual and professional growth.

Fewer respondents perceived themselves as 'learners' and seek learning opportunities to learn and develop in their workplace. They asserted that it is a matter of *personal attitude and initiative* that matter most to learn and stressed that perceiving one self as a learner or not is a matter of each person's perception. Accordingly, they stressed that those who dare to know more will learn more.

Some respondents pointed out that there is a relationship between the duration of the individual teacher's work experience and their motivation for seeking learning opportunities. According to the respondents, the willingness and courage to learn from one another is more observable in the junior than the senior teachers. Their responses indicate that relatively the younger staffs look for learning opportunities and want to learn more than the senior teachers. An example among such responses includes:

"I observe a degree of openness among the younger staff than senior teachers to learn new things from their colleagues, students and the like." I.1, P.28

A similar view is reflected in the response of another teacher

"The older staffs consider the discussion on subject matter as something against their established status as senior teachers and will avoid it as much as possible and would like to remain unchallenged and not be able to support the development of their colleagues." I.7, P.400

The differences in self-perception are explained in terms of length of service years or seniority may be explainable in terms of the level of their professional career development. The *phase of development* in a professional career may affect the motivation for further learning and development.

Many of the respondents expressed that their *self-perception* as learners may *change* if the circumstances become motivating in their workplace and contextual conditions change. Their responses also suggest that better conditions in their work culture and more openness among each other would have supported their active engagement in learning and development activities for their own benefit as well as to deliver better services for their students. Thus the respondents seemed to suggest that their self-perception is more of a function of external factors than each individual personality or learning style.

### 5.1.2 Self Perception as a Professional

Most of the respondents found it difficult to practically justify teaching as a profession and they perceive teaching as a *profession only in principle*. They attribute their perception due to such factors like the lack of professional qualification framework, current employment system, limited development opportunities and other factors.

Many of the respondents believe that teaching as a profession need to be recognized in practice and *entrance into the profession* should require teacher education and training before employment. The *absence of continuous training* on teaching skills and methodologies for the teachers (with or without initial teacher education) had negatively impacted on the perception of teaching as profession. Coupled with the lack of obvious *ladder of professional career development* as a TVET teacher, many found it rather easier to perceive themselves as technologists, engineers, or experts in their technical and vocational expertise areas rather than professional teachers.

The following two responses from the teachers illustrate their perception.

"In our Circumstance where people with out any type of teacher education or training become teachers at TVET schools, then I have a difficulty understanding it as a profession. Where is the point of teaching as a profession? If any one can be a teacher, then it is everybody's profession! " I.2, P.144

Similarly another respondent described a similar view on his uncertainty about teaching as a

profession.

“For me it is a challenging question to answer ... I could easily understand a technologist or an engineer’s professional development through experience or further learning. .... But for the teaching profession I could not clearly see that.” I.6, P.356

### 5.1.3 Individual Motivational Factors to Learning and Professional Development

The respondents mentioned a number of factors that affect their motivation to learn and develop in the profession as well as those factors which influence their attitude towards their work in general. The responses indicate a varying emphasis and priorities in terms of expressed motivational factors. However, most of them suggested a combination of extrinsic and intrinsic incentives in order to motivate and engage TVET teachers in to their learning and development so that they could deliver better services for students. Their responses to the issues of motivations are presented below.

#### *Extrinsic motivations*

The responses in general showed that there are *individual differences* as to what motivate or discourage their learning and professional development. All respondents agreed on the lack of attractive salaries and benefits in the teaching profession as compared to most other professions requiring similar qualifications. Particularly, they repeatedly described the widening gap in income and other benefits between those working in the industry and business firms after completion of their studies in similar institutions and field of study. Many respondents claimed that such extrinsic rewards are important to motivate them to deliver better services to their students and to be engaged in their own learning and development.

They claimed that current situations in their workplace do not provide these extrinsic motivating factors and hence limit their effort to be engaged in their own learning and development activities. Many of them believed that only the provision of extrinsic rewards as such may not necessarily bring about the motivation to learn and develop professionally. They focused on the need for a combination of different types of rewards. The following two responses illustrate these ideas.

“Increasing the salaries and other benefits will not necessarily guarantee that teaching profession will be attractive and that teachers could be engaged actively in professional development activities.” I.4 P. 283

"Initiatives to improve the situation should include adjustment of teachers' salary, employing teachers with teacher training, improving the teaching facilities at schools, continuous training and prospects for future development need to be in place." I.7, P.421

### ***Intrinsic motivations***

Some respondents argued that the issue of extrinsic rewards as less important and not decisive factors in influencing their learning and development in the profession. Amid the current limited extrinsic rewards, some respondents claimed that their own personal drive is the most decisive factor that motivates them to be engaged in learning activities. They gave more emphasis to the intrinsic motivation and *internal drive* rather than the extrinsic ones. The following responses illustrate that for some the teachers the sources of motivation to learn and develop are mainly based on their *own perception* of themselves and how they *would like to be perceived* by their colleagues and others.

"I want to be known as one of the best teachers in the school and get recognition for that first from my students and next from my colleagues. I want to be recognized as useful member of the school and the society at large. These factors keep me to sustain my efforts for self development." I.4, P.240

"For example in my case, it is my own willingness and effort to develop myself. It is a self - driven, own motivation to know new things that will sustain development..." I.7, p.394

The respondents further emphasised that the lack of intrinsic motivation, like recognition and autonomy, had hampered their learning and professional development. In particular, many of the respondents pointed out that by and large they perceive themselves as *unrecognized and under valued by the society*. Such emotional feeling of worthlessness has negatively impacted their motivation towards learning and better performance. Most of the respondents pointed out that such a perception by the society, not only affect their motivation, but also put a negative image on the teaching profession.

The respondents argued that the major factors influencing *their own perception* as well as *their desire* to engage in learning are strongly *linked to the motivational problems* at workplace and beyond.

Some of the teachers are wary of the relevance of learning and developing under these circumstances. The motivational problems mentioned by respondents that brought low morale

and hindrance to learning include , the economic conditions , society's perception of the teaching profession, their job characteristics, limited autonomy , school culture, among others. These factors are discussed in detail in different categories in this study. In relation to this a respondent said,

"In fact the society's negative attitudes towards the profession, the low living standard, and the lack of attractive career development have hindered development efforts of the many teachers and the profession. [...] When I can not see the reason for professional development or at least its benefits, then I do lose personal motivation to do it." I.4, P. 242

The responses also suggest that motivating teachers may involve not only providing rewards to teachers but the necessity for developing *collaborative efforts* among the TVET teachers, the school administration, government, and the society at large. The need to provide emotional support for one another by working in a group is pointed out as an intrinsic motivating factor that facilitates the learning and development of teachers.

"When teachers participate in development activities as a team, it provides encouragement and cross learning. Further upon implementation, they could help one another and all feel that they are not isolated in the development effort but part of a group." I. 11 P 589

Many of the responses also indicated that the *motivation to learn and better performance at workplace* are highly interrelated. The responses suggest better performing teachers are often more actively engaged in learning and development activities than others. They also argued that satisfaction at workplace will generate motivation to further learn and develop.

### **The need for Learning**

Many of the respondents agreed on the need for more openness to learn from one another and seek professional support from colleagues and others. Individual differences in perception of teaching as a profession and also about themselves as learners were evident. The sources of motivation that respondents suggested for learning and development are varied.

However, many of the respondents agreed on the need for the provision of further extrinsic and intrinsic motivations as to enable a better learning and development of the teachers and to bring about improvements in their services. They emphasized also on the importance of the readiness and self drive of each of the teachers at personal level. Individual commitment for learning and change is also stressed as an essential requirement for future learning and

development. The following responses illustrate some of these suggestions.

"On the TVET teachers' side, I think discharging their duties to the best possible standard, and being ethical and responsible is important. They need to engage themselves in learning and development activities throughout their service. Academic developments based on the merits of their performance should be taken in to account." I.2, P.153

"The teacher, as an individual, needs to have the discipline and internal motivation to learn and develop through out his career. That is not simple on the part of the teacher".I.11 P 584

## 5.2 The Process of Learning and Development

Many of the respondents answered that they have been engaged in different learning and development activities to a varying degree. These learning and development activities range from that of an individual self-directed learning to that of participation in formal teacher trainings and education programs organized by the TVET schools, teacher training institutions, and Universities and /or by the Ministry Education. .

The respondents' assessment of the relevance and effectiveness of their learning and development activities are also mixed. Some appreciated these learning activities and claim achieving learning goals while others are far less convinced of the impact of the trainings on their personal and professional development. Details of these responses are presented below in three categories: *self-directed learning process*, *group Learning activities* at workplace and learning in *teacher training and education programs*.

### 5.2.1 Individual Learning Process

Few of the respondents who described themselves as often engaged in self-directed learning process were asked to explain how they are engaged in this process. Not all of the respondents were able to describe their learning in an explicit process- based pattern about their learning process. Their responses, however, indicate elements of a self-directed learning process. These responses are grouped in three stages of the learning process: the identification of their needs, developing means (strategy) for learning and engaging, making own assessment of the learning outcomes.

### 5. 2.1.1 Individual Learning Needs Identification

Some of the respondents described that there are times in which they clearly identify their own knowledge and skill gaps in their day to day teaching activities and personally explore ways to bridge these gaps.

Many of the respondents acknowledged that they do learn individually but not so much by way of deliberate planning and explicit process for achieving specific learning goals. The *learning needs* described by the respondents are *closely related to the problems they encountered* in their teaching learning process and are characterised as immediate needs in their work place. The responses also indicate that the formulations of learning *goals* are often *short term and implicit* in nature. A respondent explained how his learning needs arise from the demands of his work as,

"I found it difficult to provide training for trainees coming from the industry. I am at times less confident in practical training sessions. Some of these trainees are more experienced and skilled than me. It would be more difficult if I do not acknowledge the skill gaps I have and tend to know everything."  
I. 2, P.115

Most of the respondents have not provided much evidence in their responses that illustrate earlier practices of a deliberate formulation of explicit, future –oriented learning needs and goals. This is not because of the absence of learning and development needs as most of the respondents recognized their professional knowledge and skill gaps in their responses. The self initiation and the willingness to be engaged in own development has been constrained by other personal, group and organizational factors. The issues of lack of motivation and career development opportunities as well as limited personal competence which are discussed in other sections of this research are mentioned as the reasons for the lack of proactive learning needs identification and the setting of clear learning goals and learning projects.

### 5.2.1.2 Individual Learning Activities

In self-directed learning process, the search for information on learning opportunities, and selection of appropriate learning strategy, and the realization of a personal learning plan to achieve learning goals are important steps in the process.

Despite the lack of clear individual learning plans and projects, the respondents have been engaged in a range of individual learning activities which support their learning and development to improve their teaching performance. For example, the following response illustrates the spontaneity of the arousal of a learning need, as opposed to a deliberate assessment and diagnosis of own learning needs, and the subsequent engagement in the learning activities.

"When I came across new knowledge or skill from other sources I want to try and learn by trial and error. I try to explore different possibilities to do a task and thereby I come to learn new things practically." I.7, P.395

The respondents described different individual learning activities that they undertook in the workplace and outside that helped them acquire new skills, knowledge and experiences. These individual learning activities include: reading, searching for information, observation, reflecting on own experience, trial and error, seeking support from others, acquiring experience by working in industries, participating in extra-curricula activities, and interactions with students, among others.

"I read not only what I am supposed to teach but generally in my field of specialization. I want to know advances in the field of engineering and technology as much as possible. I ask people, discuss with them, and also practice some of the new skills and techniques in my area. I keep in contact with my former students who are employed in the industry or run their own business." I.2, P.94

Most of the respondents underlined the limited resources and development opportunities at their TVET schools as a major barrier to widen their options for their learning and development activities.

### 5.2.1.3 Self Assessment

Some of the respondents expressed a link between their *positive learning outcomes* like new knowledge, skills or experiences, and *their own initiatives and effort* in engaging in self development effort. They described that these positive learning outcomes has resulted in their personal development and had impact on their teaching performance. A teacher asserted,

"Through time, I have developed my competences to be a better teacher. This is primarily due to my personal efforts to develop myself." I.5, p.293

However, the lack of clear plans and goals in their learning process has limited the assessment of the specifics of these activities and their achievement. A critical self reflection of the achievement of the individual teacher as a learner and the efficacy of the strategies used are not provided in the responses.

In relation to evaluating own learning and development , a respondent found it hard to describe his progress in recent times owing to little importance attached with gaining newer skills and knowledge at work place. He described it as

"It is difficult to describe my own development in the last years since there are limited opportunities and no visible effort towards the need for professional development." I.9, p.481

The respondents related the lack of individual- and group- based professional development programs, industrial or practical experience, research and project works in the school and the unsupportive work culture as main constraints for their individual learning activities.

## **5.2.2 Group Learning Activities**

The respondents described different group learning activities they undertook in their schools. The activities described by respondents include informal discussions, performing joint tasks like teaching material and examination preparations, sharing resources, exchange of feedback, team work, and getting personal supports from others. The extent of involving in group based learning activities varies among respondents.

Most of the respondents asserted that informal group interactions at workplaces a dominant source for their learning. Formal and planned group learning activities among colleagues are rare and the dominant work culture often does not encourages team work. By and large, all teaching activities are done in isolation and opportunities to come and work together are limited.

Though most of the respondents believed that group level learning activities to be important for their professional development, they seldom participate in such activities. Their responses also illustrate that there are limited efforts to be engaged in collaborative methods of learning. The following responses from two teachers illustrate this point.

"I interact with my colleagues informally and discuss various issues we faced during our teaching and share experiences. But I believe that in the school we have not made use of the huge potential for developing our selves through formal sharing of our experiences in teams and groups regularly." I.7, P.401

"I think reflection plays a significant role as source of development. But the practice of reflection on our practices as such in teams or in large group is uncommon." I.3, P.160

Many of the respondents mentioned lack of conditions conducive for group and team learning activities as limiting factors for their learning in their schools. The prevailing work culture in the TVET schools and the lack of resources are mentioned as the major barriers for group learning activities.

## 5. 2.3 Teacher Development Programs

The teacher education and development programs for the TVET teachers could be broadly divided into pre-service and in-service programs. The pre-service programs are initial teacher trainings offered by faculties of education in the universities and lead to the attainment of Bachelor degree in education. The in -service programs are usually courses offered to employed teachers to upgrade their qualifications or provide them specific training in their technical and vocational fields. The in-service programs range from few hour trainings or workshops up to six consecutive 10 – week summer programs to qualify employed teachers who have no bachelor degree upon employment. The in-service programs are conducted at universities and colleges, in schools, in factories and rarely in industries.

Respondents stressed that TVET teacher training institutions play critical role in strengthening or weakening the teacher learning and development. Most respondents claim that *admission* process to the teacher education programs, the dominant *teaching culture* in the teacher training institutes, and absence of TVET *schools' or teachers' need-based training* are hindering factors for teachers' development.

### 5. 2.3.1 The Pre-Service Programs

The respondents stressed that most of the students admitted to the pre-service programs lack interest in the profession and enrol as a last choice to retain their chance to continue their

tertiary level education. A respondent described the situation as follows.

"In most cases students with low academic achievements and no desire to become a teacher are enrolled in teacher education programs and later employed in the schools." I.9, P.502

The respondents acknowledged that the dominantly teacher-centred teaching methods in the teacher training institutes have not helped them in the development of essential skills for self learning and development. They also described the culture of these teacher training institutions as one where the student - teacher interactions are limited, passiveness is rewarded, and the teacher educators are sought as the ultimate source of knowledge. They pointed out that TVET teachers, particularly in the pre-service programs, have short training period, lack school practicum, and industry-based practical experience components. The following two responses are typical answers that most of the respondents gave.

"The teacher education programs should also include and give emphasis to practice teaching in TVET schools as a component in their pre service program, for example in the technical teacher education program." I.8, P. 468

"If these training institutions do not value the student and the teaching profession itself, it will be difficult to expect practically quality teaching from their graduates." I.9, P.510

### **5.2.3.2 The In – Service Programs**

The in-service programs are mainly used for upgrading TVET teachers' qualifications to a Bachelors degree level and other forms these programs are basically off- the- job training in various forms catered in different sites. Most of the respondents acknowledged that these programs, though fewer, are their main source for their learning and professional development. Most respondents have acknowledged that it is only through such programs that they were able to upgrade their qualifications.

However, most of the respondents expressed that these programs could have been more effective if designed and delivered by taking into account the needs and experiences of the TVET teachers and the contextual situations in their schools. Most respondents emphasised that often these programs are detached from the day-to-day practical problems at their schools and focus on the development of theoretical knowledge rather than teaching methodologies and other relevant competences. Respondents emphasized on the relevance of taking the teachers' situation and experience into account in the design and delivery of the in-service programs.

"If appreciation for the teachers experience and practical know-how are given emphasis, then it may motivate many teachers and accelerate their personal development. I.7, p.407

Most of the respondents mentioned that the existing weak link between the teacher development programs, the industry sector, and the TVET schools is the one of the reasons that limited the prospect of teachers' professional development both in the in-service and pre-service programs. They emphasized on the importance of building a collaboration among these sectors to the benefit of their learning and professional development, and as a result for the betterment of their students' learning.

***The need for improving the process***

The respondents put forward a number of suggestion that may help improve the process of their learning and professional development in the future. These include the need for teachers to be engaged in more self-directed learning activities, facilitating and strengthening group learning opportunities and the linking of performance assessment to learning and development needs.

"Teachers should also take the main responsibilities to develop themselves by using methods accessible to them. Personal enquiry to learn and develop through referring resource materials, peer discussion and active engagement in available professional development opportunities are also important activities teachers could do." I.10, P. 536

Furthermore, the respondents emphasized the need for the teacher training institutes to align their curricula to that of the TVET curricula and methods of delivery in both the pre- service and in- service programs. The respondents suggested that these institutes need taking into account the experience of the teachers and the demands at the TVET school teaching – learning process when designing and delivering their programs. The following response from a teacher highlights some of these suggestions.

"Teacher training institutes need to change their curricula in such a way that makes their training and education more relevant and practice-oriented. The trainings offered by these institutions need to take into account the experiences of the teachers as professionals. I.1, P.68

## 5.3 The Context of Learning and Development

The respondents identified a wide range of issues and factors in their immediate school environment and far beyond that have influenced their learning and professional development as a TVET teacher. Their responses are collated under the following categories: Socio-cultural factors, economic factors, *TVET reforms*, and working environment

### 5.3.1 Socio-Cultural Factors

All respondents recognized the influence of socio-cultural factors in their learning and professional development. Among the various socio-cultural factors discussed by the respondents are teachers' *social status*, *society's perception and beliefs*, and the *influence of religious teachings* on the current education system.

Many of the respondents agreed that the *social status* and the *society's perception towards the teaching profession* have been changing noticeably through time. They acknowledged that there were times in the past when teaching profession was respected. However, the respondents believed that currently the society has increasingly a *biased perception* towards the teaching profession and the teachers. They asserted that both the teaching profession and the TVET teachers themselves are not valued and respected.

Different reasons were expressed by the respondents to explain the low status and biased perception in their society. Most responses are related to the low income of the teachers and the lack of observable career development in the profession. Other reasons include impact of earlier cultural beliefs and superstitions about technical trades and craftsmen, teachers own behaviour and discipline, the teacher recruitment and training process, changing students' behaviour, work conditions and others. Moreover, the biased perception on the teaching profession is shared by many in the public including teachers.

A respondent answer shows how these circumstances contribute to teachers' leaving their profession.

"In fact the society's negative attitudes towards the profession, low living standard, and the lack of attractive career development have hindered development efforts of the many teachers and the profession, and these are among the main reasons why teachers change their professions." I.4, P.242

Some respondents described that social stigma and stereotypes associated with skill training in vocational and technical trades. A respondent expressed,

"In the past the status and value of the handicraft Workers or Artistry in this country were associated with a cultural stigma of being seen as members of a low cast." I.3, p.213

Though these attitudes are changing considerably, they are still barriers for the development and respect for TVET as well as the professionals in these fields including the TVET teachers. Many respondents claimed the fact that the religion –based education system, which was the main stream education till the mid of the 20<sup>th</sup> century, has affected current practices of teacher learning and development. In particular, the belief that mystifies the teacher and teaching has hindered the further learning of the teacher. It has at least influenced teachers' behaviour in seeking openly learning opportunities and affected the relationship between the teacher and their students. A respondent explained the influence this way:

"Acceptance of the teacher as an ultimate source of knowledge is recognized without doubt. Students who are passive, obedient and showing minimal interference with the teacher duties are highly valued. Probably these have been inherited from the religious teaching where the teachers are assumed to have a divine call for preaching and have their full authority as the source of knowledge and wisdom." I.3, p.204

Few respondents attributed that the behavioural and discipline problems of some of the teachers in their society as one of the reasons for the low status of the profession and teachers in their community.

## 5.3.2 Economic Factors

### 5.3.2.1 Agrarian Economy

The influence of the economic level of the country on the professional development of the TVET teachers has been discussed by the respondents. They pointed out that the dominantly *agrarian economy of the country* has limited the opportunities for technical and vocational students and the teachers to be trained in *industries and companies*. They asserted that the availability of fewer companies and industries as compared to the numbers of TVET students and teachers meant that mostly training in the TVET trades are conducted in theory and in school workshops. Most of the respondents have never *had any type of industrial or practical experience* in their field of study and often teach and train their students from text books. Thus, portraying the huge skill gaps the TVET teachers had and the need to bridge their skill gaps.

This circumstance raises the question of the fit between the demand of labour market, and the relevance of the curricula and as a result about employability of their trainees. The respondents recognized that, in the light of the continual advancement of technology in the world, the TVET teachers widening skill gaps in the technological areas demand their engagement in continuous professional development preferably in the industries and companies. Being in such economy, TVET teachers would find fewer opportunities to be trained in industries.

Moreover, the existing weak link and partnerships between the TVET schools and the industry severely limit their opportunity for professional development. The pre-service TVET teacher education programs do not have a compulsory industrial apprenticeship programs. Therefore, the nature of the economic condition has influenced negatively or has contributed to the hindrance of the learning and development of the TVET teachers. A respondent put the overall condition as follows.

"It would be important for the TVET teacher as well as the students to be linked to the industry in order to widen the opportunity to learn and develop the necessary technical and other competences like business skills, communication, marketing and the like. The problem in this regard is that there are fewer companies and industries and yet they are unwilling to support such apprenticeship programs." I.4, p.261

### **5.3.2.2 TVET Teachers Salary and Benefits**

The issue of teachers' salary and benefits have been discussed in relation to many of the questions. It is one of the issues that have been mentioned repeatedly by all respondents, though not to the same degree and effect. Most of the respondents believed that their monthly income as TVET teacher is low as compared to their services and to the salaries and benefits of others with similar qualifications earn in the industry and business sectors. The respondents asserted that the low salary and the absence of other benefits (like insurance to health and accident at work, allowances for housing, transportation) are among the major factors for the low motivation of teachers' further professional development. The low salary and benefit is also considered by the respondents as one of the prime reasons for others to perceive teaching as a low status profession and the lack of respect for teachers.

Many of the respondents claimed that the need to earn additional income has been a priority than focusing on professional development. They argued that there will be no reason to be engaged in learning or development activities unless the outcomes of these activities are well recognized and rewarded accordingly.

Many of the respondents appreciated the relative freedom or autonomy they had as a teacher with respect to the number of working hours per week and the flexibility they had to adjust their schedules. Some respondents suggested that this autonomy has created the conditions that TVET teachers could be engaged in teaching and other works outside their schools in order to earn more. At the same time, many of the respondents acknowledged that such additional jobs mean that the time they could have invested in their own individual and group learning at their school is lost.

### **5.3.3 Reforms in TVET**

All respondents agreed that the TVET sector in the country has shown dramatic expansions and developments in terms of the number of TVET schools, teachers, trainees and fields of training in the last decade. Guided by the national education and training policy and the TVET strategy, the sector is undergoing a huge reform programs. A component of this national TVET reform program is to change the initial and further trainings programs of the TVET teachers.

Despite the positive developments in the sector, many respondents cited the following facilitating and hindering factors that broadly relate to the national policy and implementation issues. They identified the following factors that support their learning and professional development: the implementation of a new TVET policy and the related increase in the provisions of teachers' practical training, the investment in TVET infrastructure, new TVET curricula development, opening of new programs and fields of training, and the attempts to link TVET training to labour market, and the like. The respondents said that such factors have a positive impact on their professional development.

On the other hand, many of the respondents mentioned the following factors as hindering their development or as having a negative effect on their motivation to learn: increasing workload due to reform, TVET students' admission regulations, employment of teachers with out

teacher training education, absence of TVET teachers' qualification framework and centralized curricula design process, among others.

All respondents agreed that the admission of students who are unsuccessful in their secondary school education to TVET schools has worsened the perception of the society towards TVET. These students do not join the TVET schools by their will and interest and that in turn has made the task of the TVET teachers more stressful and lowered their motivation for further learning. A respondent expressed the situation as follows.

"The fact that TVET students are those who are unsuccessful in their general school leaving examination, it gives a sort of feeling that these students are not challenging the teacher nor have little motivation for learning. This kind of situation does not help the development of the TVET teachers, instead it facilitate that they forget the knowledge they acquire in the university as there is no chance for applying it in the TVET School." I.9, p.481

Many of the respondents have argued that the employment of teachers without teacher education damage the image of the profession and create doubts on the relevance of teacher education and professional development. Most of the respondents stressed that the provision of continuous opportunity for professional development and the establishment of professional qualification standards for teaching positions will help motivate teachers to be engaged in professional learning and development activities. The following response supports the need for such a framework.

"There must be some framework to ensure that there should be minimum standards to become a TVET teacher than allowing any one to be a teacher on his own will. Otherwise, where is the point of teaching being a profession?" I.8, **P.466**

## 5.3.4 Working Environment

### 5.3.4.1 School Culture

According to the responses, the school cultures in the different TVET schools show similarities and share a lot in common. Some of these elements that define the dominant culture in the workplace of the TVET teachers are discussed.

One of the characteristics that define the dominant school culture in these schools is the way the teaching activity is perceived by the teachers, students and the administration. *Teaching in the TVET schools is considered as inherently a private individual activity rather than a shared, collaborative activity.* In most cases, the teacher conducts all activities of the teaching process in isolation with little or no feedback from colleagues and the administration. Lessons are planned and prepared individually; teaching and assessment of students work are conducted without support and consultation with others; and there is no formal way to monitor and assess the teacher's performance in a way that reflects his teaching activity. Helping and supporting one another is discretionary to individuals and is not part of the school culture. The following response illustrates part of the work culture of the TVET schools.

"There is no one to help or provide feedback on how I prepare my lessons, or how I am doing in the classes and workshops, how my student evaluation was fair and constructive and the like. The absence of these formal mechanisms in the teaching - learning process denies one a lot of opportunity to learn and develop." I.5, P.341

Some respondents also asserted that the work culture at their school as a microcosm of the larger society's culture. They contended that providing feedback on other's performance publicly is often a sensitive act and is at best avoided whenever possible. If feedbacks are provided then they should be quiet often not critical. The self concept of adulthood as one who requires little or no guidance or help from others is carried onto teachers' interaction among themselves and with their students as well. Most respondents acknowledged that working in isolation has denied them the opportunities to learn from others and share their experience to others as well. The respondents claimed that there are no formal systems and structures in the school which are designed to facilitate collaboration among the teachers. In fact, staff meetings are held occasionally and are often focused on administrative issues rather than on the core teaching learning process.

Another factor that respondents discussed in relation to their school culture is the growing problems in *work ethics and commitment*. Most of the respondents asserted that more members are being absent from school and only present for few hours in a week to teach. They recognized that such circumstance will also deny teachers of the possibility of learning and supporting one another in the schools.

Most respondents reflected that by and large their school culture does not often place significance to *recognize and appreciate high performances* of individual and groups. In most cases, new ideas and experimenting with new approaches in teaching are not given attention by other teachers and the school administration as well. The respondents believe the lack of appropriate recognition and support for good work discourages learning and development at their work place. A respondent described the situation as,

"I can hardly remember any one getting prizes for superior teaching activities, but I can count many who have been under much stress and negative consequences after performance assessments and evaluation." I.1, P.22

All respondents claim that teachers' *performance assessments* are not aimed at finding ways to improve the teachers' performance and the teaching learning process. The performance assessments processes do not often involve *discussions or feedback* on the performance results or possibilities for planning professional development activities as to correct and further improve performance. Performance assessments are done mainly to fulfil the administrative purposes. Most of the respondents claimed that performance assessments would have been one of the opportunities to identify their strengths and weakness and plan for future learning and development activities if carried with these objectives in their schools.

All respondents acknowledged the provision of *learning and development opportunities* on-the-job or off-the-job are limited. Many of the respondents asserted that developing teachers' capabilities in a *sustained way* is neither part of the TVET school culture nor a priority in the school plan. They claimed that professional developments are often understood and recognized by the achievement of a formal degree qualification from the university, and not as a continuous process in the profession. A respondent explained this condition as follows.

"There are fewer development activities in the school. And there are no obligations for taking part in professional development activities and as well no sanction if one decides not to participate. Irrespective of the lack of motivation from the school, it is often a personal initiative and willingness that draws some teachers to such activities." I.1, P 22

The teachers' responses also showed the limited extent of *open communication* and teachers' *involvement in school matters*. Many respondents agreed that they are rarely consulted by their heads of department or the school administrations on matters that would affect them. The respondents also underscored the lack of openness on the teachers' side about their practices and learning needs, even if opportunities are given.

Most of the respondents claimed that their initial beginning of work as TVET teachers and their subsequent socialization process at the schools were slow. They assert that similar practices are also present today in which the TVET schools have *no orientation, induction and socialization systems and procedures*. New teachers should find their own way to know about the school, their colleagues and students. The absence of such *support* impedes quick adaptation and the sharing of experiences from other colleagues that would help the teaching-learning process and development of the teachers. A respondent expressed this situation as follows.

"One prevailing problem which lies in the current TVET schools is that new TVET teachers employed are young and mostly with no work experience at all. As there are no proper induction and coaching or counselling support for these teachers, they face frequent problems with their students and the administration are observed. "I. 5, p.317

#### 5.3.4.2 Resources

Most of the respondents claimed that availability of resources to be one of the factors that affects their learning and development. The resources described by the respondents include *Books, machineries, equipments, work space, finance, time, information technology*, and the like.

Most of the respondents agreed that there is a reasonable workload in their schools but the *sufficient time* available for learning and development activities during the weekdays are not utilized due to competing priorities. A respondent explained it as,

"I could say there is a less work load here and good opportunity for focusing on the development activities. But the fact is that a considerable amount of the time in the week is spent on jobs outside the school. This situation limits the opportunity for the teachers to focus on their own school tasks and development activities." I. 7, p.402

Most respondents replied that the limited number of machineries and equipments in their TVET schools as one of the constraining factors for their own development. Some of training machineries and equipments are old models or dysfunctional, and do not help much in developing the required skills for the industry. Further more, the limited focus given to teacher development activities in their school plans and the lack of budget are other limiting factors for the teachers' learning and development.

### **5.3.4.3 Characteristics of the Job**

The respondents claimed that teaching in TVET schools has its own peculiar features that set it apart from teaching other academic subjects in secondary schools. These characteristics include the focus on skills development, intensive engagement in practical activities, close relation to the world of work, being dynamic and context specific, and its occupational orientation.

From their learning and development point of view, many of the respondents found that their job to be *monotonous, repetitive and offering fewer or no challenges* for learning new knowledge or skills. The respondents asserted that their students and themselves would have been more skilled and developed if these trainings are offered in industries and business firms. They argued that their professional development is hampered as they are limited only to offering school-based basic skill training for their students.

Many of the respondents consider themselves to be less competent in technology, engineering or business skills as compared to those professionals working in the industry and business sector. They attribute this difference in competences mainly to the characteristics of their teaching jobs at the TVET schools.

#### **The challenges in the context**

Most of the respondents expressed that the task of improving the image of the teaching profession and their professional prospects as a very daunting tasks, if not an impossible one. A respondent expressed that,

"The negative image associated with the teaching profession is a deep rooted attitude in the members of the society and therefore requires a lot of commitment and hard work to change that picture." I.1, P.57

Another respondent also emphasized on the degree of complexity to bring about change in the profession. The respondent said,

"But I am pessimistic about radical changes to come about in terms of recognizing teaching as a noble profession in a pragmatic way since there are a lot of factors and stakeholders involved in such process that any attempt to do so may provide a partial solution to the problem. I.4, P 287

Many of the respondents suggested that economic conditions of the TVET teachers, in particular their salary and benefits, needed to be improved as to enable them to live and concentrate on their teaching activities. In fact, many of them believed that the changes in salaries do not guarantee the improvement of their professional development and their teaching services. Changes in wide range of areas of the context are required to bring an impact in enhancing and sustaining the learning and development of the TVET teachers. These included the change in the biased perception of the teaching profession by the society, better pre-service and in-service training, supportive school structure and cultures, strong linkage between TVET with the industry and economy, and stronger standards for teaching qualifications are among those suggested by many of the respondents. The following responses describe some of these suggestions for improving the contextual conditions.

"...initiatives to improve the situation should include employment of teachers with teacher training, improving the teaching facilities at schools, continuous training and prospects for future development need to be in place." I.7, P.421

"We should bring change in the culture and structure of our schools and in the teacher training institutes towards one that promote and facilitate the learning of the teachers. A culture which rewards those who learn and develop and that which discourages others who do not." I.5, P 304

## **5.4 The Content of Learning and Development**

The interview question on the content of the teachers' learning and professional development was intended to identify which skills, knowledge and experiences are found relevant for enhancing their professional development. It was also meant to prompt and identify which competences might have helped them to enhance their learning and development and which competences are needed to be developed for betterment of their service as well as personal development in the future. The responses are grouped into three broad categories: Technical competences, teaching methodology competences, and personal and social competencies.

## 5.4.1 Technical Competences

The technical competences included the different types of knowledge, skills and experiences the respondents expressed as essential to their teaching and professional development. They focused more on the competence areas that they lack and also on those which need more nurturing in their particular technical and vocational subject matter areas.

Most respondents believed that they have good theoretical knowledge in the subject matter they teach but not confident in their practical or technical skills. Owing to the lack of practical training in their teacher education and subsequent years, they identified the lack of technical skills and industrial experience as a major shortcoming in their teaching and personal career development. The following responses from two teachers illustrate their view.

"It would have been better for my students and for me if I had an industrial experience as I will be a better skilled and confident teacher." I.6, p.360

"It would be difficult to train people for the industry by a trainer who himself has never been in the industry or do not know well about it." I.9, p.492

All respondents pointed out that the absence of a compulsory apprenticeship period during their teacher training programs at university and even afterwards have denied them the opportunity to learn and develop technical skills from the real world of work at industries and companies. They pointed out that the TVET teacher programs still have not included apprenticeship but believe the importance of its inclusion for the betterment of TVET teachers' profession. They stressed also on the need for a stronger link between the curricula in the teacher education programs with the curricula at the TVET institutions. Some of the respondents expressed the difficulties they faced in implementing the TVET curricula due to their limited technical skills.

"The current national TVET curriculum dictates that 70% of the total training time to be allotted for practical works and 30% is for the theory part. In fact the lack of resources and technical competence by the teachers has limited its implementation accordingly in most TVET schools." I.1, p.45

## 5.4.2 Methodological Competences

This category brings together the responses the teachers provided in regard to their teaching knowledge, skills and experience as related to the actual planning, preparation, delivery, and assessment of theoretical lessons and practical skill trainings to their TVET students.

Most of the respondents claimed that the emphasis of their previous professional development opportunities was mainly on the development of their technical competence.

One respondent expressed,

“A continuous training in general pedagogy and subject matter teaching Methodology is really what we missed here in the TVET schools. In the last several years, I have not attended any development activity or training for developing my teaching skills. I.2, P.104

The importance of including a practicum component as part of the university teacher training program is stressed by most of the respondents. Despite the existence of such practices in elementary and secondary school teachers training programs, the technical teacher education programs have not yet included this relevant component. A respondent said,

“Until now, the Technical teacher’s education programs do not have school practicum component. The technical teacher education teaching practice is limited to peer-teaching while the primary and secondary education teachers have programs to practice their teaching in different schools.” I.1, P. 69

Many of the respondents expressed their concern on the lack of teaching skills training for those TVET teachers who are employed without teacher education. They also stressed that the provision of teaching methods and teaching skills training would facilitate their development and further enrich their competence as professionals.

## 5.4.3 Personal and Social Competences

This includes those competences the respondents believed to be critical to their professional development as an individual professional as well as those relevant in dealing with their colleagues, students, and different members of their communities.

The respondents emphasised that it is primarily the willingness and personal commitment of the individual teacher that is critical to initiate and sustain learning and development among teachers. At the same time, they expressed that the development of essential skills to motivate

others in supportive culture is relevant to their learning and development process.

"It is important to ensure that a culture of support is in the school if teachers are to be encouraged to learn and develop rather than fear for being identified as incompetent. I.6, P.365

Many of the respondents argued that technologists working in the industry are likely to develop better personal and social competences than the TVET teacher in the schools. Hence they believed that working in real situations, for example in the industry, may help them develop these essential personal and social competences. As one respondent expressed it,

"Competences in problem solving, communication, team working, decision making, and the like would be better developed by the technologist in the industry than the teachers at TVET School." I.7, p426

The respondents pointed out social competence, for example for interaction and collaboration activities, as important element for supporting their learning and development. Although such group works and collaborative activities are not often carried out in the TVET schools, the gaining of personal and social competences could help to improve the current situation. Hence, they stressed the need to build and nurture the required competences in building and performing in teams and groups.

"More emphasis should be given to team development at school compounds rather than the individual based development activities. When teachers participate in development activities as a team, it provides encouragement and the cross learning. Further upon implementation, they could help one another and all feel that they are not isolated in the development effort but part of a group. Sharing of experience and supporting one another could be easily facilitated in a team setting." I.11, P.589

Many of the respondents further identified practices like sharing, reflecting on experiences among teachers, building networks and partnership with professionals in the industry and business as relevant activities to their competence development.

### **Future learning and development needs**

To summarize, the respondents identified a number of competence areas that they believe are important for their professional development. They identify skills, knowledge and experiences which are considered essential but which they have limited opportunities to develop and use them. These areas of competences are interrelated and at times overlapping in order to classify them strictly in one or another category.

In terms of the technical competences, the teachers stressed on the learning and developmental needs both in the contents of the subject matter they teach as well as in their practical skills. Many of the respondents believed that their technical competence as technologist need a significant improvement as to bridge the gap between what they actually train their trainees and the skills demanded in the industry. Like wise, they emphasised also on the need to develop personal and social competences that help them in their efforts to develop themselves and support others. The following are some of the responses that indicated these needs.

"The practical skills (or technical competences) of current teachers are not convincing because of their lack of industrial training and hence the technology and engineering programs should include industrial attachment programs as mandatory for graduation." I.10, P.554

Stressing on the relevance of practical experience to the teachers in TVET, a respondent said,

"I think a TVET teacher should have the relevant industry experience for few years in the industry before engaging in the teaching profession." I.4, P.265

As the focus of this research is on the improvement of the teachers' development as professionals, the need to strengthen all components of competences that the profession demands is important. Further development of the technical, the methodological and social and personal competences need particular attention as they are identified by the TVET teachers as the major missing components in their education and training.

The results also show the specific need for the development of methodological, personal and social competences. These competence development needs are summarized and presented into in two categories as shown in Table 23. The Classification used to present the identified competences needs as methodological competence or social and personal competence may not be clear cut. Since a set of skills that are essential for the development of methodological competence, for instance, may be useful in the development of interactional or social skills and vice versa.

Competence Category	Competence areas for	Description of the needs
<b>Methodological</b>	Curriculum development	<ul style="list-style-type: none"> <li>- for developing and revising curricula based on the contextual situation of the students and school.</li> <li>- for taking an active role in developing the curriculum of their own field in co-operation with others professional colleagues.</li> </ul>
	Facilitating learning	<ul style="list-style-type: none"> <li>- for developing own knowledge and experience about various methods for motivating , facilitating and supporting students learning</li> <li>- for using student - centred or learner –centred approach in the teaching and learning process</li> <li>- for using different teaching and facilitation methods appropriate to the specific situation</li> <li>- for promoting students self-directed learning and self-evaluation.</li> </ul>
	Planning and implementing own learning process	<ul style="list-style-type: none"> <li>- to be able to identify professional development needs , setting realistic personal learning targets to develop teaching methodology and didactical skills and knowledge</li> <li>- to be able to evaluate and reflect on the learning processes, own professional development as a teacher and facilitator of learning.</li> <li>- to be able to develop competence for self-evaluation and reflection</li> <li>- engage sustainably in keeping abreast with the development in own professional field</li> <li>- identify , search and access various teaching learning materials for own and others learning and development</li> <li>- use available information and communication technologies for own and colleagues’ development.</li> </ul>

<b>Personal and Social</b>	Interpersonal relations	<p>Development of competences to be able to</p> <ul style="list-style-type: none"> <li>- communicate and work effectively in work environment and contribute constructively to interpersonal relations,</li> <li>- work effectively in teams and learning circles</li> <li>- develop team leadership and acquire conflict resolution skills</li> <li>- apply selectively appropriate strategies for improving interpersonal relationships in the workplace</li> <li>- accept and forward constructive criticisms to improve relations at workplace</li> </ul>
	Cooperation and interaction with colleagues and other professionals	<p>To be able to</p> <ul style="list-style-type: none"> <li>- actively engage, and contribute in group discussions and learning activities and team work</li> <li>- co-operate with colleagues and engage in the evaluation of own and others teaching learning process</li> <li>- develop, implement and assess professional development activities in group settings ( collectively)</li> <li>- work and learn with others and support others development through sharing and closer collaboration</li> <li>- identify and participate in relevant professional learning teams , and networks within and outside the school for professional development</li> <li>- use extensive information resources to contribute to group and team work</li> <li>- support colleagues' learning and development by providing relevant up-to-date information in own field of study</li> <li>- contribute to the development of knowledge and skills in teaching learning processes through own learning and development</li> <li>- critically assess and forward feedback for improving the school administration, the educational policies and practices.</li> </ul>

**Table 23 Identified competences areas and their descriptions**



# CHAPTER SIX

## ANALYSIS OF EMPIRICAL RESULTS

### Introduction

This chapter presents the analysis of the empirical results obtained in order to gain a further insight into the learning and development of the TVET teachers. The analysis was carried at different levels. In the initial stage, the empirical results obtained in each of the fourteen categories were analysed to uncover any type of relationships between them. In this regard, the results obtained in one category are compared and contrasted with respect to the results of the other thirteen categories in search of any type possible interdependence that could be established between them. This process revealed a number of relationship among the different contextual, process and content factors which influenced the learning and professional development of the TVET teachers.

The next stage of the analysis of was carried by comparing and contrasting the empirical results as well as the identified relationships with the relevant theories and practices related to teacher education and professional development. This was also carried for each of the categories and the thematic areas. This step provided further understanding and interpretations of the results. Some of empirical results that are in agreement with the theories and practical experiences found in the literature while some of the results could not be readily explained in terms of the established theories which often are based on contexts and experiences different from that of the TVET teachers.

Further analysis was made in finding out the implications of the results obtained in terms of improving the TVET teachers learning and professional development at individual, group and school level. This chapter contains the synthesis of these results, comparisons and contrasts along with the relevant findings drawn from the analysis.

## 6.1 The TVET Teachers as Adult Learners and Professionals

### 6.1.1 TVET Teachers' Self –Perception as Learners

A number of writers in educational science have emphasised the importance of taking into account the underlying assumptions and perceptions of the learners for facilitating learning and development. Borko and Putnam (1996b, p674 in Kawkman, 2003) have asserted that active and constructive learning is heavily influenced by an individual's existing knowledge and beliefs and is situated in particular contexts. Hence, it is significant to take into account teachers' own perceptions about their profession and themselves as adult learners. The knowledge of the self perception, beliefs and attitudes of the TVET teachers is also an important element in the design and implementations of teachers' learning and professional development programs. (Lawler and King, 2003; Lawler 2003)

In response to the research question: *How do TVET teachers perceive themselves as adult learners, and as professional?* Most of the TVET teachers responded that they do not readily perceive themselves as learners. They found it difficult to perceive themselves as a learner owing to the fear of embarrassment and the avoidance of emotional stress, and the need to maintain a *positive* self image and respect.

Lawler and King (2003) stressed that the perception of teachers as adult learners and considering their professional development as adult education imply the development of diversified learning activities and opportunities that take into account their needs, motivation and context. Accordingly they argued that professional development is basically an adult education and the participants need to be considered as adult learners.

The perception of the TVET teachers as not active learners has been influenced by a wide range of factors. Such a perception also has a wider implication to their personal learning and development as well as to the design of the professional development activities and teacher preparation programmes.

The empirical results of this research have indicated that the perception of the society regarding adults and the role they are expected to play in their community stands contrary to

### *6.1 The TVET Teachers as Adult Learners and Professionals*

being perceived as a learner. Instead, adults are perceived as one who needs little or no guidance in their daily work and life, and all the leanings necessary have been assumed to be acquired in the process of becoming an adult. This assumption extends to TVET teachers who are considered by the society to have acquired the knowledge and skills to play their role in the society as well as in their workplace. In addition factors like school culture and the wider work environment, as well as the initial teacher trainings and professional development experiences have impacts on shaping the perception of the teachers.

A further analysis of the empirical results also showed that the perception of TVET teachers as learners could influence their motivation to teach, their self-directedness towards their own learning and development, and their attitude towards their profession.

As the empirical results also suggest the absence of self-perception as a learner by the teachers leads to the condition where much of what may be learned often is incidental or unintentional and learning and development initiative will usually be externally – driven rather than self initiated and managed, since one's self perception and beliefs strongly affects own motivation to learn.

Therefore, the knowledge about teachers' self-perceptions and how they see themselves in learning environments is crucial in ensuring their own knowledge and skills development (Kwakman, 2003; Ryckmann, 1993, p.106). This perspective needs to be taken into account by the teacher educators and hence teachers' self-perception as adult learner is a relevant aspect to be considered in teachers' learning and professional development process. (Lawler and King, 2003, p.12)

Based on the theoretical discussions and the empirical results, it would be essential to give focus in developing the self-perception of the TVET teacher as learners in order to support and enhance their learning and professional development. It is a diversified, multi-level effort that may help bring about such changes in perception in the long run. Research findings pointed out the significance of altering the negative self perception of adults in order to increase their motivation for learning and development (for example, Velez, 2006; Klein, et al. 2004; Weld, 1998).

Primarily this implies affecting teachers' beliefs and attitude towards themselves as learners and the perception of the society towards them as well. At individual level, it may require a transformative learning process, on the part of the teacher, in order to question and change some of the long held views and perceptions. For such transformative learning to take place, it is essential for the teachers to come across new experiences and learning opportunities and engage themselves in critical thinking and reassessment of their own perception and practices.

At institutional level, the role of the TVET schools and teacher training institutes in influencing the perception of teachers is important. In these institutions, it would be essential to have an integrated approach to teachers training and professional development that is based on the premise that teachers are adult learners and all learning and development activities need to be based on the adult education principles and approaches.

The overall effort to bring changes in teachers self-perception requires not only the active involvement of the teachers in such process but also others who directly or indirectly involve in the construction and deconstruction of this perception. Furthermore, various factors at their work environment, in society, in the teacher education and training institutions, and the education system need to be taken into account.

At systemic level, the implications of the empirical results suggest that the importance of individual perception as learner and demand teachers' active involvement in the process of changing their own perception. Hence it signifies that the design of teacher learning and development programs should be based on the constructivist approach to teacher education where transformative learning should be the goal of professional development. (Cranton and King, 2003)

### **6.1.2 TVET Teachers' Perception of their Profession**

As Weld (1998) has stated the lack of recognition of teachers as professionals and the absence of adequate professional development opportunities are among those factors which highly impact on teachers' motivation and morale.

In general, it is expected that the perception of teaching as a profession to differ among teachers, teacher educators, policy makers, and the members of the society at large. These varying perceptions are influential factors on how teachers are prepared and how their

### *6.1 The TVET Teachers as Adult Learners and Professionals*

professional development is promoted in the education system (Calderhead and Shorrock, 1997; OECD, 1990).

As the empirical results of this study show, most of the teachers interviewed perceive teaching not as a profession. Despite the fact that the teaching is claimed to be a noble profession in many of the discourses at their workplace and beyond, the TVET teachers found it difficult to perceive themselves as professionals. Owing to a number of factors that influenced their perceptions, the teachers also clearly indicated that their perception is also shared by members of their society.

Teachers' perception about themselves and their profession affects their daily practices and influence their desire to learn and act in different ways. If they believe that their profession is not worthy and lack belongingness or commitment to it, this will severely affect also their students' achievement as well as their motivation for further learning and development. On the other hand, the perceptions on the role of teachers and their profession are culturally and socially embedded, and teachers' own perceptions of their role and profession affect, and are affected by, the conception of teaching that is prevalent in their societies (Goodson, 2000). The results from the data clearly indicate a similar result in which the society's perception about the teachers and their profession has played a significant role in affecting teachers' perception.

As Owens (1987) stated teachers need to be perceived as "people of achievement, professionals who are influential in their workplaces, growing persons with opportunities ahead to develop even greater competence and a sense of accomplishment" (p. 104). However, the biased perception of the society towards the teaching profession, economic problems, the school culture, absence of continuous professional development opportunity, are considered to be the major factors that have influenced the TVET teachers' perception towards teaching not as a profession. As a consequence, such perception held by the teachers has in turn affected their motivation to learn and actively engage in learning and development activities at individual and group level.

Actually, debates on whether teaching is a profession or not are found in many other countries and regions as well. (Hoyle, 1995; OECD 1990; Sato 1992; Strike, 1990; Runté, 1995). However from the perspective of teaching as a profession and the teachers as professionals, it will be imperative that teachers' professionalization need to be reinforced. One of the ways towards strengthening such a perception is through teacher professional

development programs. The reforms in the TVET sector and teacher training ( in- service and pre-service ) programs need to embrace a component of professional development that aim at creating conditions that enhance the teachers' active engagement in reconstructing their perceptions.

Walling and Lewis ( 2000) have shown that professional development schools could help the development of teachers professional identity in a more systematic , realistic , balanced view of the teaching process and teaching as a *career* rather than just a *job* .

Despite the critical role of teacher development programs, a further analysis into the responses of the TVET teachers shows that most of the teacher training program designs and provisions do not reinforce the perception of teachers as professionals. The teacher education in the universities often is not given the necessary attention and is often considered practically as a marginalized activity in these institutions. Such marginalization of teacher education programs in the universities were expressed in terms student enrollment to faculties of education, much focus on technical or subject matter study, and limited opportunity for school based practicum programs for prospective TVET teachers, among others.

Unless efforts are made on influencing the perception of teachers and other members of the society, reform programs in the education system risk failure. Van Driel *et al.* (2001), for instance, showed that part of the reason for the disappointing results of some education reforms in a number of countries are due to the failure to take teachers' existing knowledge, beliefs and attitudes about their profession into account when planning these changes. Current reforms in the Ethiopian TVET teacher education sector reflect much emphasis on the development of technical knowledge and skills of the TVET teachers as compared to teaching competences and other. The available development opportunities for the TVET teachers are almost exclusively focused on the acquiring of further technical skills and capabilities and not much on broader issues that may help promote teaching as a profession.

Evidently, the changing of teachers' and others' perceptions towards the teaching profession may not be accomplished only through the provision of training or opportunities for professional development. This will be over simplifying a much complex problem which rather requires a wide range of interrelated changes and reforms in the society in the longer term.

Hence, it is necessary to develop a systemic intervention in the provisions of teacher training and professional development activities in the university, at workplace and other settings to consolidate a positive image of their identity and profession. Such a systemic approach to influence and change the biased image of the teaching profession in the workplace and the society needs longer time and concerted efforts of many stakeholders in the education system and the general public.

Clearly as Cranton and King (2003) and Villegas –Reimers (2003) stated the development of effective and meaningful professional development strategies and activities that takes into account teachers’ beliefs, values and assumptions play a critical role towards developing a professional identity and openness for learning and change. But more importantly so, it is essential to note that changes in the perception of teaching as a profession may not be achievable by the teachers and the teacher development programs alone. It requires also the change in perception from the public to bring about a substantial change in this regard. The role of the teachers in influencing the perception of the public, for example through the provision of quality education as a result of improved professional development activities and opportunities, play a significant role.

Within the scope of this study, it would be important to focus on the implication of these results in terms of the learning and professional development of the TVET teachers. Improvement in TVET teachers learning and professional development, as part of the systemic approach to influence the perception of teachers, contribute to create recognition, self-esteem and motivation for learning and development.

It is also important to note that the biased perception of the society on the teaching profession is not limited to TVET teachers but it refers to teachers at all levels of the education system. The university students and graduates also reflect similar perception of the society. In this regard, the College of Education of Addis Ababa University, presented the perception of its students towards the teaching profession through a popular expression heard from them as follows:

“There is an erroneous notion in the saying that that ‘*anyone can teach*’. There is a popular saying among graduates in *Amharic*<sup>26</sup> [which literally translate to] ‘*if the worst comes to the*

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<sup>26</sup> *Amharic* is the official language of Ethiopia.

*worst, I can be a teacher'* portraying teaching as a profession that anyone picks up at last in case he or she fails in any other business or trade or "safety net". Such a wide spread misconception about teaching has an adverse effect on the attitudes of the prospective teacher educators, the existing school teachers as well as on the status of the teaching profession in the country" (AAU ,2008, P.6).

In this regard and in the context of the Ethiopian TVET system, aside from the rhetoric that take teaching as profession for granted, appreciation of the existence of these biased and negative perceptions need to be acknowledged. Furthermore, it is important to recognize that currently the biased perception towards teaching profession is the mainstream view rather than one upheld by few. Such recognition not only shows the dire need for the improvement of the perception but should also be a central consideration in the various reform and teacher development programmes.

Incorporating these perceptions in a vivid way in all the teacher development and reform activities may help teachers and teacher educators and others engage in critically thinking and reflecting on the ways and means to influence and change them. As multitude of factors have contributed to the construction of such perception, the change in this perception may not necessary come through intervening only in one area. Hence it is essential to adopt a holistic approach to the issue and consider it as one of the elements in the TVET teachers' reform agenda.

Perceptions held by teachers and the societies are not static but are subject to change under the influence of many factors and through time. Attaining changes in perception need to be taken as a long term process given the Ethiopian context in which improvement in such areas like the economy and teachers salary, professionalization of the teachers, and the socio-cultural factors may not be readily changed in short term.

### **6.1.3 Motivation to Learn**

The empirical results suggested low TVET teacher motivation and morale because of several factors. Motivation for learning and professional development needs both intrinsic and extrinsic elements that initiate and sustain learning behaviours among professionals. The need for both extrinsic and intrinsic motivation to improve the TVET teachers learning and professional developments are also evident from the results.

### *6.1 The TVET Teachers as Adult Learners and Professionals*

Most of the teachers agreed that provision of extrinsic rewards, particularly pay and other benefits, are necessary for ensuring a sustained motivation to learn and actively engage in professional development activities at workplace and beyond. The absence of extrinsic rewards, like salary, as compared to their expectation has been described as a major factor that impend their initiation for actively engaging in their work and their own professional development. However, motivation theories in particular that of Herzberg two-factor theory (Herzberg ,1959) suggest on the importance of distinguishing factors that contribute to motivation and those hygienic factors which may not bring motivation but may only reduce dissatisfaction.

According to the two –factor theory, the factors that bring about motivation arise from the intrinsic conditions of the job itself, such as recognition, achievement, or personal growth. Such motivators like the challenging nature of the work, recognition, responsibility give the individual positive satisfaction. On the other hand, the hygienic factors, like salary and fringe benefits, and job security do not give positive satisfaction, although dissatisfaction results from their absence. These hygienic factors are extrinsic to the work itself, and include aspects such as work rule and regulations, management and administration practices, salary , working conditions , and the like ( Hackman and Oldham, 1976).

Based on the two –factor theory, it would be essential to improve the extrinsic rewards for the TVET teachers, like the salary and other benefits, in order to reduce their dissatisfaction. But such action may not necessarily lead the TVET teachers to be motivated, to initiate and actively engage in their professional development. Since reducing the factors in the work which cause dissatisfaction do not translate directly into increasing their motivation, focusing on intrinsic factors that motivate teachers become more significant in terms of creating a condition for their learning and professional development.

Factors that TVET teachers attributed to the lack of intrinsic motivation in their workplaces include

- the absence of recognition as professionals
- being undervalued by the society
- the current work culture at the TVET schools
- their own perception of as a learner and professionals
- the absence of professional development prospective

Theories on intrinsic motivation also showed that peoples' curiosity to learn and develop resides basically in the individual themselves and the desire for acceptance by others; increased status and recognition, achievement of more responsibility and autonomy, and such other desires influence the behaviour of the teachers in the learning and development process. (Steven Reiss, 2004; Deci and Ryan, 1985)

Other intrinsic motivation perspectives (Deci, Koestner, and Ryan 2001) regard that when learners could see that they are valued, and what they learn make sense and is relevant for them, then they become intrinsically motivated. Teacher education and professional development programs that take into account these factors create motivation for learning. However, the results also indicate the lack of respect and recognition for TVET teachers' knowledge and experience in the teacher education institutions and the professional development programs they attended. Various studies (Wlodkowski, 1999; Deci, Koestner, and Ryan, 2001; Csikszentimihalyi and Csikszentimihalyi, 1998) showed that the creation of a learning culture and atmosphere that respect the learners, their experiences, values, and choices are critical factors that enhances the motivation of the learners. The empirical results also support these assertions.

In general, TVET teachers' low motivation to learn affects negatively their initiation and commitment in their learning processes and their overall performance in the TVET schools. Therefore, improving teachers' learning and development requires the need to motivate teachers and create learning conditions that favor individual as well as group learning.

Improvement of teachers' motivation is central to their increased professional commitment and development. But often the issue of motivating individuals and groups are far from simple and straight forward. On one hand, the complexity of the human nature and the dynamism of the factors related to motivation make the task of motivating teachers a daunting job for school administrators and others involved in the process. On the other hand, there are different expectations and goals among the teachers and it would not be possible to assume a set of predetermined factors to bring about motivation to all teachers. Nonetheless, it would be essential to focus on the extrinsic factors to reduce dissatisfaction and on the intrinsic factors that could motivate teachers.

School leaders, teacher educators and professional development providers need to pay due attention to the contextual situation in which the teachers are found in motivating teachers. In this regard, it would be important to

- pay attention to professional as well personal needs of the teachers
- participate teachers in decision making process in matters that affects their work and performance assessment : share leadership roles among teachers
- provide more autonomy and empowerment in the teachers' work
- recognize and appreciate teachers' work , and create a sense community and pride
- develop shared and challenging goals for teachers to aspire to achieve
- establish good communication between teachers and school administration
- provision of a professional teaching and working environment , and opportunities for professional growth
- provision of time and resources for collegial interaction , and reflection
- encouragement and reward for innovation, and better teaching

Still what may remains as a challenge is the uncertainty associated with the fact that all motivated teachers may not necessarily be actively engaged in the professional development of themselves and other colleagues.

## **6. 2 The Learning Processes**

### **6.2.1 Self-Directed Learning**

Research into self-directed learning has shown that adults undertake many learning projects out of their own initiatives and bear individual responsibility for planning, executing and evaluating their own learning activities. (Candy, 1991; Merriam & Caffarella, 1991)

The engagement of the TVET teachers in self-directed learning were explored through their identification of learning needs , setting learning goals and strategies , learning activities undertaken , and personal assessment of their learning. As the empirical results showed, the teachers provided evidences that illustrate their engagement in a self-directed learning process in a much limited way and often not as a result of a deliberate attempt to learn. The results

have also shown that these individual learning activities were often not planned and limited in scope.

The results from the data seem not to strongly support the ideas that adult learners seek more self dependency in their learning and development as they accumulate more experience at their workplace and in life (Knowles, Holton III & Swanson, 2005; Merriam & Caffarella, 1991; Brockett 1991; Brookfield 1993). In addition , many of the TVET teachers do not explicitly express their self-directed learning experience as linear and sequential steps, as described by some notable authors in the field of adult education , for instance by Knowles (1975) and Tough (1971).

However, most of the teachers expressed that there are limited individual efforts and self drive to actively engage and develop themselves through self-directed learning process. In most cases the teachers claim that their learning are unintentional rather than planned, and also their learning process are iterative rather than sequential. This result supports the non - linear, often unplanned interactive model of self-directed learning as suggested by other studies like that of Spear and Mocker (1984); Cavaliere (1992); McCrae & Costa, (2003), among others.

What may be evident is that self-directed learning of the TVET teachers may not be taken for granted only because of their adulthood and experiences. Other factors, beyond adulthood and experience, play important role in motivating and engaging in self-directed learning processes. Furthermore, in some cases when self-directed learning occurs, the process may not be explicit from the beginning to the end of the cycle.

Analysis into the results shows that different factors have influenced the teachers' initiation and motivation to be engaged in self-directed learning. Many of the teachers claim that their motivation to be engaged in self-directed learning have been hindered by such factors like socio-cultural influences , absence of recognition for learning efforts , low individual motivation to learn, the work culture that do not value individuals learning efforts , limited competence in self learning and enquiry, and limited access to information and resources.

These limiting factors emanate from both the individual teacher personal situations and characteristics, as well as from factors external to them. These results suggest the need to consider both the individual and the external conditions to enhance self-directed learning. This is in line with the study of Spear and Mocker (1984) in which they found environmental circumstances as determinants of self directedness and the importance of understanding a

learner's environmental circumstances in promoting self-directedness in learning processes. Also other studies have shown the importance of considering the learners characteristics and the learning context in understanding self-directed learning in adults (Merriam and Caffarella 1999; Baumgartner 2003).

In fact for some authors, the origin of self-directed learning is more a function of contextual factors than personality differences or individual characters (Candy 1991; Clardy 2000). From the significance of facilitating self-directed learning in the TVET teachers as one way of developing themselves individually and professionally, the empirical results show the need for an intervention to improve teachers learning and development.

Therefore, in order to promote self-directedness in the teachers learning and professional development both individual factors (like personal intrinsic motivation, prior knowledge, skills and experience) and contextual (work environment, colleagues, resources and other) factors need to be taken into account.

The work environments in the TVET schools play an important role in facilitating the self-directed learning of teachers. In this regard, Hiemstra (1982, 1985) and Brockett and Hiemstra (1985) stressed the following conditions which facilitate self-directed learning in schools

- Promote learning networks, study circles, and learning exchanges.
- Provide learning opportunities to further develop competences for self -directed learning (including the ability to diagnose learning needs , setting goals , selecting effective strategies , relating and collaborating with other teachers , and assessment)
- Recognize and reward learners when they have met their learning objectives.
- Provide opportunities for self-directed learners to reflect on what they are learning.

Similarly several studies (Ash 1985; Bauer 1985; Brockett and Hiemstra 1985; Brookfield 1985; Hiemstra 1982, 1985) have forwarded a number of recommendations regarding the role of teacher educators which could facilitate self-directed learning in the adult learners. The recommendations of these studies include the need to

- create an atmosphere of openness and trust to promote learning
- help learners develop positive attitudes and feelings of independence for learning, and encourage adult learners to view knowledge and truth as contextual, cultural

constructs, and to appreciate that they can act on their world individually or collectively to transform it.

- create a partnership with the learner by negotiating a learning contract for goals, strategies, and evaluation criteria.
- help learners acquire the need assessment techniques necessary to discover what objectives they should set.
- encourage the setting of objectives that can be met in several ways and offer a variety of options for evidence of successful performance.
- provide examples and experiences
- support that learners develop objectives, learning strategies, resources, and evaluation criteria once they decided upon a learning project.
- development of inquiry , critical thinking , decision making, and self-evaluation skills
- help learners locate resources.
- recognize learner personality types and learning styles.

Not only teacher educators and school principals could provide the support for teachers to be actively engage in their self directed learning, more importantly teachers themselves should also play these roles among each other in order to promote their learning and professional development.

From the perspective of teachers as adult learners and professionals, their continuous learning and development at individual level becomes a necessity. However, it would be also important to consider the collaborative nature of teachers' learning at work places and the impact of the work culture of their schools. In this regard, building and sustaining a work culture that value teachers' effort to learn individually and collaboratively is essential.

The role of teacher education institutions, both in the in-service and pre-service programs, is significant in terms of focusing their programs as to support the development of critical competences of learning on how-to-learn, and supports the teachers to be independent learners. Development of a range of social and methodological competences that support teachers' continuous learning and development through experimentation, critical reflection, and self assessment would be relevant.

### 6.2.3 Group Learning Activities

The recognition that learning is not only individual but also social in nature (Jarvis, 1987) is taken into account by many authors in the adult learning and education. As a result, both individual and group learning are also widely addressed in professional development approaches. There is a growing call for more collaborative learning in order to stimulate teacher learning and development mainly emphasising that feedback, new information or ideas do not only spring from individual learning, but to a large extent from interaction with other people. Group or collaborative learning also help the creation of a learning culture and building a community in which further learning is supported and stimulated (Hargreaves, 1997; King & Newmann, 2000; Jenlink & Kinnucan-Welsch, 2000; Lieberman, 1996; Little, 1993; McLaughlin, 1997; Moore & Shaw, 2000; Rosenholtz, 1989; Southworth, 1994).

The empirical results have pointed out that there are few group learning activities and opportunities in the TVET schools. Such limited involvement of the TVET teachers in collaborative learning processes impacts negatively on their own development as well as their students' achievement. The TVET teachers have characterized their current school context in this regard as a place where teaching is viewed as an isolated activity. Such a mindset in the school that inhibits the collaborative nature of the teaching obviously hinders group learning and development activities in these contexts.

The absence of collaborative learning activities, collegial support, shared commitment for each others' learning deny teachers the opportunity for learning and reduce shared understanding and development of common values. As motives and interests to learn and develop are "shaped or modified through interactions with other people" (Candy, 1991, p 199 in Kwakman, 2003), engaging in discourse about subject matter, the process of teaching, sharing of best experiences will add more values in to the school system.

The empirical results strongly indicate that there are limited opportunities for TVET teachers in their schools for

- collaboration and networking
- discussions on professional matters
- team work
- sharing of information

- practices of reflection in groups
- joint work in projects, research or school development program
- group based support in the teaching process

The current work culture in their schools has provided limited opportunities for collaborative learning as teaching is dominantly perceived as isolated activity, and team work and learning are often minimal. Interaction among teachers within the school is often informal and happens in most cases not for professional development purposes. The limited networking among TVET teachers from other schools also has been a barrier to further group learning. Other factors that influence the group learning and development opportunity for the teachers include the limited personal and social competences for group and team working, less emphasis to collaborative work at teachers development programs , socio-cultural influences that do not encourage critical reflection on others work , lack of motivation , as well as the biased perception of teachers about themselves as professionals who need to continually engage among each other to further learn and develop.

Many writers have argued on the necessity of group interaction and collaboration for professional development as teachers construct and reconstruct their knowledge and beliefs about teaching from this community. Park et al. (2007) stressed on the significance of collegial interaction and stated that “among those social interactions, interaction with colleagues greatly influences the development of individual teachers’ knowledge of teaching, since teachers share similar school tasks and concerns about teaching more with their colleagues than others (p. 370). Others also put emphasis on the effectiveness of group based learning and interactions as a means for the professional development of teachers. (Bell 1998; Gee 1991, Hatano 1993)

The creation of mechanisms and atmosphere that facilitate group learning activities between teachers help them examine their own experience, attitudes and beliefs. The need to continually evaluate their beliefs and practices about the teaching- learning process help the teachers’ development as a professional. Numerous studies have show that programs designed to promote teachers collaborative reflection on their practices result in teachers developing a more complex view of beliefs and practices of teaching, both in in-service teachers (Adalbjarnardottir and Selman, 1997; Clarke, 1995; Geddis, Lynch and Speir, 1998) and in pre-service teachers (Freese, 1999; Robinson, 1999; Morey *et al.*, 1997), and thus they produce an improvement in their teaching.

If the learning and development of the TVET teachers is to be facilitated, then it will be essential to encourage and create, support and sustain the atmosphere conducive to group learning. Teachers need to reflect on their experiences in groups ( and individually as well ) and they should be able to build appropriate mechanisms that support sharing and discussions of ideas and experiences that help improve their skills, knowledge and experience.

Group activities that promote reflective practice of teacher through development of professional teams, teacher networks, building community of learners and professionals would be essential. The engagement of the TVET teachers, their school administration and others in group-based learning activities would be necessary.

Adequate resources for group learning need to be allotted in school plans. By providing teachers the resources, time and space to work together and reflect on their practices, schools build opportunities for their teachers' development.

A school culture that promotes collaboration and collegial support aimed at individual and professional development creates opportunities for learning and working in teams over wide ranges of issues on the teaching learning process and the teachers own development. Building and developing teachers work group, innovative teams and inter- and intra-school network promote the possibility for reflection on practices and beliefs to the improvement of their work life and professional development.

The establishment of school networks, teachers' networks, conducting joint projects and other group based professional development models need to be devised to facilitate the group based learning and development in the TVET schools. A school which develops a culture of collegiality among its teachers, supports and facilitates the sharing of experiences of its members will create a better chance for the professional development of its teachers.

Many authors have discussed the significance of *building a professional community* of learners and *professional learning teams* in schools. Jolly ( 2007 ) stressed the relevance of the using of professional learning teams in schools for the purpose of teachers' professional development and better student achievement as follows.

“Teamwork is the best way to make progress in any occupation, because many minds working on an issue are better than one. But this kind of collaborative work is especially crucial for teachers. There's such a culture of isolation in schools. Teachers are used to doing their work

alone. They work very hard to do the best job they can within their range of knowledge. But their knowledge can be limited by many factors—by their professional opportunities, their access to materials, and the time they have for research, for example. By providing teachers time and space to work together and to go deeper into an area of instruction, you build opportunities for them to learn and grow on the job with one another, to create a synergistic kind of learning.” (Jolly, 2007, P. 1)

In the context of the Ethiopian TVET schools, where resources and development opportunities are limited, the development of such professional learning teams at various levels is commendable. These teams may address wide ranges of issues that impact on teachers’ learning and development as well as issues that affect their students’ learning and achievement.

Owing to the huge potentials of team and group working and learning, the TVET teachers need to be further trained to develop their competence in organizing groups and building teams, working in teams and on ways of actively and constructively contributing to the development of themselves and other members within the group. TVET school leadership need to be committed to the development of such professional leaning teams for improving the teachers leaning and professional development.

## **6.2.4 TVET Teacher Development Programs**

TVET teacher development programs refer to those teacher education and trainings offered by universities and other institutes in the pre-service and in-service programs of TVET teachers.

TVET teacher education is relatively new to the Ethiopian teacher education system. It is only fifteen years ago that the first Bachelor degree level TVET teacher program was started in the country. Prior to that TVET teacher education was limited to 2-year program for those completing high school studies. As the significance of the Bachelor level programs to the TVET teacher education program is recognizable, it is essential to strengthen them to help improve the TVET teachers’ learning and professional development. Similarly the in-service programs, rather commonly known there as the *summer in-service programs*, have made significant contribution to the TVET teachers’ learning and development.

The results show that all the teachers asserted that the TVET teacher education programs, both in-service and pre-service, were their major opportunities to improve their academic qualifications, but not necessarily their competences development in various areas.

In terms of improving the learning and professional development of the TVET teachers, a number of important aspects arise from the empirical results. Most of the TVET teachers have expressed dissatisfaction in the teacher education programs on a range of issues including candidates' admission, methodology, lack of respect and value for teacher trainees' experiences, curricula, professionalism of teacher educators and trainers. Issues related to the admission, employment, methodology, and school practicum, sustainability of learning and development, as well as competence development are discussed below.

### ***Admission of candidates into pre-service programs and teacher employment***

Based on the empirical results and other studies, the admission of students mainly with low academic achievement into the teacher education programs is one area where change need to be initiated as to attract more qualified students. A study by the College of Education at Addis Ababa University (2008) described this problem as follows:

“With no critical examination of the consequences its results in the field they are assigned for, students who have the least scores in the university entrance examination (or grade 10 school certificate examinations) are assigned to the TEIs [Teacher Education Institutes]. However, one can imagine that the quality of graduating teachers would be exceedingly far better (considering teaching as a decisive profession to all other disciplines and thus needs extremely qualified people in the sector) if higher achiever students were assigned to the TEIs. Equally important is also the lack of consideration of students' interest towards teaching during admissions as lack of interest in teaching profession is exhibited with many students who are assigned to the TEIs by the ministry of Education.” (p. 41)

Due to the opening of new TVET schools and high student enrolment in the schools in recent years, the demand for TVET teachers has increased. This factor has led to a situation where TVET schools employ graduates in different Technical and vocational fields without teacher education. Such employment practices overshadowed the perception of teaching as a profession and reduced morale of others who have gone through teacher education programs before employment. Some of the respondents asserted that their schools administration make even a preferred choice of those graduates from technology and Business streams with no

teacher education backgrounds on the assumption that these graduates have deeper knowledge on the subject matter than graduates from the TEVT teacher education programs.

In fact, such problems related to the admission and employment practices of TVET teachers may not be unique for the Ethiopian TVET system. The difficulty of attracting more competitive candidates into the teacher education programs and the employment of non-trained teachers are also evident in other countries as well. In many developing countries and in some developed countries as well, there are a number of teachers who begin to teach without having any prior training or preparation in the field (Marcondes, 1999; Villegas-Reimers, 1998). In all of these cases, the majority of the candidates entering the teaching profession are among the least qualified of all the students who are entering the professional workforce. One of the reasons for the poor academic preparation of candidates entering the field is that there are not enough qualified teachers in the profession to satisfy demand. (Villegas-Reimers, 2003, p50)

The consequences of such trends in admission and employment practices of TVET teachers have a negative impact on the TVET system of the country. However, curbing these problems is neither a lack of willingness to change nor the preferred strategic choices to deal with the problem. Such problems which are deep rooted clearly demand solutions through the concerted efforts of many actors in the society and the education system at different levels that reflects the wider social, cultural and economic reality of the context. The solution needs to be related to various issues including the attractiveness and competitiveness of the teaching profession, changes in society perception regarding teaching profession the teachers, professionalization of TVET teachers, their career prospects, the demand and supply of TVET teachers, and many others.

But TVET schools and the TVET teacher education institutions need not wait until all these problems are dealt with. Besides putting these problems up and front as top priorities to be addressed by all concerned, remedial actions need to be taken by them to contain the extent of their consequences. Provision of induction programs into the teaching profession for newly employed teachers need to be pursued and pedagogical trainings need to be offered on a continuous manner in different modalities at least for those without prior teacher education.

The improvement in the working conditions at the TVET schools, including the promotion of collaborative learning within the school may help addressing the problems related to lack of

knowledge, skills and experiences. Similarly, the teachers' education Institutes should also critically look into their practices and improve their provision in order to promote the positive image of the profession and influence the attitudes of those students' attending their programs.

### **The need for Paradigm shift towards learner –centred approach**

The results from the data indicate that both pre-service and in-services TVET teacher education programs offered in the teacher education institutes rely on the 'conventional *transfer* model or the *instructional* model of teacher education. The TVET teachers also emulate the same approach in their TVET schools. Such a teacher –centred approach denies learners' active engagement in the learning process since dialogue, group discussion as well as self - study are not valued or given importance. The TVET teachers' prior knowledge and experience are not utilized as one of the inputs for the learning process which disallow opportunities for the teachers to further construct their own understanding and taking their needs into account. It is important that teachers are encouraged and supported in professional development activities to take much of the responsibilities for their own development.

Despite the benefits of learner –centred methods, teacher educators rarely make use of them. The inability to '*practice what we preach*' is also evident in the TVET teacher education institutions. Most teacher educators adhere faithfully to their lecture methods. Teacher trainees generally tend to emulate the teaching styles of their educators or the methods they experienced in their education. The comfort of repeating what is familiar is simpler for the TVET teachers than venturing in to the unknown or little known methods. The absence of role models in the TVET teacher education in using student-centred approach has denied them the opportunity to use it in their own practice.

In related literatures, a number of reasons have been attributed for the failure to apply what teacher educators preach to their students. Some of the reasons why teacher educators resist using student-centred methods include: lack of self confidence by teachers, fear of the loss of content coverage , loss of control in the classroom , lack of prepared materials for use or resources , teachers' egos , and lack of teacher training in learner –centred methods. (Hockings , 2004 ; Panitz , 2005; Knowlton, 2000)

A paradigm shift from the teacher-centred approach to that of a learner –centred approach is only promoted in theory in TVET teacher education programs and proved to be difficult in practices. As adults do have different learning styles and learning pattern and preferences, the teacher education programs should also reflect the same in their approach for better effectiveness of the teachers' education and professional programs.

Therefore, it will be important for the teacher training institutes to critically evaluate their methods and approaches to teacher training. The contents of their programs should also be re-examined in terms of the learning and development of needs of the teachers at the TVET schools. It is important to design methods that could help the teacher education institutions to get feedback on their programs and assess the impact of their training programs on the teachers' performance and experience in the schools. The teacher education program content should be based on the required competences and profile of the teachers' needed by the TVET schools.

Teacher trainings need to be designed and implemented valuing the prior knowledge, experiences, and current needs of the learners and provide space for their participation in the design of the programs. Also ensuring the full participation of the teachers in the development programs and activities should be important criteria for the effectiveness of these programs.

The education and training of teachers need to be understood and delivered as an adult education and the teachers as adults who can take responsibilities for their own learning and development. Teacher training institutes need to provide the learning environments that facilitate teachers' construction of their own knowledge through individual and collaborative learning processes. The constructivist approach to teacher education will be a better option to make these programs more effective than the current traditional instructional approach.

It will be essential to ground the teacher education and professional development activities on the principles of adult education and sustainable life long learning. The recognition of teacher education and professional development as an adult education also entails that teacher educator themselves need to ensure that they have the competences to practically implement such development programs.

### **The need for TVET teacher educators' professional development**

The need for professional development of the teacher educators and their engagement in a continuous process of learning and development is pivotal to bring about changes in approaches and their practices. The lack of pedagogical knowledge and skills on the part of some teacher educators as well as the low standard of qualification of some of the university teachers<sup>27</sup> in teacher training institutes had been pointed out as some of the bottlenecks in the teacher education system (MoE, 2006). Most of the university teachers in Ethiopian, particularly in the faculties of technology, engineering and other vocational disciplines, have not been into teacher education programmes in their universities studies or are not trained as teachers. The lack of knowledge and skills in pedagogy and educational sciences by these teacher educators not only affects their practices as teacher educators but also influences the practices and conception of the teaching profession of their students. Perceiving teaching as *profession* would be challenging in a context where the teachers themselves are educated with educators who had no teacher education.

Postareff et al. (2007) described that

“In most European countries, teachers in higher education do not need a certificate of teaching competencies. However, the quality of university teaching has been discussed in recent years, and the need to improve university teachers' teaching skills and pedagogical thinking is now acknowledged to be essential. Many countries have made decisions about the compulsory pedagogical training of university teachers.” (Postareff et al., 2007, p 29)

The need for professional development of TVET teacher educators to influence their perceptions and practices deemed essential as their conceptions of teaching do not necessarily develop with increased teaching experience. Research results provide also some supporting evidence that:

Pedagogical training organised for university teachers enhances the adoption of more student-centred approaches. Some researchers emphasise that a change in conceptions of teaching is considered to be a prerequisite to a change in teaching practices (e.g., Ho et al. 2001; Oosterheert and Vermunt, 2003). However, the opposite effects have also been reported (Guskey, 2000), so that changes in teaching practices are seen to occur before changes in conceptions. Conceptions of teaching change slowly, and hence, teachers should be made aware of the possible delay in more sophisticated conceptions. (Postareff et al, 2007, p 30)

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<sup>27</sup> The annual statistical publication of the Ministry of Education shows that among the Ethiopian university teachers 50% of them have a qualification of a Bachelor degree or less, and 43% Masters and around 7% PhD degrees.( MoE , 2009, p 163 )

The provision of professional development for the teacher educators and their own engagement in their development may bring about improved practices in the education of the TVET teachers. Therefore, it would be essential to implement such professional development activities as part of the overall effort to improve the education of TVET teachers and their educators.

### **The need for practicum as part of the TVET teacher education**

Teaching as a profession need to rely on both the earlier practical practices (pre-service practicum) that could allow opportunity to develop pedagogical and didactical competences for candidate teachers and also valuing the teacher experience in professional life of the teacher. The importance conducting training needs assessment and the provision of need-based trainings help the teacher trainees to be engaged in meaningful professional development activities and motivate their active engagement as adult learners.

The empirical results suggest that the current relationships between teacher training institutes and the TVET institutions are weak and the TVET teachers believe that so far limited efforts are made to forge closer collaboration. This weak link has resulted on the teacher training programs to be often not demand-driven and non context specific in their nature.

The demand for more need- based trainings that reflect the actual school situations and problems are evident from the responses. One element that comes out from the empirical results in this regard is the absence of school based practicum training during the pre-service teacher education for technical teachers.

Most teacher education program in different countries includes a period of school-based practicum during the pre-service program. It is well known that when practicum programs are well planned and implemented, they would be very important components that contribute to the development of effective teachers through experiencing real classroom and school contexts (Ben-Peretz, 1995; Cobb, 1999; Grisham, LaGuardia and Brink, 2000). In this regard, Villegas – Reimers (2003) wrote:

The trend on an international level is to increase the amount of time spent in the classroom in a formal professional practicum. [...] In some countries where the practicum is short, teachers are required to have extensive in-service opportunity to practice under strict supervision. Studies assessing the effectiveness of the teaching practicum have concluded that an increase in the

number of hours a student-teacher spends in the classroom is very beneficial. (Villegas – Reimers, 2003, p. 49)

The lack of school practicum component in the technical teacher training programs, for example, illustrates the need to integrate school based trainings within the university teacher education programs. The absence of a practicum component is also attributed to the lack of resources like finance, the limited number of TVET schools for placement as compared to the number of student-teachers, the short duration of university study, among others. But it is imperative to prioritize the provision of the practicum, if prospective teachers are to be supported to develop the practical skills needed for good start in their professional life.

The role of teacher educators and the teacher training institutions are imminent for the improvement of effective teachers' professional development. The need for better teacher education programs that are more practice-oriented is evident. Current debates in improving the general teacher education in Ethiopian include whether to extend the duration of the initial teacher education in the universities. There have been on-going debates to extend the teacher education program from the current three-year to four-year program (AAU, 2008; MoE 2006).

The lack of important components, like the school practicum and apprenticeship in the current technical teacher education programs are some of the major reasons for extending the duration of these programs. But one of the essential factors that should be taken into account in such debates need to be the identification of competences that are important to the TVET teachers' profession and considering the time necessary to develop the basics of these competences within the program.

### **Sustaining life-long learning**

As the results have pointed out, many of the TVET teachers may not have opportunity for institution-based professional development training after they completed their university studies and would continue teaching without such additional training for as many years as they may serve in the profession. The notion of institution-based teacher training programs as the only way to prepare and develop teachers need to be changed. Hence a wide range of methods and approaches, beyond the pre-service and in-service paradigm, need to be complimented by different types of opportunities and mechanisms, including the individual teachers own learning and development efforts.

Accordingly, the teacher education institutions need to focus on competence development that enhances the life-long learning capabilities of the teachers through their programs. As these programs have critical role in the earlier professional life of the teachers, they need to be designed and offered in such a way that motivate learning and continual professional development of the TVET teachers. TVET schools need to focus on developing the conditions that facilitate, recognize and reward their teachers continued learning.

## **6.3 The Contextual Factors**

### **6.3.1 Socio-Cultural Factors**

The influences of socio-cultural factors have a much wider implications on the teachers learning and development. As expressed by the TVET teachers, their society's culture and biased perception towards learning of adults are reflected through the role adults are expected to play in their community. Adults' roles in the society regarding learning are predominantly to transfer their knowledge and skills to the younger generation rather than being an active learner themselves.

Teachers are assumed by the society to have the required knowledge to teach and their search for more knowledge and experience may raises doubts on their *competence* for the job. Hence, teachers who openly aspire to learn more would find themselves in an atmosphere which is not conducive and motivating. As the results of this research indicate, often being perceived as a learner indicates incompetency on the part of the teacher. Such perceptions stand against the basic need for continuous learning of teachers and professional, in fact for adults in general, to cope with the day to day experience, developments and changes in their work and personal lives.

Such conceptions discourage the TVET teachers self perception as a learner and provide them no motivation to be actively engaged in self development activities individually and in a group in their schools.

The results also show that predominantly the teaching profession is considered as a low profile job and teachers' status in the society is low. In addition, teachers' efforts to learn and develop professionally in the teaching profession is neither encouraged nor valued by the

school culture and the community they live in. As a result, many of the TVET teachers have been encouraged or persuaded to change their profession.

The dominantly biased attitude of the society towards the teaching profession had an adverse effect on the TVET teachers learning and development. Such perceptions have limited teachers' individual and group learning initiatives and have also contributed to the lack of active engagement in group learning activities by the teachers.

The teachers also argued that it is their *low status* in the society that has more negative impact on their learning and development than their relatively low income or limited opportunity for development in the profession. Similarly, the work culture of the TVET schools, which is also a reflection of the society culture and norms, has not helped them either to be motivated or pursue their learning and professional development endeavours. Many of the teachers attempt to avoid being seen as a learner in the workplacesince it may indicate in a way as *incompetent teacher* by fellow teachers and others.

The lack of recognition of teachers as professionals and the absence of development opportunities are considered to be among those factors which highly impact on teachers' motivation and morale (Weld, 1998). Taking into account the relevance of education in general and the contribution of TVET in particular to the development of a society, it will be difficult to produce a competent TVET graduates from unmotivated , and poorly trained and looked down teachers and trainers. Such conditions undermine the efforts of many in the education system, and the contribution of education to the well being of the society would be in question.

In fact, changing attitudes and perceptions held by the society requires a consistent and long term concerted efforts of many stakeholders including the public, the government, education policies and strategies, teachers, educational institutions, professional associations, and many others. These biased perceptions need to be changed if teacher development and professionalism is to be facilitated. In a country where the economic level is yet so underdeveloped and the majority of the population are young people, the importance of education and the role of teachers could not be underestimated. Bringing about changes in the lives of people without taking care of its education system and its professionals will be a recipe for further underdevelopment.

Current trends show a rapid increase in the TVET student enrolment and development of TVET schools which admit hundred of thousands of young people into the system every year. It will be essential to ensure that such expansion and increase of access to TVET programs are run by teachers with the required competences and motivation for its success. Existing stereotypes towards teaching profession and teachers will not result in a good return for the economy and the society.

In fact, TVET teachers and the schools play a key role in changing such perception held by the society. The development of a school culture that is conducive to individual and group learning and development, the development of key competence in personal and social competences including emotional competences, and changing the beliefs and attitudes of the teachers towards themselves and the profession within the school is essential. If teachers' perceptions and the schools' culture are not changed, it would be difficult to anticipate a change in the society's belief and perception about the teaching profession.

Teacher education institutions and TVET schools should take their share of responsibilities in this regard. Teachers' learning and professional programs need take into account the society's perception, culture, and values into account when designing their programs. The professional development programs need to help teachers in influencing such biased perceptions of their own and that of the society.

The analysis of the results shows that the society's perception of teachers and teaching profession has influenced the TVET teacher education programs. Such influences can be seen through their emphasis on development of certain areas of competences in the teacher education programs.

Most of the teacher training programs are much focused on transferring subject matter (technical) knowledge to their teacher trainees in both the pre-service and in-service programs. As teachers educators are perceived as the sole source of knowledge for their students by the society, the teacher education programs exerted much effort to ensure that such expectations by the society and by the students are met. However, it would be important to focus towards the provision of training programs that could facilitate the development of all other dimensions of competences that would help the teachers learn and develop continually in their career.

### 6.3.2 Economic Factors

The contribution of TVET to the economic development of a country is immense. The African Union strategy document to revitalize TVET in Africa (2007) asserted that:

There is a fresh awareness among policy makers in many African countries and the international donor community of the critical role that TVET can play in national development. The increasing importance that African governments now attach to TVET is reflected in the various Poverty Reduction Strategy Papers that governments have developed in collaboration with The World Bank. One of the most important features of TVET is its orientation towards the world of work and the emphasis of the curriculum on the acquisition of employable skills. (AU, 2007, P.5)

Not only the economy benefits from an effective and efficient TVET system, but the TVET system also needed to be closely aligned with the economic sector for its own sustainable development. A closer collaboration between the different actors in the economy and the TVET system are essential for strengthening the TVET training programmes and to be able to produce graduate with employable skills demanded by the economy. Such a partnership between the economic sector and the TVET system also helps the professional development of the teachers.

Ethiopia's economy is dominantly characterized by agrarian economy. The rainfall - fed agriculture sector of the country absorbs more than 80% of the country work force and contributes half of its GDP. The industry and manufacturing sectors of contribute around 12 % of the GDP. As the empirical results indicate, the TVET teacher education as well as their professional development programs rarely takes place in the real work places. This is partly due to limited number of industries and business as well as due to the poor linkage between the TVET teacher education, the TVET schools and the economic sector.

The lack of training and professional experience in the real world of work have denied the TVET teachers the possibilities of building key professional competences that may not be attained in the school-based theoretical instructions. Most of the TVET teachers asserted that the major skill gaps in their profile arises from the lack of these practical experiences in the economic sector.

Due to the prevailing economic conditions, TVET teacher education programs do not include mandatory apprenticeship or work based experiences as part of their requirement for graduation as a TVET teacher. The number of government and private industries and companies are fewer as compared to the number of trainees, the absence of legal framework governing such cooperative training, and limited resources to run such programs are cited as reasons for the lack of strong collaboration.

On the other hand, the existence of weak relationship between the TVET teacher programs and TVET schools with the economic sector raises the issue of the relevance of the curricula of the corresponding trainings. The curricula of these programs may be more relevant if they are based on the demands of the economy at present as well as on what may be required in the near future. Correspondingly, the learning and development of the TVET teachers should be based on these demands. In fact , the rapidly changing demands of the industries and businesses means that TVET teacher training need to skewed more to the acquisition of key competences that allow them to be engage in new learning and development situations as circumstances change.

In order to improve the teacher training and professional development increased collaboration between the training institutions and the industries and business need to be sought. Options should be explored that attract and benefit both the institutions and the economic sector. A stronger linkage with the economic sector shall support the inclusion of compulsory component of apprenticeship programs into the TVET teacher education program. Forging a collaboration that benefits the TVET, the economy and the society need to be developed. However, given the lack of strong cultural background and experiences that enhance closer collaboration between school trainings and the economic sectors, the challenges would be high to attain the desired collaboration in short time.

One of the issues that have been frequently addressed by the TVET teachers was about their salary and benefits. The TVET teachers believe that their income is not commensurate to the services they offer and assert that their earning being considerably lower as compared to other professionals with similar qualifications. This might be partly explained by the low economic status of the country and by the significance and perception of the teaching profession in the society in general.

Often the issue of what salary is commensurate for teachers' work could be debatable. However, the perception of TVET teachers that their income is considerably lower than other professionals of similar qualifications has an impact on their motivation to learn and develop. It could also be one of the factors that may deter experienced teachers not to stay long in the teaching profession. Further more, many of the TVET teachers claim that the need to earn additional income has prompted them to work other additional jobs during their normal working hours, in the night and the weekends. What should be of a particular concern for the TVET schools could be the absence of teachers from the school compound during work time. As the TVET teachers stretch themselves between a numbers of part time jobs and their own businesses, the time they may have for leaning and professional development activities in their schools would be limited. For that matter, the issue of professional learning and development may not be an issue of importance.

The results also show that in general there are less than average workload<sup>28</sup> in the TVET schools and teachers may not be present at schools when they have no trainings to conduct. The relatively less work loads at the TVET schools would have been a good opportunity for conducting their own individual and group leaning and development activities. But the engagement of the teachers in part time works at other places have not made it possible to utilize the time available. The impact of such a trend is that for many of the teachers learning and professional development may not be a priority and also their commitment to their school and students may be compromised.

On the other hand, additional works outside their school may provide TVET teachers opportunities to develop further competences that they may have not acquired during their initial training, and teaching experiences. Though the need to regulate such extra work activities outside the school seem important , it could be considered as one options to TVET teachers learning and professional development in the economic sector.

Though increasing salaries or income of the teachers may not be a sufficient condition to motivate their learning and development, it may be worth considering to establish a strong linkage between income and benefits with the leaning and development activities undertaken by the teachers. Rewarding learning and development activities may motivate further learning if a stronger tie between teachers learning efforts and outcomes are established to their implicit and explicit motivation.

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<sup>28</sup> The average workload of the TVET teachers in this study was about 15-20 hours per week.

### 6.3.3 Reforms in the TVET Sector

Educational reforms and teacher professional development must go hand in hand for either or both to work well, as they share a symbiotic relationship (McLaughlin and Oberman in Scribner, 1999). Thus reforms must include professional development programs and these professional development programs should support reforms. Professional-development experiences and opportunities that are not embedded in some form of major reform of structures, policies, and organizations have not been successful, as changing teachers without changing contexts, beliefs, and structures rarely creates a significant change (Darling-Hammond and McLaughlin, 1995; Futrell *et al.*, 1995).

A number of research results and experiences show the importance of this interdependence between reforms and teachers professional development programs. Villegas-Reimers (2003) described experiences in Africa as:

Reforms that have centered on teachers' professional development have been extremely successful in transforming even national education systems. Such is the case in Namibia, for example, where the education system was transformed into a more democratic system after the country gained independence, and this transformation was led by a reform of its teacher preparation systems and institutions (Dahlstrom *et al.*, 1999). This reform was designed and implemented by national leaders, administrators and teachers, with some support from foreign institutions that joined a partnership of national institutions. A similar trend can currently be seen in some teacher preparation institutions in South Africa that are trying to impact educational and social reforms by transforming the programs and practices they offer (Robinson, 1999; Samuel, 1998). (P. 26)

Ensuring stronger linkage between the teachers' learning and development and the current rapid increase in the TVET schools and reform programs undertaken is critical. The TVET reforms undertaken currently give much attention and priority at opening up new TVET schools throughout the country in order to increase training access to young people after completion of their general secondary education. The steep increase in student enrolment and the number of newly opened TVET schools in the last few years shows the progress made so far in this respect.

Though the TVET teachers described the provision of limited TVET teacher training programs with respect to the reform, most of these training were focused on improving the

technical skills of the teachers. The main goals of the teacher trainings so far have been on the development and improvement of technical competences. Little attention was paid to other competences that the teachers need, like teaching methodology, personal and social competences.

The different reforms in TVET sector, including changes in curricula of TVET and teacher education, methods of training, focus on labour market demands and technology and the like, call upon for a newer approach and competences of the TVET teachers. Therefore, the TVET teachers are not only the one who are responsible as change agents for these reforms but they also need to be part of the variables that need to be changed as well in order to deliver what is expected in the reform programs. The need to change teachers themselves, particularly in terms of their perceptions and competences, demands TVET teachers active engagement in their own learning and development activities.

An important aspect in the Ethiopian TVET reform program is its aim at developing an outcome-based TVET system where the competences needed by the labour market would serve as benchmark of training and learning (MoE, 2006 TVET strategy). Therefore, extending such an approach into the realm of the TVET teachers' education and professional development may be important to support teachers' professional development.

In this respect, the development of a national teachers competence and qualification framework that mirrors the profile of the TVET teachers' core duties and responsibilities will be helpful towards the development of competence based teacher education and training. In other words, TVET teacher education program need to be demand-based rather than being supply-based programs.

TVET teachers' professional development activities could be strongly tied to such national competence and qualification frameworks and could also serve as a goal for the TVET teachers who want to develop professionally. Such a national competence and qualification framework which stress on the significance of continuous learning and development of the teacher need to be developed through the participation of the concerned professionals and stakeholders.

As the empirical results show, currently there are no certifications or obligatory professional requirements for TVET teachers to engage in learning and professional development activities in order to maintain their teaching positions. However, if such requirements are in place, they may elicit the need and significance for teachers to be engaged in professional development activities.

The need to focus on the provision of teacher education that support the development of wide ranges of competences is evident. The sole focus on the development of their technical skills may not help the professionalization of the TVET teachers. Range of competence domains including the technical, methodological, personal, social, and emotional competence need to be incorporated in their development programs as par of the TVET reform.

Hence the dual role of teachers needs to be emphasised and reforms need to accompany professional development programs that are necessary for the teachers to effectively change their attitudes, skills, knowledge, and practices. In such cases, the reforms in the TVET sector will have a strong base for success.

## **6.3.4 The Work Environment**

### **6.3.4.1 School Culture**

Many writers and researchers have emphasised on the critical role school cultures play on the learning and professional development of the teachers. School culture enhances or hinders professional learning. Cultures that enhance professional learning and development facilitate the sharing of ideas, working collaboratively to learn, and using newly learned skills and recognizing members for their efforts and results. Where as cultures dominated by hostile relations and pessimistic view for learning and change impair teachers learning and professional development. (Brown et al 2007, Peterson, 2002; Fullan, 1987; Futrell et al., 1995, Villegas –Reimers, 2003)

The empirical results of this research pointed out that a number of aspects of the cultures of the TVET schools do not facilitate the learning and development of the teachers. Among the elements of the school cultures that discourage the learning and development of the TVET teachers include:

- absence of induction and socialization program for new teachers
- the perception of teaching as a private and isolated activity of the individual teacher rather than a shared and collaborative activity
- lack of sense of purpose and shared goals
- growing problems in work ethics and low commitment and professionalism
- little recognition and appreciation for learning and development efforts, and high performances
- Weak link between performance assessment and professional development
- limited discussions and feedback on teacher performance and assessment results
- limited learning and development opportunities
- focus on academic qualifications rather than on acquisitions of competences for career promotion
- communication problems among teachers and school management
- centralized decision making system
- avoidance of risk , and fear of making mistakes

The empirical results indicate that teachers' learning and professional development in the TVET schools, is neither recognized as part of the school culture nor embedded as an integral part of the school system. Though the TVET teachers are provided with few learning opportunities on ad hoc basis, these were often not need - based. In addition, there is no explicit requirement to undertake such professional development activities by the teachers. However, the impact of teachers not engaging in professional development activities extends beyond the teachers themselves. The TVET teachers' engagement in continuous learning and development will not benefit themselves alone, but also supports their students' achievement and school development. TVET teachers' learning and development need not be left to the arbitrary willingness of the teachers, as is the case in the TVET schools, but it should be part of the work responsibility and the expression of their professionalism.

As this research results indicated the issue of the schools' culture is one of the main inhibiting factors that influence teachers learning and professional development. Its influence extends from that of the individual perception and motivation at work place, to group learning and to that of the overall school environment for facilitating the learning of all the teachers and the school development. The implication of the school culture on individual and organizational learning is wider in scope and the creation of a culture conducive to learning produces

benefits to the teachers as well as the school in which they work. The empirical results also have indicated that changes in the school culture may bring about changes in their self-perception about learning and professional development as well as their practices.

The development and existence of such conducive learning culture in schools often depend on changing mindsets and existing paradigms. Arnold and Schübler (1998) described the school learning culture as

“The entirety of learning and development potential, which is arranged through the interaction of the members in interactional and communication processes, on a lesson, collegial and organisational level” ( p. 4 in Schübler 2009, p. 8).

The development of the school learning culture requires a continual process rather than a specific change programs or events to build the desire system. It would be a challenging and complex process where changing peoples’ perception and beliefs is much at stake. However, it would be essential to develop a learning culture that provides conditions that facilitate the learning and development at individual, group, and organizational levels within the school. (Senge et al. 2000; Bowen et al. 2007)

### **Collaboration and collegiality**

According to many writers, school cultures that are conducive to teachers’ professional development include the existence of professional collaboration and collegiality among school members, effectiveness of school leadership, and a systemic development of schools into learning organizations, among other factors.

The results of this research pointed that there is no strong culture of support and collaborations among teachers in the TVET schools. This has limited the potential to learn from one another. Culture of collaboration and support must be established for professional development activities to be successful and bring about changes in beliefs, attitudes and practices in the teachers.

Among the factors that help the development of culture of support within the school include developing norms of collegiality, openness and trust , creating and supporting networks, collaboration and coalitions among teachers , and the distribution of the role of leadership among teachers (Lieberman,1994). Collegiality and collaboration in schools are promoted when there exist openness, trust, respect, ease of communication, and supportive school leadership, among others. (Kurse et al. 1994, Barth 1990, Arnold 2005b)

### **Leadership**

It would be essential to develop a school system where professional development activities are given priority by the school leadership and encourage teachers to participate. The system needs to make use of the resources available within the school to the best effect of professional development. The school structure should reflect the strategic importance of professional development as an integral part of the daily learning and teaching process in TVET schools. The school governance structure needs to engage teachers at individual, and group level to decide on key issues of the school. (Lummis 2001)

The school system and culture should also provide a support for those people taking part professional development activities so that they are recognized and helped to share what they knew and practice newly acquired competence supported by resources from the school.

The school culture that provides opportunity for its teachers to take leadership roles in terms of their own development benefits from improved motivation and engagement of the staff.

Collegial support for one another is also facilitated when teachers are given the leadership and responsibilities for their development as compared to a top-down or a distant management-staff relationship dominant in the TVET schools. The existence of shared leadership helps members of the school community in understanding the need for professional development and change for teachers (Dubs 2009; Cibulka, 2000; Clement and Vandenberghe, 2001). Development of teams of teachers who plan and implement different activities within the school is one of the means to share responsibilities. (Lummis 2001)

Feasible professional development plan, based on the teachers and the school needs, should be put in place if the professional development of TVET teachers is to be improved (Moore, 2000). It is also necessary to have clear policies, strategies, and implementation plans in the schools and at all levels of the education system about professional development that entail its significance and as a required component of the teacher professional work life.

### **TVET schools as learning organizations**

It is essential that the school culture need to be changed to a culture that is conducive to the learning and development of the all individuals members and groups within it as well as the learning and development of the organization itself. In other words, schools need to under go a paradigm shift to be transformed into *learning organizations*. (Bowen, 2007; Senge et al. 2000; Senge, 1990)

A number of theoretical works as well as empirical investigations have shown evidences that schools functioning as learning organizations to achieve not only high performance , but promote the learning and development of their teachers , and also increased achievement of their students. (Lick, 2006; Orthner et al., 2006; Bowen et al., 2007)

The need for a systemic approach towards building a learning organization culture in the TVET institutions is significant. The process of changing the schools culture towards that which represents “a learning organization” is a process that needs to incorporate changes not only at the individual teachers and school management level but also changes at group and organizational level. It also requires changes in the school systems, structures, relationships, rules and regulations. Such changes in culture, systems and structures need to be addressed through change management process that involves Organizational Development (OD) strategy (Kotter, 1995; Beckhard and Harris, 1987). Changes involving human dimensions are often complex and need a persistent effort and commitment through a longer time to ensure that the desired changes happen and remain an integral part of the transformed system.

Organizational development processes also require the development of change agents, both from within and from outside. These processes further require fundamental changes in perceptions and understandings of the school as an environment for the learning and development of individual and the organization itself. The various learning and development activities may bring about the transformative learning necessary to operate in the new school culture. The required changes in perception of the teachers as well others may be facilitated in a school culture which has transformed its culture successfully. However, the achievement of a new learning culture is not feasible unless all members of the school and other external stakeholders are actively engaged as owner of the process and developed a shared vision towards a new culture and practices.

#### **6.3.4.2 Teacher Performance and Linkage to Professional Development**

According to the empirical results, teachers’ performance assessment at the TVET schools is mainly focused on ensuring the conformance of teachers to certain behaviours in the school and in the classroom. The performance assessment is not rooted in the teachers’ efforts and results in the daily work life including their effort to learn and develop. In most cases, the performance assessment results are used for administrative purpose. Organizational theories

and practices show that performance assessments could provide opportunity for identification of future professional development needs of the teachers. In such process of assessment, strengths and areas for improvements could be jointly identified by the teacher and the assessor. Teachers' development plans with specific objectives could be set based on the information from the performance assessment of the teachers.

The results also show that engagement in professional development activities are not included as teachers' performance goals in the school plan and are not taken into account during the performance assessment. There are no targets for professional development at the school or department levels either. The TVET teachers acknowledged that often professional development activities are viewed as "an event" rather than as a part of an ongoing and continuous process. The responses also indicate that the students' achievements are often not associated with the teacher's performance or professional development needs.

Including teacher professional development goals as part of the teacher performance measurement will support teachers' development and the school's performance as well. A clear and positively perceived linkage between the performance and rewards help encourage teachers to see a reason to be engaged in professional development activities at both the individual and group level. Incentives for those teachers engaged in professional development activities are important in order to attract more teachers who may find the rewards attractive. There is a need to establish a strong link between the individual motivation to learn, with the performance measures and the rewards to be given. Teacher Performance measurement indicators should clearly include professional development activities participation and results achieved. Professional development targets should be constituted as elements of the performance targets for the teacher.

Information obtained from the school students' achievement may provide areas where the school focus on improving including the performance of the teacher. However, performances improvements may not be necessarily indicate the need for teacher learning and development. Some of the problems in teachers' performance may not be the result of lack of learning or professional development.

### 6.3.4.3 Educational Resources

Kwakman (2003) argued that “the task and environmental factors, including the resources and infrastructures, do affect teachers’ participation in professional learning activities, but that this effect is mediated by personal characteristics.” (p. 167)

A number of other studies also stressed the significance of resources for teachers’ professional development in the workplace and argued that teachers’ learning may not be a prominent activity at schools with limited infrastructures. (Darling-Hammond, 1998; Hargreaves, 1997; Jenlink & Kinnucan-Welsch, 200; Moore & Shaw, 2000; Scribner, 1999 in Kwakman 2003)

The empirical results of this research also indicated that the limitations of resources have affected teachers’ learning and development. Many of the teachers argued that the scarcity of such resources like books, machineries, equipments, finance, information technology , have denied them opportunities for learning and development. Indeed, the lack of resources inhibits the teachers learning, but at the same time such difficult circumstances may also provide the opportunity to look for innovative ways of developing one self.

Despite these limitations, it could also be argued that the schools and the teachers might have utilized the available resources as optimally as possible for their professional development activities. Notably, the availability of ample time during the week days as a result of less work load may be one important resource that may be used to plan and engaged in individual and group learning activities in the school. More over, the results show that there are limited effort to share acquired skills, knowledge, and experiences between the TVET teachers within the schools. It is important to recognize and use “the expertise of teachers within the school” as an important resource for individual and group learning activities. Collegial support and collaboration among teachers within the school and beyond play critical role in the professional development of teachers and in the integration of the work and learning processes.

In this regard, senior teachers would have helped the junior teachers as coaches or mentors by sharing their teaching skills and experiences. Other learning opportunities like induction for new teachers, visiting colleagues’ classes, sharing of teaching materials , group discussions and team teaching could be facilitated. As Wenzlaff and Wieseman (2004) asserted *teachers need teachers to grow* and such collaborative learning activities taking place in the work environment facilitate their professional development.

In fact, it is important for the school administration to recognize and encourage teachers who take part in activities which facilitate the learning and development of fellow teachers. At the same time, the recognition of the contribution of the teachers in the professional development for each other may provide motivation to take over more responsibilities for other related professional development activities in their schools.

It could be argued that the lack of resources at the TVET schools may not be the primary factors that inhibit teachers learning *per se* but could exacerbate the conditions of learning compounded with low teachers' commitment and motivation for learning. There are teachers, though few in number, who are engaged in different professional development activities within and outside the school who search for alternative way of accessing the resources not available at their workplace. Taking into account the impact of lack of resource for teachers' development, the focus need to be often on the optimal utilization of available resources, constantly engaging in ways to acquire more resources in a creative ways and sharing of resources need to be considered by the schools as strategies to minimize the effect of lack of resources. Networking among other schools and teachers, closer collaboration with the organizations in the economic sector, and the use of information technology may be considered as additional means to expand the resource base for teachers' learning and professional development in the TVET schools.

#### **6.3.4.5 Characteristics of the Job**

Many of the TVET teachers perceive their job as monotonous and offer them limited challenges for learning and professional development. The routine and non challenging nature of teachers' tasks at the TVET schools affects teachers' motivation, job satisfaction and professional development. In this regard, Kawkman (2003) argued that one of the task factors that affect teachers' participation in professional learning activities at workplace is job variety, expressed by availability of learning opportunities and the diversity of activities.

A number of human resource management techniques may be used to enhance and improve the job characteristics of teachers through job enrichment, increased autonomy and responsibilities and other methods. However, this calls for the need to have professional development structure for the teachers at each stage of their development. Therefore, it may be helpful to have a clear career structure for the TVET teachers to aspire that provide different roles and responsibilities they could be engaged as part of their current or future

tasks rather than restricted to teaching one and the same subject to a level for years probably for their entire professional life time.

Villegas-Reimers (2003) suggested three areas where the professional development of teachers may lead them: to advanced teaching positions, to administrative positions, and as experts working outside the school. This situation requires establishing a clear linkage between the goals of the professional development of the school and that of the individual teacher.

As teachers engage continually in their learning and development, their knowledge, skills and experiences would be developed. Their attitudes and practices in their teaching would be continually changing as they experiment new methods and approaches gained from their professional development activities. Thereby their active engagement in professional development activities gives them the opportunity to further explore and develop professionally.

Teachers who constantly develop themselves may not react or solve a problem the way they used to as a result of their professional development. They may find each and every day presenting them an opportunity for further learning and development.

## **6.4 Competences for Teachers' Development**

### **6.4.1 Focus on Development of Range of Competences**

The empirical results show a number of important aspects that help to improve the TVET teachers' competence development. The TVET teachers have identified a number of competence areas which they found to be critically important to their individual and group learning and development. Though there are a number of different ways of classifying competences, the results obtained were categorized and discussed in three major competence categories: technical, methodological, and personal and social competences.

Most of the teachers indicated that their teacher training and education programs, during their pre-service and in-service programs, gave primary focus to the development of technical competence and too little attention to methodological, personal and social competences. Despite the emphasis on technical competences, most of the respondents believed that the

absence of continuous training and their lack practical experience in industrial and business have made them less competent in this regard. Many of them had no exposure to the world of work beyond their schools in technical and vocational fields. As discussed in the preceding sections, TVET teacher programs do not have mandatory programs to participate in apprenticeship programs. Most believed the lack of such experiences limited their development of technical and other types of competences.

The results clearly indicate that most of the TVET teachers agree on the dire need for further development of methodological competences. It has been pointed out , among others , that the absence of practicum or school-based teaching practice during the pre-service programs and lack of induction programs upon employment have negatively influenced their development of the methodological competence that are essential to their profession. The professionalism of the TVET teachers will be enhanced if developmental activities provide similar focus to the teaching competences as is given to the technical competences. The current teacher employment practice that allows teachers into the system without any teacher training and the absence of subsequent teaching methods training reflects a vivid image of the little importance attributed to teaching as a profession as well as to the significance of developing methodological competences.

Further more, it could be inferred from the results that little or no attention is often given in particular to the development of personal and social competence development at schools and teacher education programs. All the teachers believed that the lack of these type of competences is one of the major barrier to their learning and professional development in their workplace and beyond. In order to facilitate group and individual learning, the need to have key competences are helpful. Key competences in such areas as team working, communication, reflection, critical thinking, problem solving and other skills enhance and facilitate group and individual learning in the school.

As these findings show, the current scenario of TVET teachers' competences could be described by the combination of two situations: limited competence development opportunities, and too little efforts in the development of methodological, personal and social competences in the workplace and teacher education programs. These situations have hindered the development of ranges of competence essential for the teachers as competent professionals.

TVET teachers' professional development programs need to focus on the development of a range of competences in all these three areas rather than being restricted in few areas. In this regard, Arnold (2005a) stressed that professional preparation need to focus on the integrated offering of the three competences: technical, methodological, and personal and leadership competences. These set of competences facilitate learning and professional development of people in today ever changing environment where continuous learning and development are key to cope.

The emphasis on specific competence areas in the teachers training and development programs reflects in general the overall orientation of the teacher education program which in turn is influenced by a number of factors. Hauge (2000) and Calderhead and Shorrock (1997) explained that teacher preparations and professional development programs takes very different forms and varies dramatically in focus and content from country to country depending on the existing conceptions and beliefs about learning and teaching, teachers' personal learning history and complex nature of the variety of skills and competences to be learned in a context-specific issues. These different conceptual orientations about the role of teachers and their preparation have shaped the nature of the teachers' preparation and professional development.

The empirical results also indicated that the perception of the society , teacher educators , teachers and others about the nature and construction of knowledge , the teaching profession and the role of teachers have influenced the orientation of the teacher training programs in particular and the teacher education policy in general. The widely held belief in the society that espouse teachers as the ultimate source and transmitter of knowledge has evidently influenced to skew teachers preparation to focus on developing more theoretical knowledge and particular technical skills in their subject matter areas. The beliefs that teachers, like other adults in the society, being not perceived as learners may have made the need for developing competences for sustainable life long learning less important in their professional development programs.

A constructivist approach to professional development therefore will require the development of essential competences rather than expecting the transmission of knowledge from others through the regular teacher development programs like in in-service programs. Therefore the competences that help to *know-how-to-know* will be even more essential than the specific content knowledge. It is therefore necessary to develop essential competences that help teachers and others to examine, and bring about changes in their belief, attitude and

perception through transformative learning. Therefore, the teacher education programs need to give emphasis to the development of methodological competences (*know-how-to-know*) and personal and social competences.

### 6.4.2 Change in the Learning Culture

The current dominant learning cultures in the teacher education programs and in the TVET schools are also factors that hindered the development of an integrated competence profile.

The TVET teacher education programs so far have been largely dominated by transmission-oriented approach whereby students are taught *what is essential* for them in their professions. Neither the conditions to encourage students to learn through self acquisition nor the development of such competences for self learning are central goals. The cultures of these teacher training institutions need to be changed from that of a *dead* culture to *live* culture (Rogers 1997, in Arnold 2005a). The role of the teacher educators as well need to change from that of *instructors* to *counsellors* who support in many way the learning of their students through providing guidance, facilitation, and motivation to enable their students to learn and develop. (Arnold 2005a, p.96)

Adopting a new approach in the initial and further teacher education programs based on constructivism would help promote the idea of creating a *new learning culture* that is conducive to self guided learning rather than transmission. Arnold and Schübler (1998) stressed that the design of the learning cultures proves to be the real issue for the future education systems to ensure the sustainable development of competences.

The results indicate that currently professional development is hardly a priority in the TVET schools. Putting teachers' learning and development at the centre of the teaching – learning process requires fundamental changes in the school culture and structure as well. Teacher learning and development need to be part of the school priority that needs to be strategically designed and managed in the school system. TVET school leadership and head teachers play important role in the facilitation and creation of a motivating environment, and provision of resources and other supports.

At the same time, the TVET teachers need to be actively engaged in individual and group learning at work place. The absence of collaborative efforts among the teachers in the teaching-learning process and the low motivation and commitment to profession development need to be changed.

These changes of culture at the teacher training institutions as well as at the TVET schools requires the development of newer competence profiles for the teacher educators, the TVET teachers and the TVET school leaders, among others. It requires a paradigm shift in the way the TVET schools and teacher training institutions operate and manage their human resources. Newer approaches in the management of human resources at TVET schools that promote and reward learning and professional development may help change the school culture.

Therefore, professional development activities need to integrate these mutually inclusive ranges of competences with appropriate didactic arrangements to enable the teacher learning and development in both formal and informal settings to facilitate life long learning through collaborative as well as self directed learning.

Particularly, it would be useful if TVET teacher education and professional development providers base their programs on the set of competences that are identified as relevant for TVET teachers. The identification of set of competences and profiles of TVET teachers could be undertaken at national level based on the analysis of the teachers work in the schools in order to construct a competence framework for the TVET teacher professionals. The development of such a competence framework along with the profiles of the TVET teachers serve as an important input in the design and provision of professional development programs by teacher education and other professional development providers.

Overall, adopting a systemic constructivist approach to teacher education and professional programs and the development of an environment that enable the competence development of the TVET teachers in these programs and work places should be the ultimate way forward.

# CHAPTER SEVEN

## SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

### **Introduction**

The synthesis of the research empirical results, theoretical and practical considerations provided the basis for this research results and their implications for Ethiopian TVET teachers' future professional development.

In this final chapter, the major results obtained in this research are summarized with respect to each of the research questions in the first section. Following the summaries of results, the conclusions made in the research are presented. Based on the conclusions, specific recommendations are forwarded for improving the learning and professional development of the TVET teachers. At the end of the chapter, possible areas for future research and studies are suggested.

## **7.1 Summary of the Research Findings**

*Research question one: How do TVET teachers perceive themselves as learners and as professionals? What are the implications of the individual teacher's perceptions on their learning and development?*

This study found that most of the TVET teachers do not readily perceive themselves as learners owing to fear of embarrassment, the avoidance of emotional stress, and the need to maintain a *positive* self image and respect from the school community. Moreover, most of the teachers interviewed perceive teaching not as a profession. These perceptions are also found to be culturally and socially embedded within their society. A number of factors have contributed to such a biased perception of the teaching profession. The major factors that have

contributed to these perceptions include the cultural context, the teacher education approaches and practices, the low level of teachers' professionalization, the dire economic conditions, the work environment, and the limited resources in the TVET schools.

The implications of the teachers' perception have been found to play a major role in their commitment to learn. One's self perception and beliefs can strongly affects own motivation to learn. Therefore, the knowledge about teachers' self-perceptions and how they see themselves in learning environments is crucial in ensuring their own knowledge and skills development (Kwakman, 2003; Ryckmann, 1993). As this finding also showed, the perceptions of most of the TVET teachers have negatively influenced their motivation to teach, their self-directedness towards their own learning and development, and their attitude towards their profession.

The results also showed that TVET teacher' motivation and morale for learning and professional development are low. Most teachers argued that both extrinsic motivations factors ( for example , salary ) and intrinsic motivations factors ( like being not valued and respected by society ) need to be considered for better teaching-learning process at schools and for improving their learning and professional development.

***Research question two: How do TVET teachers engage themselves in learning and professional development activities?***

The engagement of TVET teachers in their learning and professional development activities were described in terms of self-directed learning, group learning and the formal education and trainings at teacher education institutions.

Studies in Adult learning assert that adults would seek more self dependency in learning through their experience in work and life (Knowles et al., 2005; Merriam & Caffarella, 1991; Brockett, 2000; Brookfield, 2000). Most of the TVET teachers expressed that they exert limited individual efforts to actively engage and develop themselves through self-directed learning process. Often their individual learning experiences are not results of a planned process to learn and develop.

Many of them claim that their motivation to self-directed learning have been hindered by such contextual factors like socio-cultural influences , absence of recognition for learning efforts , the work culture , and limited access to information and resource. The results of this research indicate that self-directed learning of the TVET teachers is influenced mainly by function of contextual factors than their own individual characters like prior knowledge or experience.

The results have pointed out that there are few group learning activities and opportunities in the TVET schools. The findings also show limited opportunities for such activities as discussions, team work, collaboration, sharing of information and reflections in groups in the TVET schools. Limited personal and social competences for group and team working, less emphasis to collaborative work at teachers development programs, and the school culture that discourage critical reflection on others' work are cited as major barriers to group learning.

The findings also show that most candidates are admitted to the TVET teachers programs with out interest and with low academic achievement. TVET teacher education programs are dominantly teacher-centred and often disregard TVET teachers' prior learning and professional experiences. The partnership between teacher training institutes and the TVET schools are weak, and collaborations to improve the teacher training through provision of need-based professional development programs are limited. School practicum is not incorporated in technical teacher education programs, and only peer-based teaching practices in the universities are conducted. Improved situations in the teachers' education programs would have supported the professionalization of the TVET teachers and their learning and development at workplaces.

***Research question three: What contextual factors facilitate or hindered the TVET Teachers' learning and professional development?***

The empirical results showed that a number of contextual factors have influenced the TVET teacher learning and professional development. In particular the socio – cultural factors, the economic conditions, TVET reforms, and the work environments in the TVET schools are considered to be major contextual factors that have hindered teachers' learning and their professional development.

This study shows that TVET teachers believe that teaching is not perceived as a profession in their society. In addition, being perceived as a learner in adulthood is considered as a sign of incompetency by the society and hence teachers avoid an open commitment and engagement in learning.

Most of the TVET teachers agreed that the major skill gaps in their profile arise from the lack of practical experiences in industries and business economic sector. The country's agrarian economy and the weak link between TVET sector and the economy are among the reasons why TVET teacher training rarely takes place in industrial or business workplaces.

The results also indicate that the TVET reforms being undertaken in the education sector give priority to rapidly increase students' enrolment without proportional increases in other inputs. There are few professional development activities provided in relation to the reform programs. The limited training opportunities available in this regard focus mainly on the technical skill improvements but not on teaching methodology and didactics. Currently, there are no professional requirements for TVET teachers to engage in further learning and professional development activities in order to maintain their employment after their initial teacher education. The absence of such requirements has denied TVET teachers the opportunities to assess their development needs and participate in professional development activities through the support of their school and the education system.

The findings of this research indicate that the work culture in the TVET schools is one of the main inhibiting factors for teachers' learning and professional development. The empirical results of this research pointed out that a number of aspects of the cultures of the TVET schools do not facilitate the learning and development of their teachers. These include absence of induction and socialization program for new teachers, lack of support and collaborative activities in the school, limited learning and development opportunities, and centralized decision making system.

The results also showed that basically teaching is considered as an isolated activity of the teacher and his students. Limited collaboration among teachers, low team work, and the lack of support for one another professionally in the workplaces have hindered the learning and development possibilities for the TVET teachers.

***Research question four: Which competencies are found critical for the TVET teachers' learning and professional development?***

The findings show that competence development efforts are mainly focused on technical competences. Focus on the development of methodological, personal and social competences in pre-service and in-service programs are minimal. The results support the notion that is widely held belief in the society that espouses teachers as the ultimate source and transmitter of knowledge has evidently influenced the teachers' education programs to focus on the development of technical skills.

The absence of school - based teaching practice and apprenticeship during the pre-service and in-service programs, and the lack of induction programs have also negatively influenced TVET teachers' development of competences that are essential to their profession. The teachers have identified those professional development needs in methodological, and personal and social competences which they consider as important for their profession.

***Research question five: What actions need to be considered to enhance and sustain TVET teachers learning and development in their context?***

The particular actions that could be considered to enhance and sustain TVET teacher learning and professional development are developed from the conclusions made in this study. The set of specific actions that can be considered as options towards improving the professional development of the TVET teachers are presented in the Recommendations section of this chapter.

## **7.2 Conclusions**

The analysis of the empirical results along with the theoretical frameworks included in this research has provided insights into the various issues of the TVET teachers' learning and professional development. As a result of this qualitative analysis, important conclusions are drawn which have implications for the improvement of the professional development of the TVET teachers. Accordingly the following conclusions are made.

1. The biased perceptions held by the TVET teachers about themselves and their profession is one of the main barriers to their own learning and professional development. Improving TVET teachers' learning and professional development requires changing these perceptions to new perspectives where teachers perceive themselves as adult learners and professionals. The significance of changing the biased and negative self perception of the TVET teachers in order to increase their motivation for learning and development is crucial.
2. With due recognition to the complexity of the issues of motivation, both extrinsic and intrinsic motivational factors have affected the TVET teachers' learning and development. Teachers' remuneration need to be considered to minimize their dissatisfaction at work place. However, the intrinsic motivational factors such as the need to be recognized and valued by the society, increased status and autonomy play more critical role in creating a conducive conditions for teachers to engage in learning and development activities at individual and group level.
3. Despite the teachers' adulthood and their experiences, self-directed learning initiatives and projects are not strongly evident. Teaching activities are mostly considered as isolated individual activities. Though contextual factors are attributed as major factors that inhibit their self-directed learning activities, both individual factors (like personal motivation, prior knowledge, skills and experience) and contextual factors (work environment, colleagues, resources and other) factors hindered or discouraged the self directedness of the TVET teachers in their learning and professional development.

4. In order to promote the positive image of the teaching profession and a life long learning attitudes in their students, the TVET teachers' education institutes should look critically into their approaches to teacher education and practices in a number of areas. Some of these include

- the predominantly use of a teacher – centred approach
- the practices of admission of unwilling candidates into teacher education programs
- weak collaboration with TVT schools
- absence of school practicum component in some of the TVET teachers' education programs.

5. TVET teachers' professional development programs are narrowly focused on the development specific technical competences. Both pre-service and in-service teacher education programs particularly lack emphasis on the development of methodological, and personal and social competences in order to support the learning and development of the teachers.

6. The society's perception about the teaching profession and the teachers themselves has contributed to the hindrance of the efforts of teachers' learning and development. The lack of recognition of teachers as adult learners and professionals by the members of the society had impacted negatively on the teachers' motivation and morale to learn. The professionalization of TVET teachers is yet not realized.

7. A closer collaboration between the economy and the TVET system would have strengthened the teachers' learning and development, as most of the teachers had had no previous experiences in industries, companies or business and service sectors. However, given the lack of strong cultural background, experiences and legal frameworks that enhance closer collaboration between school trainings and the economic sector, the challenges would remain difficult to attain such collaboration at least in the short term.

8. There are limited efforts and evidences to strongly link the TVET reforms with the professional development of the TVET teachers. The importance of engaging in professional development activities are neither valued nor required by the TVET schools. This condition not only hindered the teachers' professional development, but also impact on teachers' own belief as professionals as well.

9. The absence of collaborative learning activities, collegial support, and shared commitment for each others' learning and development in the schools are evident from the results. Therefore, the existing culture in the TVET schools has limited the potential for teachers' learning and professional development in their workplaces.

## **7. 3 Recommendations**

Improving TVET teachers' learning and professional development is neither a straightforward explicit process nor involves only the teachers themselves. As the results of this research showed, a number of interwoven factors influence professional development issues. It is a complex, dynamic and multivariable process that requires a holistic approach to deal with. It is not possible to single out one *right* model to ensure an effective professional development method for the TVET teachers. Individual characteristics, organizational and contextual factors, and other influences need to be taken into account to facilitate teachers' learning and development.

The recommendations made in this research need to be considered as an option in which policy makers, teacher education institutions, TVET schools, teachers and other may consider in their pursuit to improve the current status quo of the TVET teachers' learning and development. The different factors in the TVET schools, the teacher education institutions, and in the wider socio-cultural context may require different approaches to deal with their own particular situations. It would be difficult to assume that these set of recommendations to provide solutions to all contexts or to all persistent problems. Neither the assumption to develop an exhaustive list of strategies nor to readily provide solutions to all the complex problems in the Ethiopian TVET sector could be anticipated within the scope of this research.

However, based on the research objectives, the empirical findings and the theoretical considerations, a number of recommendations are forwarded which could serve as strategic options and framework of actions for improving the TVET teachers' learning and professional development. The conclusions made in this research broadly suggest three major areas that help to bring about improvement in the learning and professional development of the TVET teachers. These major change areas for improvement are the TVET *school culture*, *TVET teacher education programs*, and *Education policies*.

The implementation of these recommendations require a systemic approach and collaborative effort of TVET teachers, school leaders, teacher education institutions, regional education bureaus, Ministry of Education and other stakeholders in the education and economic sectors. As teachers' professional development is a long term process beginning from the initial teacher education and continuing throughout the teachers' career, it is critical to adopt a long-term perspective and a systemic approach as opposed to fragmented and temporal changes and reforms in the implementations.

The recommendations made under each of the three major areas of change are presented as follows.

#### ***1. TVET Schools culture***

One of the major areas where changes are necessary for improving TVET teachers' professional development is the TVET School culture. The development of a school culture supportive of teachers' learning and development is found to be a critical element missing in the TVET schools. To this end, TVET schools should aim to

- develop a culture of collaboration , collegiality and commitment to teachers' professional development
- develop shared leadership and empower teachers to take the lead in setting professional development goals and implementation.
- increase teachers' motivation in their work and decrease dissatisfaction
- transform TVET schools as learning organizations in the longer term

Specifically, in order to create conducive learning and development environment, it is recommended that TVET schools should

- develop and implement a system for the induction and socialization for new teachers by engaging senior teachers
- build and support professional learning teams based on the teachers' professional development needs and interests with the TVET schools.
- design and implement individual and group based learning projects within the school and recognize and reward participation and achievements in these activities.
- create forums for individual teachers and professional development teams that provide opportunities for learning from each other through discussion, reflection, and critical discourse.
- develop strong link between teachers performance and their engagement in

professional development with intrinsic and extrinsic rewards

- facilitate the provision of in-house training based on learning and professional development needs of the teachers
- allocate resources to foster professional development of TVET teachers
- make efficient use of teachers' work time at schools for their professional development activities
- share leadership roles in schools to empower teachers and take responsibilities in the decision making process

## ***2. TVET Teachers Education Programs***

Teachers' professional development begins from their initial teacher training in the teacher education institutions. As this research findings show, the role of the TVET teacher education institutions and their programs are critical in improving the professional development of teachers in both the pre-service and in-service programs. Hence based on the conclusions made in this study, it is recommended that the TVET teacher educations institutes should

- make use of a constructivist approach to teacher education and professional development
- adopt the perspective that teacher education programs as adult education programs, and implement these programs based on the principles of adult learning and sustainable life long learning.
- develop curricula and practices that facilitate the professionalization of TVET teachers
- develop an integrated approach to competence development

Specifically, it is recommended that TVET teacher education institutions should

- change the predominantly teacher –centred approach to learner-centred methods that enhance life long learning
- review their curricula to support development of range of competences based on actual TVET teachers' profile
- incorporate school practicum as one of the core component of the education program in all TVET teachers' education programs.
- provide professional development programs to their teacher educators
- provide need-based professional development programs for TVET teachers through joint planning
- provide learning and development opportunities that help facilitate TVET teachers'

continuous learning and development through experimentation, critical reflection, and self assessment

- improve the admission of students to the TVET teacher education programs
- focus on integrated development of technical , methodological , personal and social competences in their programs
- focus professional development programmes on nurturing teachers' critical competences of learning on how-to-learn
- actively engaged in the attempt to develop a national competence and qualification profile for the TVET teachers
- synchronize teacher education and development programs with national competence profiles of TVET teachers
- establishing stronger collaboration with TVT schools and teachers

### ***3. Educational Policies***

Implementation of major changes in the teacher professional developments requires the engagement of a number of stakeholders besides TVET teachers and schools. Particularly policy makers at regional and national levels play a crucial role. The results of this research also show the key role that the Ministry of Education and regional education bureaus could play in improving the TVET teachers' professional development. Particularly in terms of developing appropriate policies and reform programs, providing resources, and leadership. Taking their role into account, it is recommended that the Ministry of Education and regional education bureaus should,

- support the professionalization of TVET teachers through policies and actions
- provide leadership and resources for improving TVET teacher education and professionalization
- facilitate the collaboration between TVET schools , teacher education institutions and the economic sectors
- develop a national TVET teachers competence and qualification framework
- design and reinforce TVET reform programs concurrently with the provisions of professional development programs for TVET teachers.

In particular, the following actions are recommended to be implemented by the Ministry of Education and regional education bureaus

- sponsor the development of national TVET teacher competence framework , licensing and career development structure
- allocate resources to support teacher education institutions to launch postgraduate programs in TVET teacher education to strengthen the professionalization of TVET teacher
- mobilize all actors and implement reform programs aimed at influencing society's biased perceptions of the teaching profession
- facilitate and provide resources for the development and implementation of in- service training programs aimed at school management , and building of learning cultures in TVET schools
- support through policy framework and resources the change initiatives in TVET teacher institutions and schools.
- support efforts to develop networks between TVET schools , TVET professionals , university – schools partnerships and other collaborations to create opportunities for the TVET teachers professional development
- play key role in forging strong linkage between TVET schools and the economy sector
- reconsider the duration of TEVT teacher initial education in the light of including practicum and apprenticeship components in the programs

## **7.4 Suggestions for Future Studies**

This research has identified the various factors that influenced the learning and professional development of the TVET teachers. The individual, group, organizational and contextual variables that hindered teachers' learning and development at the workplace and beyond are analysed. The results obtained and the recommendations forwarded to improve the learning and professional development of the teachers could be used by TVET teachers , school leaders, providers of TVET teacher education and professional development , policy makers and others with vested interest in improving the TVET teacher education and their professional development.

However, there are areas where further theoretical research and empirical enquiry could be carried in order to further improve the professional development of the TVET teachers. Some of the suggestions for future studies in these direction focus on the following areas.

As the empirical data of this study is based on the perspectives of TVET teachers on their own professional development , it may be necessary to conduct a qualitative as well as quantitative research that reflect the perspectives of others who may have a differing perceptions on the issues , problems and the professionalization of TVET teachers. This could include policy makers, school leaders, teacher educators, teacher associations, and other stakeholders in the economy and the society.

A study on the process and development of competence frameworks and TVET teacher profiles through the engagement of teachers, experts and other stakeholders at national level is also relevant. Such frameworks may help reform efforts in the TVET Teacher education curricula, teachers' qualification and career structures, and provision of professional development programs.

Creating an environment conducive for teachers' learning and professional development requires fundamental changes in school cultures and approaches to the teacher education system. These changes have far more implications and consequences beyond the schools and the teacher education institutions. Further studies that could support the development of a systemic approach to reform the TVET teacher education system and development of TVET schools as learning organizations would be important.



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