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VOCATIONAL PEDAGOGY APPROACHES FOR THE IMPROVEMENT OF TEACHING AND LEARNING IN FORMAL VOCATIONAL EDUCATION IN UGANDA.

A CASE STUDY AT KYAMBOGO UNIVERSITY

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DEDICATION

This work of my hands is dedicated to my beloved daughter; ***Inga Fortunate Nannungi,*** for the endurance she had to undergo by sustaining a lot of pressure from tireless days and nights I persevered to have the work accomplished. Your contribution will remain memorable to me.

ACKNOWLEDGEMENT

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ACRONYMS

BTTE   Bachelors of Technical Teacher Education
BTVET   Business Technical Vocational Education and Training
CBET   Competence Based Education and Training
CTE   Career and Technical Education
DTTE   Diploma in Technical Teacher Education
EPRC   Education Policy Review Commission
GTZ   Germany Technical Services
HiAk   Akershus University College
ICT   Information Communication Technology
IIEP   International Institute for Education Planning
ILO   International Labour Organization
JICA   Japan International Cooperation Agency
KyU   Kyambogo University
MoES   Ministry of Education and Sports
NCDC   National Curriculum Development Center
NGOs   Non Governmental Organizations
PVE   Professional and Vocational Education
TE   Technical Education
TVE   Technical Vocational Education
TVET   Technical Vocational Education and Training
UGAPRIVI   Uganda Association of Private Vocational Institutions
UNEB   Uganda National Examination Board
UNESCO   United Nations Education, Science and Cultural Organisation
UVQF   Uganda Vocational Qualifications Framework
VE   Vocational Education
VET   Vocational Education and Training
WE   Workforce Education/Workplace Education

ABSTRACT

The purpose of the project was to experiment the vocational pedagogy approaches of teaching and learning vocational disciplines on technical teacher trainees, with a target of enticing them to later adopt these approaches and apply them in their teaching practice. This would in turn improve on the challenges facing teaching and learning of VET disciplines in Uganda.

The research was action oriented taking a participatory approach with a descriptive research design. For data collection, I adopted the interview method involving informal conversational and open-ended. I also employed participatory observation and documentary analysis for the empirical data. The data analysis process constituted transcription of field data and coding to form themes following the objectives of the project. I then presented and interpreted the coded data and finally I discussed the findings based on personal reflection and interpretation with a backing of scholarly views.

The main findings indicated that the methods of teaching and learning employed by instructors in VET institutions in Uganda render learners passive. The instructors are regarded the sole source of knowledge. Learning is basically theoretical with minimal use of hands-on resources for the learners to development the expected competencies of VET.

The curriculum currently employed is to a large extent out-dated with content that less addresses the current demands of a technician/craftsman on the labour market. VET is rated secondary in the country's education system and with a low attitude accorded to it.

It was a strange and uneasy experience to the participants to learn in groups which targeted self discovery as one of the vocational pedagogy approaches to learning. Participants were so much used to individualism and competition in their previous learning circles. These practices made sharing of experience difficult at the beginning of the project. Self documenting of learned experiences was equally complex since the participants were used to being given ready-made documents by teachers.

However, as we progressed with the project, participants began to appreciate what they missed by not being taught by such methods.

The vocational pedagogy approaches to learning need to be introduced in vocational/technical teacher training institutions so as to take root in the country's education system.

I conclude that VET in Uganda is at low ebb because of insufficient tools, equipment and other resources such as reference books due to low levels of initiative by Ugandans to produce what is needed inspite of the huge volumes of locally available resources. The low attitude accorded to VET is upon Ugandans not wanting to do work that leads to sweating.

The methods of teaching and learning employed in VET institution in Uganda are not made rich, instructors/teachers are less creative in the sense that they wish to teach others the way they were taught irrespective of the changes in the world.

I recommend the funding of VET to be every ones responsibility if the country is to prosper. The current VET curricula need urgent attention for review. More VET teachers' training institutions need to be established in the country and should not operate in isolation of those in other countries with a more developed VET system.

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Chapter one

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1.0   Introduction

1.1   Overview

In this study, I am focusing on vocational pedagogy approaches for the improvement of the teaching and learning of technical teacher trainees at Kyambogo University. The aim is to introduce them to different approaches of learning vocational disciplines which they can later adopt and employ in their teaching practice.

To provide a foundation for the study, I present my personal background which reveals my ontological and epistemological values of which influenced the study as well as the background of the Diploma in Technical Teacher Education (DTTE) course. I also analyze the meaning of the term vocational education and training (VET) as put forward by the various scholarly views and incorporating personal experiences all of which influenced the study. Furthermore, I carry out an overview of VET in Uganda following the indigenous and formal VET perspectives. It is from this overview that I analyze the meaning of the term vocational pedagogy and vocational pedagogy approaches as used in the teaching and learning in VET. As a result, I lay out the problem under investigation, the purpose, objectives and the significance of the study.

1.2   Personal Background and the Background of the Diploma in Technical Teacher Education (DTTE) course.

1.2.1   Personal Background

I am a technical teacher in the field of electrical engineering. I pursued my undergraduate studies at Kyambogo University where I graduated with a bachelor's degree in technical teacher education in the field of electrical engineering. Before taking up the study of Masters degree in Vocational Pedagogy at Akershus University College (HiAk) 2009 – 2011 under the Norwegian Quota Scheme Program, I taught for two years at St Joseph's Technical Institute Kisubi, Wakiso District in Uganda. During this period I was exposed to a lot as regards teaching and learning in VET institutions. This exposure was an empowerment to my understanding of the nature of teaching and learning that prevails in our vocational educational institutions as well as own practice. Below I give a brief account of this as:

 I perceived teaching as the management by the teacher of the teaching/learning situation where by the teacher instructs and the learners receive, internalize and memorize the facts,

ideas, concepts, procedures, laws and principles. This traditional understanding of teaching entailed me to give out a lot of written literature to learners in form of notes that learners are expected to memorize and reproduce at the end of the day when subjected to examinations. From own observation, this situation prevails in many learning institutions in Uganda; where learning is associated with examinations at the end of the day thereby forcing the learners to memorize what is given by the teacher in form of literature. The practice of learning being examination oriented results into competition and individualism amongst the learners. Likewise, I perceived learning as change in response or behavior involving some degree of performance caused partly or wholly by experience and teaching. This perception too entailed me to take full control of the learning process of my learners so as to enforce the change in their behavior. With this perception, as a teacher, I am expected to have knowledge of what the learner is expected to learn, how far in the subject matter he should go, how best to deliver it so that the learner learns it, as well as assessing the learning outcome. Personally, I was not impressed with this approach to teaching and learning because it leads to high level dependency on the teacher which enslaves the learners to the teacher's ways of doing things thus restraining the development of critical thinking. For that matter, I was trying my best to involve my learners by encouraging them to participate in solving problems on the chalk board. However, due to the fact that they were not familiar with this approach, most of them would shy away fearing intimidation by fellow students if they provided the incorrect solution.

My teaching practice as well as own learning while pursuing my undergraduate studies has largely been constrained by insufficient teaching and learning resources. I have observed, with concern, that this aspect denies the learners the pleasure of learning by doing which reduces their enthusiasm of learning a vocation. I must reveal that during my teaching, I would try as much as possible to improvise materials so as to provide for practical-demonstration teaching though at limited times. Furthermore, it is my observation that majority persons in Uganda still regard vocational education and training as for academic failures that are unable to compete in the academic world. Therefore, most of the persons joining VET do so as a last resort after failing to obtain high scores and school fees for secondary education. Consequently, such people do not perform to expectation of the labour market demands since they are less motivated in the careers they are pursuing. This low stigma associated with VET in Uganda has to date persisted and is partially responsible the low recruitment numbers and under development of VET.

With this background and inspired by the experiential learning, which I encountered during my masters study; where emphasis is on learning by doing I was empowered to undertake this project. This stand was strengthened by my values of hard-work, freedom of expression, courage and democracy which I ought to exemplify during the project.

1.2.2 Background of diploma in Technical Teacher Education (DTTE) course at Kyambogo University.

Technical Teacher Education Programmes at Kyambogo University is under the department of Teacher Education and Development Studies in the section of Technical Teacher Education. The section runs two programmes namely diploma in Technical Teacher Education (DTTE) and Bachelors of Technical Teacher Education (BTTE) in Electrical Engineering and Mechanical Engineering. However, currently it is only the DTTE program running and it constituted my target group.

The DTTE trainees at Kyambogo University

A brief account about the DTTE study program is summarized in the table below.

Programme Element	Diploma programme in Technical Teacher Education (DTTE)
Goals, aims and objectives	• To train teachers who would teach in technical and farm schools and technical and vocational training institutes.
Admission requirements	• Minimum of Advanced craft, or • Certificate in Technical Teacher Education (CTTE), or; • Their equivalent
Structure	It is Full time:Two years for holders of Advanced Craft, and one year for the Ordinary Diploma in Engineering-OD
Content	Programme is set out in courses: • Specific trades courses • Technician Mathematics I and II • Education professional course • Human resource management studies • Information and communication technology (ICT) • School practice.
Teaching methods	• Lecture and practical • Project • School& industrial practice
Assessment	• Progressive assessment (coursework) in each course: 40% coursework includes at least one written assignment, test & project/practical work • Written examination in each course: 60% • School practice: 100%
School practice	Six weeks at each end of semester II: end of each academic year- in year 1 & 2
Award and certification	Successful completion leads to an award of Diploma programme in Technical Teacher Education (DTTE)

Table 1: Course outline of the DTTE study programe

Source: Master thesis report by (Kyakulumbye, 2008, p. 114) entitled: "*Work Related Learning*: *A Comparative Study Relating Vocational Education at Høgskolen I Ahershus to Technical Teacher Education at Kyambogo University.*")

1.3   Background of the Project.

Meaning associated with the terms Vocational Education and Training (VET) and Vocational Pedagogy approaches

1.3.1   Meaning of Vocational Education and Training (VET)

The term vocational education and training falls under different nomenclatures following specific geographical areas. According to UNESCO-UNEVOC, Vocational Education and Training (VET), Technical and Vocational Education (TVE) and Technical Vocational Education and Training (TVET) are used to describe the same thing (Atchoarena and Delluc, 2002, p.16).   UNESCO-UNEVOC further asserts that throughout the course of history, various terms have been used to describe elements of the field of this kind of education that collectively are now conceived as TVET. These include: Apprenticeship Training (AP), Vocational Education (VE), Technical Education (TE), Technical-Vocational Education (TVE), Occupational Education (OE), Vocational Education and Training (VET), Professional and Vocational Education (PVE), Career and Technical Education (CTE), Workforce Education (WE) and Workplace Education (WE)[1].   The deviation in the nomenclature from the standard term was accepted to acknowledge the concepts used in specific national systems (Atchoarena and Delluc, 2002, p. 18). However, on analyzing the different nomenclatures, they focus at preparing an individual for work in a particular field(s).

According to the recommendations by UNESCO and International Labour Organization (ILO, 2002, p. 7) on *Technical Vocational Education and Training (TVET) for twenty-first century,* Technical Vocational education and training, is used as a comprehensive term referring to those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life. Reflecting on this description of TVET, I observed that it accounts for the general education which is composed of the general knowledge as an aspect of vocational education. However, this aspect of vocational education is not so much emphasized in Uganda's VET because at some levels of the training, this aspect is not even included on the teaching curriculum or assessed.

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[1]. http://www.unevoc.unesco.org/2.0.html?tx_drwiki_pi1[keyword]=What%20is%20TVET. Retrieved on 15th April, 2010

If considered, it is taught in isolation of the other two aspect of vocational education; that is, vocational theory and vocational training. For that matter, most learners do not recognize it significance in learning a trade and they end up dodging it. An example is mathematic and English language not being part of the curriculum for craft part one course in electrical installation.

The Conflict and Education Research Group (CERG) in their discussion paper developed for (UNESCO-UNEVOC, 2007, p. 2) defines TVET as a learning system in which both soft and hard skills are developed within a joined-up, integrated development and delivery framework that seeks to improve livelihoods, promote inclusion into the world of work and that supports community and individual agency. Uganda being one of the countries which have for a long time experienced conflicts emanating from political ideologies needs to have vocational education which provides skills to improve the peoples' livelihood.

According to Egau in her presentation on an analysis of the relevance of vocational education and training vis-a-vis the world of work, divides TVET it into two parts vocational education and vocational training. She regards vocational education as provision of knowledge about vocations and about skills required for production of goods and services while vocational training is the process of actual skills acquisition targeting specific outputs[2]. In regard to her description of TVET, from the aforementioned description of TVET, I realize that the emphasis is on knowledge and skills acquisition for work. However, it is my observation that TVET in Uganda does not fully prepare its trainees for work as reflected from theoretical mode of training at the expense of hands-on training recommended by TVET globally. This has in turn resulted into incompetent persons who are at a dilemma of seeking paid up employment due to their inability to apply the acquired skills for self sustainability.

As a technical teacher and a student of vocational pedagogy, concurring with the above scholars, I describe vocational education and training as that field of education where an individual acquires knowledge and skills about work and develops attitudes as well as competencies for executing the associated tasks for personal, community and national development.

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[2]. This was a presentation to the students of a masters degree in Vocational pedagogy by
  Dr. Jane Egau Okou on the 26th August, 2009 at kyambogo University

1.3.2 Indigenous vocational education

Before the introduction of western formal education into Uganda, there was indigenous education in form of practical training whose general purpose, especially at the tribal level of social organization was to enable each member of the society to be helpful to himself and to the rest of the members of the community and to the chiefdom, kingdom or state. In view of the above, the skills were passed on from the old to the young within the family through a form of apprenticeship (Ssekamwa, 1997, pp. 2-3). The learning process was by doing, learners had to go and work together with their "teachers" who were mainly their elder relatives and local specialists from whom they could learn to master particular skills. This observation is shared by (Okello, 2009, p. 5) who points out that the learning method was that of apprenticeship;[3] where a learner observed with keenness what an adult was doing and imitated the skills.

This direct indigenous link to the world of work is today reflected in some informal vocational practices such as agriculture, ceramics, weaving, carpentry and barkcloth-making in rural areas where the youth are trained by specialists; acquire the required skills and later are left alone to join the world of work.

1.3.3 Formal Vocational Education in Uganda

The arrival of European missionaries in the 1870s[4] saw the birth of formal vocational education in Uganda. This education system took root in 1889 when new approaches to teaching agriculture and some technical skills were taken up (Ssekamwa, 1997, p. 39). However, it should be noted that the introduction of limited vocational training was not intended for Ugandans *per se* but to satisfy the internal needs of the missionaries[5] and with a main objective of evangelization of the people (Ssekamwa & Lugumba, 2001, p. 43).

Formal vocational education training centres were set-up at each Church mission centre to train people who would fulfill the needs of the missionaries.

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[3] Apprenticeship refers to the non-formal kind of practical training whereby the young ones learned skills under the guidance and supervision of a more skilled elder and learning would mostly be through imitation. In this case, no defined curriculum, study time structure and criteria of assessment were stipulated.

[4] In 1877, the Church Missionary Society (CMS) missionaries of the Anglican Church arrived in Uganda, followed by the White Fathers Society missionaries who were Roman Catholics in 1879 who immediately started formal classes in their missions.

[5] In my view the missionaries did not come to Uganda to teach vocational education. Their intention was to spread Christianity. In doing so, they incorporated technical training for the Africans so as to equip them with skills for establishing missionary headquarters and spreading their Gospel. See also Tiberondwa (1978) who argues missionaries have been prime agents of colonialism. All this they did because they could not afford to bring trained people from their countries of origin.

On achieving their objectives, the training centres would close. This system of education was carried on by the missionaries until 1925 when the Phelps Stokes Commission of 1924-25 recommended government's involvement in the country's education system (Ssekamwa, 1997, p. 50).

As a result of the recommendations of the Phelps Stokes Commission, the Colonial Office in London recommended the teaching of technical skills in four ways: the first way was to be through government work-shops on an apprenticeship basis. There was an urgent need for personnel to help in construction of civil works under the Department of Works. This was because the First World War made it very expensive to bring in technical people from abroad. Africans were trained in simple tasks while Europeans and the Asians were trained in complex and superior tasks. The second way was to be in special instructional workshops on a production basis. This was done because there was a need for semi-finished materials for use in construction projects and the production sector could not wait for recruitment of trained people who were lacking at that time. The third way was to be conducted through properly instituted technical schools which were already in existence and being run by the missionaries.

The fourth way was to be run by primary schools where village crafts were to be taught (Ssekamwa, 1997, p. 84). The institutions under the third and the fourth categories were largely left in the hands of the missionaries since they were the ones running the country's education system at the time. They had no formal curriculum to follow especially for the fourth category.

The way the implementation was carried out was up to the teacher. Courses taught in the technical schools were carpentry, shoe-making, tailoring, brick-making, and some mechanical works (Ssekamwa, 1997, p. 90).

All these were geared to serving the missionaries and the colonial government's interests. In view of the above, it is my observation that although vocational education has grown and diversified in Uganda, the curriculum for VET schools is still narrow. As already seen that missionaries were agents of colonialism, I argue that European missionaries discouraged vocational education in the country because Uganda was a potential market for the industrial products from their home countries. On the other hand, they encouraged primary and secondary education since it was easy to indoctrinate young ones who had not been corrupted by the indigenous educational system. Furthermore, the government left vocational education in the hands of the missionaries because it is expensive and it was not ready to invest in such a venture.

The courses that were taught in the formal vocational institutions were an improved version of the indigenous VET fields. This is reflected in trades such as carpentry, wood-carving, shoe-making, tailoring, plumbing and weaving. Today VET institutions still have the above mentioned trades in addition to the newly introduced trades such as brick-laying and concrete practice, electrical installation, and motor-vehicle mechanics among others.

On the side of implementers, the majority of teachers at the time were not pedagogically educated; they had been successful tradesmen in a particular trade and were drafted to teach. This was asserted by Alfred Wallace Wood, in his study of "Educational Policies and Social Change in Uganda". He pointed out that: "The teaching in technical schools was left to the amateurs – usually European former army corporals and bridge mechanics who might have got some mechanical skills back in Europe" (Ssekamwa, 1997, p. 91). It is my observation that, Uganda to date is still faced with the challenge of many pedagogically un-trained teachers in most of its vocational education institutions.

Development trends of Vocational Education and Training in Uganda after Independence in 1962

In 1963, after independence, there was a commission of enquiry that was appointed to revise the education system of the country so that it could better serve the needs of the citizens. That commission was the Castle Education Commission. This Commission recommended the abolition of the vocational schools that were running parallel to the general academic schools; these were the rural trade schools, farm schools and home craft centres. It is my observation that the abolition was due to the negative attitude that had developed amongst Ugandans about vocational education, that it was for academic failures and a new form of VET needed to be introduced. In this respect, the Commission promoted technical institutes, technical colleges, agricultural colleges and district farm institutes as the new road to vocational training institutions (Ssekamwa, 1997, p. 166). However, it is evident that much more emphasis was put on academic secondary school education where many new government and private secondary schools were established. It is my opinion that since the country's education system was still under the funding jurisdiction of the British government, it was their desire that Ugandans followed their footsteps of acknowledging white-collar jobs as opposed to manual work. The colonial government encouraged secondary school education and did not set up schools to cater for vocational education.

Furthermore, there was no effort to change the curriculum to suit the country's vocational needs and address the low social status of VET that had been inherited from the colonialists. I argue that an integral part of developing VET is government seeking to change peoples' attitudes and make them realize the significance of vocational education. Not learning from either their experience, or the changing labour market demands, the few vocational institutions at the time continued to teach the very curriculum which the colonial government bequeathed to Uganda at independence.

It appears that during the 1970s under Idi Amin Uganda experienced difficulties of trade embargos from developed countries. Industrial machinery, tools and equipment together with a variety of other merchandise from abroad could not be accessed. This situation resulted in a renaissance of indigenous vocational education. This was reflected in the development of intermediate technology to replace foreign technology and foreign spare parts which could not be accessed at that time. Many workshops for forging tools such as hoes and machine parts sprung up in Kampala. All this was dictated by the needs of the time. On a sad note during the 1980's after the overthrow of Idi Amin's government, all the efforts Ugandans had made to develop vocational education were emasculated by the governments that followed. Vocational education was once again suppressed as academic secondary school education was again emphasized.

In 1987, the National Education Policy Review Commission was set up by the government of Uganda to review its education system (Uganda, 2001). A number of recommendations were put forward for the improvement of vocational education, and as a result, in 1992 the Government White Paper on implementation of the report was put in place[6].

Current Development Trends of Vocational Education and Training in Uganda

The MoES has identified an urgent need to raise the status of work-based skills and to increase on the student and instructor awareness of quality job practices, attitudes and employability skills[7].

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[6] Some of the recommendations pertaining to vocational education included: Integration of technical with business education; restructuring of technical and vocational education to cater for vocationalization from primary to tertiary levels of education; establishment of at least one technical school in each district; re-equipping of technical and vocational institutions with tools, equipment, scholastic materials and the training of technical teachers (Uganda, 1992).

[7] http://www.education.go.ug/Brief%20on%20SKILLS%20EXHIBITION[1].pdf. Retrieved on 2nd June, 2010
This was obtained from the document on Promoting Excellence in skills development presented for the 1st National Skills Exhibition and Competition held in Kampala Uganda from 6th -9th August 2009.

The government's efforts in trying to develop TVET have been manifested in the BTVET act of 2008. The Act is based on the principles and concepts of promoting an integrated, demand driven and competent based modular BTVET system. Under this learners enter the system at various points suited to their skills and needs, with their qualifications certified and recognised at different levels and establishment of a qualifications framework based on defined occupational standards and assessment criteria for different sectors of the economy (Uganda, 2008, p. 6).

In addition, Uganda has established Uganda Vocational Qualification Framework (UVQF) whose purpose is to define occupational standards in the world of work, assessment standards, and vocational qualifications to learners who meet the set standards of the different studies and provide guidelines for modular training (Uganda, 2008, p. 13)

In conclusion, all these strategies have been inspired by the Vision 2025[8], which envisaged a new Uganda enjoying: "Adequate capacity to compete technologically, rapid and sustained economic growth, poverty alleviation, hardworking citizenry, prosperity with harmony in diversity and equal opportunity for all," among others (Uganda, 2001)

However, it is my observation that despite of all the encouraging recommendations to develop vocational education in line with the Government White Paper, very little has been done. Instead there was further promotion of academic secondary school education. This is evident by the introduction of Universal Secondary Education (USE). Vocational education is still poorly funded and with training facilities in a sorry state, coupled with obsolete technology and untrained or under-trained teachers, as I observed during the situational analysis made prior to conducting this project and from the various pedagogy workshops attended. In addition, the majority of Uganda's vocational education institutions are private. This is pointed out in the National Development Plan (Uganda, 2010, p. 237) which reports that over 1000 VET institutions are private with 600 registered by the MoES against the 137 publically owned institutions. There has been no change in curriculum, teacher/instructor training is still at a low level and teaching is still dominated by theory as opposed to practical learning. It is against this background that I decided to conduct the project so as to improve the situation.

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[8] http://www.ibe.unesco.org/International/ICE/natrap/Uganda.pdf. This is from the report on development of education in Uganda for last ten year presented by the Ministry of Education and Sports at a UNESCO conference in Geneva in May 2001

1.3.4   Vocational Pedagogy approaches

- **Pedagogy**

Bernstein cited in (Harry, 2001, p.3-4) describes pedagogy as a sustained process whereby somebody acquires new forms or develops existing forms of conduct, knowledge, practice and criteria, from somebody or something deemed to be an appropriate provider and evaluator. Appropriate either from the point of view of the acquirer or by some other body or both. On analysis of Bernstein's description of pedagogy, it is my observation that throughout the learning process, new strategies are always developed and earlier strategies improved to meet the situation of the time. I attribute this to the fact that learning is a lifelong process that evolves from one generation to another. Reflecting on indigenous education in Africa, (Sekamwa, 1997), learning is by doing and the learning arena is always the venue where the activity takes place. In this respect, when I reflect on the present day strategies employed in learning particularly in vocational disciplines, I observe that most of them are an improved version of the indigenous systems of learning. On the other hand, this excludes a few methods which through discovery are put in place but the majority of human beings have different points of departure where they based to develop the methods. However, I argue that I do not necessarily learn from somebody or something deemed to be an appropriate provider but may also learn by insight through self discovery and unconsciously by interacting with any elements of environment, appropriate or not appropriate.

Davies cited in (Harry, 2001, pp.3-4) regards pedagogy as involving a vision (theory, set of beliefs) about society, human nature, knowledge and production, in relation to educational ends, with terms and rules inserted as to the practical and mundane means of their realisation. Personally, upon analyzing Davies's line of thought about pedagogy, it is my submission that, change being a constant in human life, it is rather difficult to have particular sets of terms and rules for employment by society. Humans are governed by the environment in which they live therefore human nature, knowledge and production in relation to educational ends call for flexibility, creativity and sometimes trial and error methods to realize the vision in the environment at the time.

Based on personal experience coupled with the knowledge I acquired during my study at HiAk, I regard pedagogy as a science of education which deals with the strategies of teaching and learning. On this note, it is therefore true that various disciplines have different kinds of pedagogy. It is from this assumption that I make my submission that there is pedagogy which deals with general academics and pedagogy of vocational disciplines and also pedagogy of people with different behaviours such as traumatised and disabled children.

From my experience, I have observed that children from the war ravaged areas and those with natural disabilities in my country Uganda fail to study with those who have never under gone such an experience as well as the physically fit respectively. Therefore they need special pedagogy adapted for their learning needs.

To have a better insight of the concept of vocational pedagogy approaches, I have broken it into two parts namely: Vocational Pedagogy and Vocational Didactics and my analysis is based on scholarly views as stated hereafter:

Vocational Pedagogy

Melinda and Angliss (cited in Kyakulumbye, 2008, p.15) describe VET pedagogy as providing for, "a learning experience that is social, passionate and inspiring. The emphasis is on 'how' and 'why' of the learning rather than the 'what' and the underpinning pedagogy aims to enhance the learner's capacity and desire to learn and be an independent thinker, productive citizen and future leader". This view analyses vocational pedagogy in relation to two key aspects of teaching and learning: the 'how' of learning which I understand as the teaching and learning methods and the 'why' of learning perceived as the learning goals; objectives the learning intends to achieve. Reflecting on my of two years' experience in teaching, my focus was on the subject matter mainly addressing the 'what' of learning and with little emphasis on the 'how' contrary to what is emphasized by Melinda and Angliss's. However, my study at HiAk while pursuing a masters degree in vocational pedagogy made me to realize that vocational pedagogy does not only address the 'how' and 'why' as pointed out by Melinda and Angliss, but also the 'who'; is the teacher and the learners, 'when'; time structure for the learning, 'where'; the venue for conducting the learning (learning environment) and 'what' the learning is aiming at; content. From my observation, all the above are interrelated and need equal attention for effective teaching and learning process.

On the other hand, the experiential learning which I have encountered through the course of this masters training, has enabled me to appreciate a learner, learning process and its outcome as centre to my practice in teaching. This has been one of the key aspects I have been focusing on in the process of the project undertaking, and with the aim of developing the learner's capacity and desire to learn and be an independent thinker which is in conformity with Melinda and Angliss' view on vocational pedagogy.

Mjelde (2009), in her paper under the title; "*New challenges in the Social Organization of Knowledge in Vocational Education: Unity and diversity in Vocational Didactics in Relation to the Identity of specific Trades and Professions,*" describes vocational pedagogy as a learner-centered approach to teaching and learning, in which the relation between the student and the task is central. Reflecting on Mjelde's view it is evident that the task is the pivot of learning and the core of vocational pedagogy is learning from the workshop as well as and learning in work life situation. She further asserts that vocational pedagogy emphasizes learning through working tasks that are related to a trade for which a person is being prepared. In this regard, vocational pedagogy brings forth a close link between two of the three aspects of vocational education that is vocational training and the vocational theory. I therefore commend Mjelde for her efforts in advocating for a renaissance of the indigenous methods of learning as reflected in the informal education system in Uganda. These indigenous methods of teaching have a kind of learning which simulates real work situation, a state of affairs which is not far from Mjelde's advocacy.

Further analysis of Mjelde's view seems to unveil that to some extent she excludes the non hands-on disciplines such as geography for which I believe vocational pedagogy is fundamental in their teaching and learning. In addition it is my observation that she puts less emphasis on knowledge acquired from other fields; general knowledge, which cannot be excluded in the teaching of vocational disciplines. Lennart Nilsson (cited in Mjelde, 2006, p. 52) indicates general knowledge as the third element of vocational education in addition to vocational training and vocational theory. He emphasizes that the three elements must taught when integrated for the learners to clearly get their implication in the learning.

Based on my experience in Uganda, it is my submission that workshop based learning (vocational training) and the general knowledge as elements of vocational education are still at a low ebb in VET institutions. The nature of teaching and learning prevailing in VET institutions puts much more emphasis on vocational theory than the other two elements.

Personally I perceive vocational pedagogy as a broad term referring to an education program that is geared towards experiential based development work; in crafts, trades, occupations and professions. It embraces all various approaches that are employed to effect the teaching and learning process in the various fields with the objective of preparing individuals for work. Learning in this case is mainly by doing and reflection. The learners practically engage in performing a task through interaction and they actively get involved in constructing their own learning with a high degree of democracy encouraged.

Learning in this sense involves the use of the heart, mind and the hand. In this respect, learners are made to value whatever tasks they are engaged in, use their minds and their hands to ably undertake the said tasks while interacting with one another and the teacher as advocated for by (Mjelde, 2006, p. 80). It is my observation that this creates dialogue between the teacher and learners as well as the learners themselves, and even between learners and their materials and tools.

Vocational Didactics

Didactics

Harry (2001, pp. 3-4) defines didactics as the study of the relationship between pupils, teachers and various branches of knowledge grouped into educational subjects. On the other hand, Aakre[9] argues that didactic is also about analyzing the conditions and need of students with different skills and abilities, to choose proper content that is educational, and to implement the best methods and strategies for the students to learn.

Reflecting on the above two views, I observe that they both address the learner, the content to which a learner is subjected and the teacher who is responsible for the learners' learning. The content is what the learner is expected to study and for that matter the teacher is expected to identify the suitable learning strategies of delivering it to the learners for effective learning. The relationship between the pupils, teachers and the educational subjects put forward by Harry, signifies the depth of content that is undertaken at the various levels; this implies that the learners' ability to respond to it in their learning is fundamental. It is my observation that this reflection when related to education gives birth to didactics of a particular kind of education such as vocational education and general academic education and later giving rise to the nomenclatures such as vocational didactics.

Vocational Didactics

Aakre argues that vocational didactics focuses on competences and characteristics of a specific vocation, not on school subjects or general competences for all. Reflecting on her view, it is my opinion that vocational didactic is basically developed for the teaching and learning of vocational disciplines. In this respect Aakre points out that in vocational didactic, requirements of a particular discipline are analyzed for purposes of searching for relevant content and methods for its implementation.

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[9] Refer to her paper entitled: "*Vocational Teacher Education: A Norwegian Context,*" obtained from: http://teora.hit.no/dspace/bitstream/2282/801/1/vocational_teacher_bmaakre_250908_p.pdf. Retrieved on 01.04.2011.

Relating to Aakre's view and my personal understanding, I would describe vocational didactics as a systematic plan developed for the teaching and learning of vocational disciplines. In the plan there is implementation, supervision, and evaluation of the teaching and learning of vocational disciplines intended to develop the labour force required in the world of work. In this regard it is my submission that as teachers, we should not only follow pre made plans by scholars, but also to develop similar plans suitable for particular learners in specific learning environment since we are always on ground. In so doing, it is certain that the self developed plans will address learners' needs hence realizing the desired learning outcomes. I also observe that the planning process needs the learners' hand since they are expected to construct their learning.

The Post Graduate Diploma in Vocational Pedagogy (PGDVP) report entitled: *"Documentation of the PGDVP work Semester I, 2009; Vocational Teacher study program at Kyambogo University,"* the following are emphasized:

Vocational pedagogy has its basis on tasks executed by persons in a special situation. This is an indication that for one to teach a vocational discipline should be that one with skills and knowledge in the concerned field and practicing it.

Vocational didactics is anchored on real training often integrated in production. My opinion to this is that vocational didactics enforces learning which simulates the work life and to some extent having apprenticeship training.

Learning reflecting simulation of work life implies that the learning arena is a workshop whether in a school setting or a workplace. My understanding of this state of affairs is that the said workshops must have all the necessary equipment that is required to bring out the desired outcomes.

1.4   The Need to Improve My Practice as a VET Trainer

As a master's student of vocational pedagogy at HiAk, who has been introduced to the vocational pedagogy approaches to teaching and learning that encourage experiential learning where the learner is actively involved in construction of his/her learning in a social interaction with others or tasks; geared with high level democracy, I was encouraged to consider a need to improve my practice as a VET trainer. The milestone of improving my practice begun with the question: 'How can I, together with technical teacher trainees at Kyambogo University, improve our practices in teaching and learning while employing the vocational pedagogical approaches?'

This is emanating from the traditional approaches to teaching and learning I was subjecting to my learners as reflected in my personal background. These approaches were reflected up on by Lutalo-Bosa[10] (2007) who says that the conventional approach in teaching and learning which has been tried over the years has not, on many occasions, led to permanent solutions. Indeed for a long time the emphasis has been on theoretical knowledge Lutalo-Bosa (2007). Further, it is indicated that to ensure that both the human element and occupational aspects of technical education are given consideration, it was recommended that educational mechanisms and systems be designed with two major objectives in mind: learning and work (Atchoarena and Delluc, 2002, p.53). Through own experience as an undergraduate student at Kyambogo University, most of the courses were handled theoretically in the classroom setting with minimal demonstration or even practical work. The teaching was focusing at equipping the learner with theoretical material but not preparing one for work. My teaching too has been a similar encounter. Most of the skills I have acquired were through industrial training and personal initiative by teaming with colleagues who would obtain field electrical installation works. However, the delivery of quality TVET is dependent on the competence of the teacher in terms of theoretical knowledge, technical and pedagogical skills as well as being abreast with new technologies in the workplace (COMEDAF, 2007, p.9). Reflecting on own practice, there is a need to improve my teaching and learning strategies to creative ways of involving the learners in their learning process. In addition, the learning tasks require being work oriented and learner-centered so that the relationship between the student and the task is central as supported by (Mjelde, 2009).

Government of Uganda has "the provision of sufficient manpower of the quality needed to meet the skill requirements of the economy" as one of its two main long-term government objectives (World Bank, 1999). It is stated that vocational education in Uganda aims at producing craftsmen, technicians and other skilled manpower to meet the demands of industry, agriculture, commerce and teaching of technical and vocational disciplines. It further aims at stimulating intellectual and technical growth of students in order to make them productive members of the community (Uganda, 1992, p.116). It is my observation that realizing this objective will enable Uganda cope with trends of globalization. However, for Uganda to achieve its aims there is need for combined efforts by the community including VET trainers, and government in trying to sensitize the public about the benefits of VET as well as improving its standards through increased funding by the government.

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[10] Lutalo-Bosa is a former Vice-chancellor of Kyambogo University since its formation after a merger of its three member institutions: Uganda polytechnic Kyambogo -UPK, Institute of Teacher Education- ITEK and Uganda National Institute of Special Needs – UNISE in 2003

Teachers should realise the need to embrace a different approach to teaching and learning. This way, they will be encouraged to seek for better ways of content delivery, creative ways of involving the learners in the construction of their learning as well as seeking the learners' experiences as the point of departure in the teaching and learning process. As a technical teacher, it was justifiable joining arms with the government in realizing her objectives and aims of VET by considering a need to improve my practice.

Having been inspired by vocational pedagogy approaches I acquired through the course of this training, together with my values of hard-work, freedom of expression, courage and democracy, I was encouraged to undertake this project aimed at improving my practice as a VET trainer and facilitating similar process to the teacher trainees at Kyambogo University.

1.5   Statement of the Problem

From scholarly views, personal experiences and those of teacher trainees and the trainer's experiences, I concur with (ILO, 2002) that VET focuses on studying of the technologies together with related sciences, the acquisition of skills, development of attitudes, and knowledge relating to work in various sectors of economic and social life. This is therefore an implication that the nature of teaching and learning in VET must involve a high level hands-on to address the mentioned constituents. However, in Uganda VET is dominated by a theoretical/academic delivery teaching and learning techniques (Daily Monitor, 2011:53). This nature of teaching and learning is also pointed out in the National Development Plan 2010/11-2014/15 (Uganda, 2010) where it indicated that the teaching methods currently employed are a constraint to the performance of the Education and Sports Sector in Uganda. Although the Government White Paper (Uganda 1992) declares the Science and Technology Equipment Production Unit, (STEPU) as a pedagogical centre which should train teachers how to produce instructional materials and equipment they need together with their students, very little has been done to that effect. As a result, VET teachers have continued to employ the theoretical/academic delivery teaching and learning techniques as opposed to the vocational pedagogy approaches. It was therefore imperative to carry out an investigation on nature of teaching and learning in VET institutions in Uganda and come up with a way forward on how vocational pedagogy approaches can improve it.

1.6   Purpose, Objectives, Research questions and Scope of the Project

1.6.1   Purpose of the Project

Experimenting the vocational pedagogy approaches of teaching and learning vocational disciplines on technical teacher trainees, with a target of enticing them to later adopt these approaches and apply them in their teaching practice.

1.6.2   Objectives

1.   To find out challenges faced by technical teachers in the teaching and learning in VET institutions in Uganda

2.   To examine the influence of vocational pedagogy approaches as applied in the teaching-learning process of technical teacher trainees at Kyambogo University.

3.   To establish possible challenges in the use of the Vocational pedagogy approaches in the teaching-learning process.

4.   To develop solutions to the challenges in the application of the vocational pedagogy approaches in the teaching and learning process.

1.6.3   Research questions

1.   What are the challenges to the teaching and learning in VET institutions in Uganda?

2.   How can vocational pedagogy approaches improve on the teaching and learning process of teacher trainees at Kyambogo University?

3.   What would be the challenges to the use of vocational pedagogy approaches in the teaching learning process?

4.   What workable possible solutions can teacher trainees develop to overcome the challenges to the use of vocational pedagogy approaches in the learning process?

1.6.4   Scope of the Project

Content scope

The content scope of the research is based on the four objectives of the study. In the first objective, we identified challenges that are directly being encountered by instructors in the teaching and learning process in VET institutions in Uganda. Under the second objective, the vocational pedagogy approaches as applied in the teaching and learning of teacher trainees of DTTE were considered. These included: Experiential learning with emphasis on learning by doing; group learning; and vocational didactic relations model.

In the third and forth objectives, possible challenges that emerged in the use of vocational pedagogy approaches in the teaching process and workable solutions to these challenges were considered.

Geographical scope

The study project was based on the technical teacher trainees in year one pursuing a Diploma in Technical Teacher Education (DTTE) at Kyambogo University and a regular lecturer to the DTTE class. Regarding situational analysis I considered practicing instructors from VET institutions under UGAPRIVI[11] in seven of its regions namely: Eastern, West A, Central A, Central B, Southern region, West Nile and Northern region in Uganda. Each region organized an independent a three day workshop.

Although the study involved instructors from various VET institutions under UGAPRIVI, it was based at Kyambogo University, Faculty of Education, Department of Teacher Education and Development Studies in the Section of Technical Teacher Education

1.7   Significance of the Project and limitations to project undertaking

1.7.1   Significance of the Project

The findings of the project clearly unveiled that VET in Uganda is characterized by an academic/theoretical delivery teaching and learning techniques which is one-way (trainer to trainee) and does not meet VET aims. In this respect therefore, VET trainers shall be encouraged to change and adopt a mode of delivery which actively involves a learner in the learning process so as to produce the people required in the world of work. The findings further indicated that VET institutions have insufficient training materials and equipment despite VET being hands-on oriented. Through vocational pedagogy approaches, instructors shall be empowered to design and develop possible instructional materials and equipment together with their trainees so as to make the VET learning practical and develop the trainees' attitudes and interest in VET. The interest developed in the participants in regard to vocational pedagogy approaches, will be a point of departure to effect changes in the teaching and learning in VET institutions in Uganda. As a research student, more research techniques and expertise in working with Action oriented approaches as well as implementing vocational pedagogical approaches were enhanced.

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[11] UGAPRIVI is Uganda Association of private Vocational Institutions in Uganda. Its major objectives are related to advocacy and lobbying for vocational training and the provision of member services that contribute to enhance the qualitity of vocational training provided by its members. Refer to: http://uganda.ded.de/cipp/ded/custom/pub/content,lang,2/oid,7226/ticket,g_u_e_s_t/~/Uganda_Association_of_Private_Vocational_Institutions_UGAPRIVI.html. Retrieved on 20th October, 2010

1.7.2 Limitations to project undertaking

Lack of computers at the faculty to facilitate the documentation process by the teacher trainees during project execution was one of the major hindrances encountered during the project. This was a setback in that the documentation process because it became more cumbersome since participants had to hand write several times in order to incorporate corrections made to their work. I observed that this created so much pressure on to the participants keeping in mind that they had more workload for the other course units by other lecturers. Flexibility in structuring the project activities was an essential tool in overcoming workload pressure by other lecturers. We would discuss the situation at hand and adjust our programs according.

1.8 Definition of key terms, organization of the report and Summary of chapter one

1.8.1 Definition of key terms

Vocational education and training (VET): It is that field of education where an individual acquires knowledge and skills about works, develops attitudes and competencies for executing the associated tasks for personal, community and national development.

Teaching: In this sense, teaching relates to counseling or mentoring, I employ it to mean; guiding somebody to develop his/her own knowledge as s/he learns from their actions and experiences through sharing opinions and reflections.

Learning: Refers to actual acquisition of knowledge and skills through personal interaction with the environment so as to construct meaning out of it. Learning may result from experiences, self discovery, instruction, and through interacting with others to mention but a few.

Approaches: This is used to mean the strategies; methods and techniques employed to effect the teaching and learning process.

Vocational pedagogy: I perceive vocational pedagogy as a broad term referring to an education program that is geared towards experiential based development work; in crafts, trades, occupations and professions

Vocational pedagogy approaches: These are approaches addressed under vocational pedagogy and the underpinning vocational didactics. For purposes of this project; I will focus be the following vocational pedagogy approaches namely: Experiential learning with emphasis on learning by doing; Group learning; and Vocational didactic relations model.

The details of these and more analysis of the concepts of teaching and learning are discussed in the chapter of literature review ahead.

Challenge: This is used to mean an obstacle, set-back or difficult situation encountered in a system.

1.8.2 Organization of the report

The report constitutes of five chapters which include: Introduction of the study; literature review; methodology; presentation and interpretation of findings; discussion and analysis of findings together with the conclusion, recommendation and way forward.

In chapter one, I put forward the introduction of the study and this constituted: Personal background and the background of DTTE course at Kyambogo University; background of the study with emphasis on meaning of VET, indigenous and formal VET in Uganda, vocational pedagogy and its approaches; problem statement; purpose of the study, objectives and their respective research questions, scope of the study and significances of the project.

For chapter two, I review the literature related to the topic under study. It encompasses a brief account on the structure of VET in Uganda and the associated challenges facing the teaching and learning in its institutions; concept and theories on teaching and learning under vocational pedagogy.

In chapter three, I describe the methodology that I employed in conducting the research. This methodology focused fieldwork planning; the type of research and the research design employed; the population sample; the research methods and tools employed in data collection and data analysis which comprised of data transcription, coding, presentation, discussion and analysis as well as data validity.

Chapter four presents and interprets the data that I obtained from the field and well thought-out as relevant to the experimentation of the vocational pedagogy approaches of learning to technical teacher trainees and illustrates a reflection of the story of action as it unfolds.

Under chapter five, I put forward the analysis and discussion of the findings accruing from the story of action.

Finally, in chapter six I stated the concluding remarks emanating from the findings as well as suggested possible recommendations on the way forward.

1.8.2 Summary of chapter one

This section of report summarizes key items that were discussed in chapter one of the study.

In this study, I focus on vocational pedagogy approaches for the improvement of the teaching and learning of technical teacher trainees at Kyambogo University. The aim was to introduce

them to different approaches of learning vocational disciplines which they can later employ in their teaching practice. In so doing, the following items were reviewed which provided the foundation of the study:

The purpose of the project is to experiment the vocational pedagogy approaches of teaching and learning vocational disciplines on technical teacher trainees, with a target of enticing them to later adopt these approaches and apply them in their teaching practice.

I teamed with technical teacher trainees of DTTE at Kyambogo University and a one of their lecturers. I intended to realize the objectives of: finding out challenges faced by technical teachers in the teaching and learning in VET institutions in Uganda; examining the influence of vocational pedagogy approaches as applied in the teaching-learning process of technical teacher trainees at Kyambogo University; establishing possible challenges in the use of the Vocational pedagogy approaches in the teaching-learning process as well as develop solutions to these challenges.

The findings of the study will benefit VET trainers whereby they will be encouraged to change and adopt a mode of delivery which actively involves a learner in the learning process so as to produce the people required in the world of work. The interest developed in the participants in regard to vocational pedagogy approaches, will be a point of departure to effect changes in the teaching and learning in VET institutions in Uganda. Finally as a research student, I will attain more research techniques and expertise in Action oriented research undertakings.

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Chapter Two

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2.0   Literature Review

2.1   Introduction

In this chapter, I present scholarly views related to the problem under study and in the presentation addressed the four objectives of the study project. In the first place, I briefly presented an overview on the education system in Uganda which gave me a soft landing to the reflecting on the causes of challenges facing the teaching and learning in VET institutions. Secondary, I make a reflection on the concepts of teaching and learning under vocational pedagogy as put forward by various scholars.

2.2   Vocational Education and Training (VET) in Uganda and the associated challenges.

2.2.1 Overview of the Education system in Uganda.

The structure of Education system in Uganda is a responsibility of the Ministry of Education, Culture and Sports (MoES). The system is composed of the following: Pre-primary level, Primary level with duration of seven years, lower secondary (Ordinary- O level) with duration of four years of general education or three years of junior technical education. After these two, there is upper secondary of two years namely: General secondary education (Advanced-A Level) which runs parallel with a two year course at technical/vocational institutes or a two-year course at grade III teacher training. Above upper secondary there are outlets to institutions of higher learning which include; University education, Grade V teacher training, Diploma courses in technical colleges and colleges of commerce and other higher level courses[12].

VET in Uganda is harmonised by the BTVET department under the Ministry of Education and Sports. The institutions under BTVET include: Uganda Technical Colleges, Technical or Farm Schools, Technical Institutes, Community Polytechnics, Vocational Training Institutions and Community Polytechnic and Instructors Colleges offering a wide variety of business, technical and vocational courses, Uganda Colleges of Commerce, Agriculture

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[12] Refer to The government white paper (Uganda:1992 , pg. 10 -11)

Colleges, Forestry Colleges, Fisheries Colleges, Cooperative Colleges, National Meteorological Colleges, Survey and Management Colleges.

Typically, Education in Uganda is provided through multiple approaches including the Formal, Non-Formal and Informal Systems. Funding is by the central government to the government institution and private funding to the privately owned institution though the donor agencies, non-government organizations (NGOs) in addition to independent countries that offer aid to both government and privately owned institutions. However, individuals, private sector and NGOs are all encouraged to join government to educate Ugandans. Within the formal sector, government encourages a diversity of opportunities which include general, Vocational and Technical education in its education structures. Currently, according to the National Development Plan 2010/11- 2014/15 there are approximately 133 public/government funded VET institutions and about 600 privately funded training service providers and 17 apprenticeships and enterprise based representing 17 percent, 81 percent and 2 percent respectively (Uganda, 2010, p. 213). The large number of privately owned VET institutions is an indication that the government is not in position to fully provide VET to its citizens. From own observation, these institutions solely operate on meager resources from private owners and as a result substandard service is offered. VET a kind of education that requires tools and equipment in addition to materials which are rarely re-used, whether government or privately funded, the training institutions in Uganda are faced with similar challenges except for a few that are funded by donor agents such as the German Technical Services (GTZ) and the Japan International Cooperation Agency (JICA).

2.2.2 Challenges associated with the teaching and learning process in VET in Uganda

VET in Uganda is faced with a range of challenges emanating from administrative, economic and social constraints. As already indicated above, whether government or privately funded VET institutions, various studies have revealed that these institutions more or less encounter similar challenges as discussed hereafter.

Based on my experience when I enrolled for my undergraduate studies at Kyambogo University under the faculty of Engineering in the department of Electrical and Electronics Engineering, I expected maximum exposure to hands-on learning since so much of technical education is work-oriented. Surprisingly the nature of teaching and learning I encountered at the university was mainly dominated by the word of mouth and conducted from ordinary classrooms. However, on a few occasions throughout my study period, practical learning could be conducted with insufficient tools, equipment and material.

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Learning was basically conducted from the traditional classrooms facing the chalkboard and with the lecturer in-front as a priest in church. There was a very low level of interaction as it was not being encouraged by the lecturers and even fellow learners were so much used to individualistic and competitive tendencies from the former schools. Coupled to that, the level of participation in the learning process was equally low, the lecturers were the only ones to give what to note down for reference purposes and as learners, we believed that a lecturer had all that we needed. This we could prove whenever one reproduced exactly what the lecturer provided during the course of teaching and learning to answer the examinations.

On completion of my studies at Kyambogo University and I began practicing the teaching profession, I encountered similar experiences. The learners could wait for me to provide for their learning with minimum input on their side. I would assign them learning tasks but they could always complain that it was my duty to source for information and deliver to them. With that experience as a student at a higher institution of learning and also as a teacher at a higher level, I have observed that what I experienced is a general practice prevailing in most VET institution as well as general academic education institutions in Uganda. Such a state of affairs I attribute it to a number of factors which include:

Training equipment

Many VET institutions are severely handicapped by adequate basic requirements such as training workshops with equippement, tools and materials; lecture rooms; libraries; staff houses; staff offices and students' dormitories and even land on which they could operate. This is put foward by (Kohn et al, 2006, p. 17) who point out that VET institutions in Uganda are characterised by inadquate training infrastructure in terms of buildings/facilities, equipment, tools and training materials. The same situation is also shared by the BTVET commissioner at the time (Okinyal, 2006) indicating that BTVET institutions lack instructional material, and infrastructure like lecture rooms, teachers' houses, workshops, tools, equipment, books and libraries. It is my submission that since VET is a practical oriented kind of education, its success is therefore dependent on the presence of tools, equipment and materials and if these are lacking in institutions then the learners can not attain what is expected of them. The insufficient training equipment and materials entails the teachers to employ a theoretical mode of delivery which hold back proper skills acquisition. As a reuslt the graduates cannot acquire the required competencies demanded on the labour market. Furthermore, based on my experience I have observed that there are some VET institutions which offer training programs to which they hardly have training equipment.

This I experienced at the institution where I carried out my school practice during my training at Kyambogo University and at a private institution in Kampala where I taught on part-time basis after completion of my studies at Kyambogo. These two institutions offered the training of motor vehicle mechanics without a motor vehicle repair workshop section and there was no equipment relevant to such a training. I have learned, from the various study reports conducted on VET in Uganda that such a state of affairs has been and still prevails in many institutions but with the concerned authority seem not bothered.

Based on my short experience in the taeching of electrical engineering and what I hear from colleagues in other fields of VET I have observed that VET education is more expensive than the general academia. Training equipment is expensive and in most cases materials once used cannot be reused. The issue of the high cost of VET is shared by (Nalumansi et al, 2002) who point out that effective BTVET is relatively expensive compared to general academic education. With this in mind, it implies that even the government cannot afford to equip its training institutions. Therefore, it is my submission that if the government cannot support its VET institutions, then for the privately owned institutions which operate on meager resources from the training fees levied on trainee there is no doubt of them being in a sorry state. Where government and private owners have put in efforts to stock VET institutions with training equipment, it is my observation that equipment seem to be obsolete. Consequently learners train and practice on obsolete equipment which does no longer exist in the workplaces. Therefore, I must point out that when such trainees enroll for work in organizations with modern technology, they are always challenged and this calls for on-job training if they are to work with them effectively. Although this may be possible, employer organizations find it rather costly in terms of finance and time. On the other hand however, the trainers who would be in position to design and produce models and mock-ups for use in place of the expensive equipment are also not empowered to do so during their training as trainers. Therefore they continue to train without the necessary equipment and instead only use the mouth together with chalk and the chalk board. To crown this, it is my submission that the inadequacy of training equipment and materials coupled with low levels of scientific thinking and initiative by teachers to improvise for the learning hinders VET to flourish to the expectation.

Instructional materials

Vocational education as a kind of education that simulates what transpires in the world of work requires to-date instructional materials. Taking change as a constant, it is my observation that the rapid changes in technology and that of the needs of the population are responsible for the need to always update instructional materials if VET aspirants are to meet the demands on the labour market. VET does not only require updated instructional materials but they must also be in sufficient quantities. The materials in question are in form of reference and reading books, journals, computer and internet services among others.

The Uganda Association of Private Vocational Institutions (UGAPRIVI, 2004, p. 7) pointed out that:

> Little attention is given to organizing the teaching material, up grading of taught information, syllabi or curricula in VET training institutions and some of the information taught was found to be dating back to 30 years ago.

Based on personal experience, when I enrolled to teach at St Josephs Technical Institute Kisubi in the electrical department, the academic registrar presented to me the examination syllabus from Uganda National Examinations Board (UNEB) the national examining body in Uganda, as a guide to preparation of what I was expected to teach. From the examination syllabus, I observed that some of the stipulated items under the electrical engineering course were no longer valid compared with the reality of the time. During the course of my teaching, I was very much surprised to learn that there was no designed curriculum for diploma program for which I was a teacher. This was a signal to me that a reasonable percentage of what is taught is not coordinated and also out dated a situation affirmed by (Kikomeko, 2010, p. 64), who pointed out that:

> Findings from the expedition at NCDC in 2009 done by a group of masters students of vocational pedagogy from Kyambogo University of which I was part, revealed that NCDC has the responsibility of developing curriculum but it had just started working out a plan on how to go about the exercise, a confirmation that no curriculum has been developed for VET institutions. However, NCDC certifies curricula developed by individual institutions in the field of VET.

Reflecting on the above statements, I get an impression that very little has been done by NCDC in developing new and relevant curricula as well as reviewing the existing one. The use of outdated curriculum is also shared by (Liang, 2004, p. 40) who points out that much of what is taught is a Ugandan adaptation of the old Oxford/London syllabuses of the 1950s.

VET trainers

Based on experience during my undergraduate studies at Kyambogo University, and that I acquired during my visits to training institutions and workplaces in Norway and as a trainer I have observed that VET trainers need to be practicing engineers, technicians, artisans or craftsmen in the world of work. Reflecting on the situation in Uganda I observe that VET institutions have trainers who are not practicing their craft. The majority trainers pursued technical education programs and later were enrolled as trainers in VET institutions without industrial work experience. Coupled to the above, these trainers do not have the required pedagogical[13] knowledge and skills thus rendering them less competent. The issue of less competent teachers in VET institutions is pointed out by (Nalumansi et al, 2002), in their study report on the need for modern BTVET entitled; "*Matching Social Needs and Economic Requirements of 2002*"[14] where they revealed that VET institutions often have poorly trained staff (instructor and managers) an indicator of low academic levels. It is my interpretation that such teachers employ unprofessional instructional methods and practices which do not fully prepare trainees for the world of work. This is also shared by UGAPRIVI (2004) which pointed out that some teachers in VET institutions use trial and error methods of teaching[15]. Although VET is expected to be conducted mainly through learning by doing for mastery of predetermined skills by the learner, the commonly used methods are synonymous with those used in general academic education a situation that is parallel to VET aims. Based on experience, teachers always tell their learners what to learn. Learners are accorded little chance to reflect and build upon their past experiences in an educative manner. Generally, learning is more or less teacher-centered where a teacher is regarded as a small god and a source of knowledge for one's success in life. The teaching methods practiced by VET teachers are branded old fashioned as pointed out in the National Development Plan 2010/11-2014/15 (Uganda, 2010, p. 218). In addition to the methods being old fashioned, the learning is characterized by high levels of individualism and competition all this accruing from the examination-oriented system of education prevailing in Uganda. It my observation that the spirit of individualism is natured by the teaching methods that are employed by the teachers in

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[13] The majority of instructors and teachers are tradesmen who have never undergone a professional curriculum that entails them to train others.

[14] For more details, refer to a study on the need for mordern business, technical and vocational education and training (BTVET) under the theme Matching Social Needs and Economic Requirements of 2002.

[15] For more details: see UGAPRIVI Training Needs Assessment Survey of 2004.

vocational training practice[16]. Personally, I find the training so traditional and characterized with a lot of theoretical learning coupled with memorization of facts that are asked for, in the examinations. Such approaches to teaching are pointed out by Lutalo-Bosa[17] (2007) who asserts that the conventional approach in teaching and learning which has been tried over the years has not, on many occasions, led to permanent solutions. Indeed for a long time the emphasis has been on theoretical knowledge.

Public perception of VET

Before the introduction of formal education in Uganda and in Africa, there was a kind of education which could be passed on from one generation to another. The kind of education observed the cultures, beliefs and norms of a particular society. It was intended for the development of the society and to preserve its culture. Every learning activity was mainly by doing where the learner and the teacher had to physically get involved in accomplishing a task by use of their hands, the mind and governed by the love for the activity (Ssekamwa, 1997). The results of any learning activity were tangible and the learner would feel great for any progress in the learning process. The members of the society accorded due respect to the seniors in the kind of learning activities, they also expressed their desires to attain such skills and knowledge. Human survival was directly associated with hard work using the hands, the head and the love for that activity.

However, it is my belief that the introduction of formal education made Ugandans to lose their pride with traditional education (indigenous vocational education) to general academic education. This implied that Ugandans were brain washed by the colonialists that any kind of education that leads an aspirant into manual work where one is exposed to bodily injuries is for the failures. This is reflected by the colonialist's introduction of parallel schools in the education system of the country, clearly indicating that vocational institutions are for the academic dwarfs while general academic education institutions are for the academic giants who at the end of the day would work as clerks in the offices of the colonialist (Ssekamwa, 1997).

With a reflection on the aforementioned scholarly view coupled with personal experience, I have observed that in Uganda, VET is a secondary rating in the country's education structure.

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[16] When learners are out for practical work each individual is expected to perform the assigned task as an individual without consulting one another. At that time there is almost no interaction as if the trainees are under a trial test. Really the practicum experience is a learning process and should not be treated as such.

[17] Lutalo-Bosa is a former Vice-chancellor of Kyambogo University since its formation after a merger of its three member institutions: Uganda polytechnic Kyambogo -UPK, Institute of Teacher Education- ITEK and Uganda National Institute of Special Needs – UNISE in 2003

This is reflected by the misery expressed by the youths who join VET institutions on their failure to pursue higher academic education after completion of their Uganda certificate of education or Uganda advanced certificate education levels. Although the government is putting more efforts to sensitise the populace about the significance of vocational education, majority persons in Uganda have persistently continued to regard vocational education and training as a path for academic failures. This perception is being persistently carried on by the establishment of more general academic institutions than the vocational institutions. Furthermore, the stigma associated with VET in Uganda is partially responsible the low levels of enrolment and the under development. This is reflected upon by the (JICA, 2007) in the report entitled: "*Vocational and Industrial Human Resource Development through TVET in Africa: Changing Assistance Environments and Human Resource Demands*" that socially-constructed and commonly-held beliefs dictate that technical and vocational education are lower in value than academic courses. This is an indication that although the colonialists rating of VET was low in Uganda, but the Ugandans are also responsible for its being at a low ebb because it is now over forty years since colonialist left the country. The low attitude towards VET in Uganda is also shared by Egau and Bachu (2009)[18] who pointed out that the implementation of the Universal Post Primary Education and Training (UPPET) by the Ministry of Education and Sports was after its recognition of the poor image and stigma associated with BTVET institutions. Egau and Bachu further emphasize that the skills training programs in vocational institutions do not attract students because of the stigma, the poor infrastructure and the lack of teaching and learning resources. Based on my experience with VET institutions in Uganda, I am in agreement with Egau and Bachu's observations about VET as already reflected upon under my reflections on training equipment and instructional materials.

It is from this observation that I suggest a need for us Ugandans to think otherwise and pave a way forward for promoting VET in the country's education structure.

2.3   Teaching and Learning under Vocational Pedagogy

2.3.1   Overview

In this section of the dissertation, I present my personal perception of teaching and learning before and after being introduced to vocational pedagogy and also reflect on the various scholarly views about teaching and learning under vocational pedagogy.

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[18]For more details refer to a report on Promoting Excellence in skills development presented for the 1st National Skills Exhibition and Competition held in Kampala Uganda from 6th -9th August 2009.

2.3.2 Personal perception of teaching

Based on the nature of the education system in Uganda I regarded teaching as the management by the teacher of the teaching and learning situation which involves: pre-active decision making of planning, sourcing, designing and preparing learning activities; a direct interaction between the teacher and the learners; and finally pro-active re-direction involving evaluation and redesigning. This understanding of teaching creates a boss-subordinated relationship in which a teacher is placed as a 'boss' and assumes full control of the teaching and learning process while the learner is positioned as a 'subordinate' who is expected to listen, receive, memorize and reproduce the information provided by the teacher when subjected to examinations. A learner in this respect is a passive element in the entire process with one task of memorizing what is given by the boss in preparation for its reproduction once called for, implying very little is consolidated by the learner. Such a situation is reflected upon by (Dewey, 1997, p. 81) who points out that the accumulation and acquisition of information for purposes of reproduction in recitation and examination is made too much of knowledge. In this respect, I observe that knowledge which is not related to real life situation may be rendered of less value by the recipient. Furthermore, it is my belief that acquired knowledge if not put to proper use, but for reproduction in examination is no knowledge. It is also my observation that such knowledge is retained for a short period of time and the learning process is characterized by limited cooperation amongst learners as everyone struggles to emerge the best.

With the exposure and experiences I acquired while pursuing a masters degree in vocational pedagogy, I realised that the aforementioned perception of teaching is synonymous with the banking system, where one deposits a sum of money at one time and in case of a need he withdraws part of it. The banking concept of education is put forward by (Freire, 1996) as briefly reflected upon in the following text.

Freire closely analyzed the teacher-student relationship in the teaching and learning process and reveals a narrating subject (teacher) and a listening object (student). He points out that a teacher uses the word of mouth and tells the learners the little he has about an item while detaching it from the reality. In the process the learners are not provoked to have deeper understanding of it. Learners are not expected to question but to receive and memorise what is given thence classifying them good learners.

In this respect therefore, Freire asserts that education becomes an act of depositing, in which the students are depositories and the teacher is the depositor.

Instead of the teacher communicating, he makes deposits which the students patiently receive, memorise, and repeat (Freire, 1996, p. 53). This description of education is regarded as the 'banking' concept of education, in which the scope of action allowed to the students extends only as far as receiving, filling and storing the deposits.

Reflecting upon Freire's description of the banking concept of education, it is my submission that:

- It encourages 'rot' learning since it limits the learners to receiving, filling and storing by mechanically memorising the information provided by the teachers.
- It places a teacher into full control of the teaching and learning process since his role is to regulate the way the world 'enters' into the 'students'.
- It also renders a teacher as a sole assessor of learning with no opportunity for participation of the learners.
- It puts a teacher at a risk of solely organizing information that is considered constituting the true knowledge with which to 'fill' the students.

Relating the above observations with my previous experiences as a teacher, I recall many instances when learners would dodge my lectures or simply walk out of the lecture session. This could have been an indication that either the content or the mode of instruction did not encourage them to learn. I must admit that the teaching and learning I encountered while still a student, in my practice as a teacher as well as the prevailing situation in most learning institutions in Uganda still adheres to Freire's banking concept of education.

2.3.4 The Teacher's Role

Based on the knowledge and the skills I acquired during my studies at HiAk, I realize that the role of a teacher in this teaching-learning process is beyond what I previously had. A teacher is like a mother to a child who must ensure that the child is well natured for proper growth. In this respect a teacher's role is to ensure that a learner achieves what he is intended to achieve. A teacher shows the way and the learner ventures to find out what he wants. A teacher must by all means empower the learner to achieve.

I addition, I also perceive a teacher as a counselor whose role is guide one out of a challenging situation. With this therefore, a teacher gives guidance to someone in constructing learning, knowledge, skills and attitudes development as well as values as promoted by (Inglar et al, 2002, p. 19). Under such a situation, it is my observation that the obligation of learning is shouldered by the learners themselves. In doing so, the learners take the initiative

to learn, carry out trials and discover many things on their own with the teacher taking responsibility of developing this initiative in the students.

The aforementioned view about counselling is also shared by (Lauvås and Handal, 1990) who argue that to counsel is to help another person to make connections between values, theoretical knowledge and own experiences of or from everyday life, not in general, but in connection with each person's thinking and action in a specific situation. Reflecting upon Lauvås and Handal's description, I observe that a learner is only guided to develop his/her line of thought through self discovery and experience. Furthermore, learning through this approach facilitates independent thinking thereby reducing over reliance on the teacher for ready information as the practice is in Uganda's education system.

My reflection on a teacher as a mother brings forward a close relationship between a mother and a mentor where the work of a mentor is also to empower one to success. (Inglar, 2001, p. 25) defines mentoring as an organised meeting between equal colleagues in an atmosphere of trust, support and challenge with the aim of creating reflection. In this regard, it is my observation that Inglar's view about mentoring emphasizes creation of reflection. Personally, I appreciate the role of reflection in the learning process. Through reflection a learner is able to visualise the knowledge obtained from learning, relates with past experiences and thereby think up means of improving upon such learning and at the same time develop critical thinking skills. It is my submission that learners need such kind of skills for application in problem solving which leads to new knowledge creation.

Based on own experience with my mentors at HiAk, I perceive a mentor as an experienced advisor and supporter who advises and guides a younger or less experienced person to develop own knowledge as he learns from his actions. At HiAk, mentoring encouraged me to learn from experiences as I was at all times and all stages fully engaged in my learning. On my arrival at HiAk for the master's programme in vocational pedagogy, I was so much encouraged by the mentor to whom I was assigned. I was requested to design a draft plan of what I wanted to concentrate on for the two year study period and how I would wish to go through it. This was a motivation to develop an inspiration of studying since I was to concentrate on items of interest in my career to the extent that even when the spirit was low, the inner drive and desire to obtain satisfaction from my efforts kept me going. With this experience, it is my humble submission that in the teaching and learning process, a mentor helps a learner to develop the learning abilities through sharing opinions and reflections so that the learner reaches his zone of proximal development as described by Vygotsky.

Vygotsky (cited in Mjelde, 2006, p. 94) describes the Zone of Proximal Development (ZPD) as:

> The distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers.

Whether a teacher, mentor, counsellor or a colleague, can help a person in achieving his/her ZPD by organising learning tasks that incite one to think and trying various options aimed at obtaining appropriate solutions to the assigned tasks. This idea is also shared by (Harry, 2001, p.56) who points out that through acting on things in the world, we engage with the meaning at those things that are assumed with in a social activity. As humans, we both shape and we are shaped by things a process that takes place within the zone of proximal development.

Relating with the above, it is my submission that for effective teaching of a vocation, the one in a position of a teacher should always allow learners a chance to engage in the real work tasks while interacting with one another. In support of this is Moll (cited in Harry 2001, p.56) who also stresses that the child's active involvement in finding new means to solve a problem is reflected in the ZPD concept. Based on Moll's argument, I assert that as teachers, we should come into play only when learners seem to be failing after a series of trials. This will clearly enable them to relate the theories and principles upon which the given tasks derive their operation and allow them opportunity to build their own knowledge so as to attain the zone of proximal development.

2.3.5   Learning under Vocational Pedagogy

Unlike with teaching where personal experience is key; my understanding of learning is directed associated with the behaviorist's line of thought. Behaviorists perceive learning as a change in response or behavior involving some degree of performance caused partly or wholly by experience and teaching[19]. In this perspective, behaviorists assume that learners will work hard on those tasks for which they secure a positive reward of some sort and will fail in tasks that yield punishment as pointed out by Bandura and Skinner (cited in Johnson & Johnson, 1999, p. 188).

Reflecting on the behaviorist view of learning, and borrowing a leaf from own experience, learning in this sense entails a teacher to adopt both positive and negative rewards to entice

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[19] http://www.learning-theories.com/behaviorism.html. Retrieved on 9th may, 2011

learning. Learners under such situations are compelled to learn mechanically without the inner will and in most cases the experiences acquired under such conditions are short lived. Based on own experience during the time of my lower education, the common rewards were teachers' comments such as "very good, very poor, and associated with mark scores leading to grades. Referring to the education system of my country which is examination oriented, the kind of learning there-in reflects a high level of memorizing and internalizing as already reflected upon. My experience with memorization, shows that a few hours after the examination, a large percentage of what was in memory of the learner is lost and never to be recalled for use in future.

Current personal perception of learning

With the exposure, the knowledge and skills I acquired during my study of the master's degree in vocational pedagogy, learning is beyond memorization and internalizing of facts. Learning involves a reflection on past experiences to establish how the past can be integrated in the present to develop new knowledge required to solve challenges of life. It further involves high level sharing of experiences and putting the developed new knowledge to practical use. With this, I certainly commend a change in the current learning approaches under VET in Uganda. There is an urgent need to adopt alternative approaches to learning that promote the learners' involvement in constructing their learning as they socially interact with one another. In this respect, I would like to appreciate the contributions of the various concepts and theories under vocational pedagogy as analyzed in the following text which would effect a change in the learning process in my country Uganda once adopted.

2.3.6   Experiential learning and learning by doing

Dewey (1997, p. 73) points out that to learn from experience is to make a backward and forward connection between what we do to things and what we enjoy or suffer from things in consequence. He further emphasizes that under such conditions, doing becomes a trial an experiment with the world to find out what it is like whereas the undergoing becomes instruction, that is, discovery of the connection of things.

Based on the great Roman leader Julius Caesar's proverb that 'Experience is the teacher of all things'[20], I perceive experience as a practical situation an individual has gone through in life. According to (McKenzie, 2005) experiential learning is learning that facilitates the exploration and utilisation of the diversity knowledge and perception in an individual, from

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[20] For more information refer to http://www.phrases.org.uk/bulletin_board/21/messages/1174.html down loaded on 13th April, 2011

which he/she makes new sense of its opportunities so as to be able to design innovative actions that enhance the robustness of an organisation's relationship.

When I reflect on the way I learned house wiring, I observe that it was through experience that I used to go through while with a colleague at the various installation sites. The personal initiative of trying out things which I used to do with a colleague was an empowerment to learn the practice. With time I managed to master a series of scenarios involved in house wiring. Such a practice of learning is also shared by (Bjerknes 2002, p.8) who argues that experience is built through interaction between the individual and the environment and is enhanced when an individual acts together with others at least in a social context.

Reflecting upon the aforementioned scholarly views, coupled with own experience before and during my study period at HiAk, it is my submission that this kind of learning is highly practical and requires physical personal involvement. This involvement entails the aspirant to do and discover things around him and reflect upon the knowledge generated.

In agreement with experiential learning is (Kolb, 1984, pp. 26-27) who also describes learning as a process whereby concepts are derived from and continuously modified by experience. In my understanding Kolb indicates that knowledge is continuously derived from and tested out in the experiences of the learner.

Experiential learning appreciates the constructivist approach of Jean Piaget and Lev Vygotsky, however, their concepts are criticized as being uni-dimensional. The basis under constructivism is an understanding of the learner as able to construct his/her own knowledge and competence.

Constructivists put it that learning is not mere understanding the "true" nature of things, nor is it remembering dimly perceived perfect ideas, but rather a personal and social construction of meaning out of the puzzling array of sensations which have no order or structure besides the explanations which we fabricate for them[21]. This therefore implies that a learner employs past experiences to reflect and construct personal and social meaning of a scenario at hand.

Piaget (cited in Bjerknes, 2002, p.13) regards learning as structuring of experiences that involve the process of adaptation, assimilation and accommodation. In this respect, Piaget describes adaptation as construction of new knowledge based on the already existing knowledge and experiences in an individual. This is an assertion that one's former knowledge and experiences are a contributing factor to his/her new learning.

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[21] http://www.exploratorium.edu/ifi/resources/constructivistlearning.html   Retrieved on 10. 08.2010

Turning to assimilation as applied in the learning process by Piaget, it is the integration of new knowledge into the already possessed experiences and knowledge. It is my submission therefore that without previous experience it is difficult for one to think of a new situation. There must always be a foundation onto which the wanted new knowledge is developed. On the other hand, human beings tend to reject knowledge that is abstract and whose application is far from their life situations.

Reflecting on accommodation according to Piaget, is a process of re-organizing past experiences for incorporation in the new knowledge. Based on Piaget's view of learning, it is my observation that there is hardly any learning without past knowledge and experience as a point of departure. The three aspects of learning as put forward by Piaget are interdependent and all governed by experience as a pivot.

Bruner (1960) though seem to differ from those who advocate for experiential learning, but somewhere in his description emphasizes learning as a transformation process of manipulating the existing knowledge to fit new tasks. In this point of view, I agree with Bruner since it is evident that a person integrates the newly acquired information into the past experiences and reorganizes a combination to suit the new situations. Further, the act of integration reflects experiential learning promoted by the advocates of vocational pedagogy.

Although silent as to what kind of evaluation is required, Bruner clearly points out the aspect of evaluation in his description of learning. In a similar manner, vocational pedagogy advocates put emphasis on evaluation as an avenue for ascertaining learning and mastery of the acquired knowledge and the associated skills.

2.3.8   Learning by discovery

Freire (1996, p.14) describes learning as a way of discovering oneself and a potential to name things around us. In this respect, people if empowered are capable of making their own internalization and analysis of the world around them and make use of it as they interact with others. Learning in this sense is by letting people discover things on their own, in a social set up with others. If an individual is provided with the proper tools and materials, then he/she can gradually perceive the personal and social reality and the contradictions in it. He/she becomes conscious of his or her perception of that reality, and deals critically with it. This nature of learning supports the student-centered approach to learning where learners try out tasks and are enabled to deal with the reality of learning how things work by themselves.

Through experience during the time I was pursuing the masters programme in vocational pedagogy, I proved that Freire's approach to learning is real and effective.

I was given all the necessary material for study and I was empowered to read the various books, and made an analysis of each aspect based on personal experience. Although the beginning was difficult like any new venture, gradually I got used to the approach and I benefited a lot. It is a good and satisfying experience when one learns many new things through self discovery. Today I regard myself an achiever every time I get new ideas incorporated in my experiences and reflecting upon them to improve myself. In that respect, (Freire, 1996. p.15) points out that if an individual comes to a new awareness of self, he or she acquires a new sense of dignity and is stirred by that new hope.

Relating to Freire's approach of learning by discovery is a view by (Dewey, 1997, p.75) who points out that every experience with a meaning has some element of thought and that a phase of cut and try is inclusive in all our experiences. Reflecting upon this view, it is evident that wherever we succeed, the process to success has phases of trial and failure until a workable procedure is achieved. Although Dewey does not bring it out as learning by discovery, but it is my opinion that the phases one goes through to success reflect a high level of discovery. At this point I wish to make my submission that experiential learning, learning by doing and learning by discovery only differ by nomenclature.

2.3.9   Learning as a Social Activity

Lave and Wenger (1991, p.14) describes learning as a form of social co-participation where the social situation in which it occurs is a focal point. The individual learner acquires the skill by actually engaging in the process, under the attenuated condition of legitimate peripheral participation. This process of skills attainment is highly interactive and productive. Learning is by participation in a particular task. One must get fully involved in the real act of the task in order to learn it, an emphasis of vocational learning

The view that learning is a social activity is also shared by (Johnson and Johnson, 1999, p.187) who brings forth the social interdependence theory. Under this the two scholars emphasize that the level of cooperation exhibited in the structure of society determines how individuals support one another in all aspects of learning and also determines the outcomes. Where society members are interactive, these members encourage and facilitate each other's efforts to learn and the reverse is true. In this respect, (Johnson and Johnson 1999, p.204) assert that cooperative learning promotes a greater use of higher level reasoning strategies and critical thinking than do competitive or individualistic learning strategies.

In relation to afore analysis is the structure of the indigenous education system where learning is associated with living together as a society.

Through socialisation one's mental ability to perceive things enlarges, individual experiences are enlightened and the thinking is stimulated and enriched. This view is supported by (Dewey, 1997) who points out that a man living alone would have little or no chance to reflect upon his past experience to extract its net meaning. The implication of this is that when we socially interact with others, we share and reflect upon our experiences and this creates an insight in us to think deeply and reflect on them.

Through experience coupled with the different scholarly views about learning, it is my belief that any person living in isolation, not exposed to other peoples' ideas and experiences has no much in his learning environment to compare and interact with, refer to, and reflect up on. Such a person will always think that what he/she knows is the truth and the reality. This nature of learning is also supported by (Lave and Wenger, 1991, p.15) where it is asserted that learning takes place in a participation framework, not in an individual mind.

Learning as a social activity is also shared by (Mjelde, 2006, p. 23) who describes it as a process that takes place through activity and collaboration. In this regard the process of carrying out an activity is the act of learning while collaboration implies a presence of more than one person hence a social activity. Learning occurs by power of examples, where the teacher exemplifies the competency of the activity that the learner is trying to carry out on her/his own while the learners' co-operation on learning tasks constitutes a real learning resource as they learn from one another.

Also in support of learning as a social activity is (Senge, 2000, pp. 3-5) who argues that learning is at once deeply personal and inherently social. It connects us not just to knowledge in the abstract, but to each other. Reflecting on the aspect of inheritance, I observe that as humans we tend to engage in ventures which at one time were practiced by our grate parents or friends. It is rare to see children take up ventures that have never existed in a family or close to it before, an indication that learning is inherently social. However, since the in-depth self is also paramount in learning, Senge's perception of learning may be inappropriate to some extent because new and strange things need to be put in place which must be a result of discovery. Promoting learning as a social activity is Vygotsky (cited in Harry, 2001, p. 18) who also shares a similar view that it is through the mediation of others, through the mediation of the adults that the child undertakes activities. With this he emphasises that an individual becomes aware of him or herself only in and through interactions with others.

Based on the above scholarly views coupled with personal reflections and experience, it is my submission that the act of setting up of learning institutions where learners come together reflects that really learning is a social activity.

Although one would perceive learning institutions as a way of pulling resources together for communal utilisation, but the extraordinary rich people with sufficient resources would have their children educated as individuals in a one-to-one environment. Since this is not the practice, then coming together as a society is paramount to learning.

2.4   The vocational didactic relations model

Tobiassen (2002) puts forward a vocational didactic relations model to show the interdependency of the elements which make up learning. This relations model for planning and evaluating the vocational pedagogies consists and relates six phenomena namely: learning experiences, resources, objectives, content, learning process and evaluation. Through experience and by comparison, the vocational didactic relations model adopted in Norway is similar to the scheme of work employed for the preparation of the teaching and learning that is commonly used in my country Uganda. However, I have observed that the two are perceived and employed differently. My experience with the scheme of work is that its preparation involves: identifying the items for learning; making an analysis of them into suitable units for instruction; sequencing these units in a logical order; identifying the suitable methods together with the appropriate learning aids and finally identifying the possible sources of information about the identified items. From own experience, all the preparation is done by the teacher without the learners' involvement. In such a case, the teacher is regarded the sole source of knowledge and is not questionable by the learners. Turning to the relations model as employed in Norway, the preparation of the learning activities is done in collaboration with the learners to whom it is subjected. The learner is a focal point which is different from the scheme of work's preparation in Uganda. It is my observation that planning learning without the learners only caters for the teachers' interest and totally omits those of the learner. As a result, learners fail to bring out their previous experiences related to what the teacher intends to teach.

The practice of involving the learners at the planning stage of any kind of learning empowers the learners to construct their learning to the level of assessment. It further lends a hand to a teacher to have a holistic learning process which is inclusive in the sense that all that is required is unveiled by the learners beforehand. The interdependency of the elements of learning as put forward by Tobiassen in the didactic relations model is shown in the figure following this text and a detailed description of its operation is analyzed thereafter.

Vocational oriented education
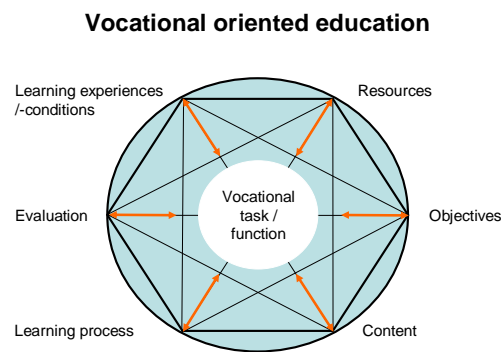
Figure 1: Vocational Didactic Relations Model

Learning experiences

To begin with, I must acknowledge that every student comes with him/her a set of physical, psychological and social conditions, which have an effect on his/her learning. With physical conditions, I refer to their natural abilities to see, hear, talk, feel and sense. The psychological aspect addresses elements such as attitude, motivation and knowledge where as the interpersonal skills such as the learner's ability to work in group in cooperation with others forms part of social conditions. (Tobiassen 2001, p. 45) points out that learning experiences comprise of knowledge, skills, attitudes and values learners possess. He further asserts that it is important for the teacher to take the students' learning abilities into consideration when planning how to organise the students' learning and teaching activities. Reflecting upon my experience with the scheme of work, I would plan the learning activities in isolation of the learners with a focus of meeting what is dictated by the syllabus and without considering whether the content benefits the learners. The exposure to the different approaches to learning during my study period at HiAk was an eye opener to appreciate that learners join learning institutions well equipped with various experiences. It is my submission that these experiences need high level consideration as they form a foundation for effective teaching and learning which is inclusive. Furthermore, it is also my observation that if learners' experiences are sought for prior to tackling the lesson's content at the time of actual teaching, in one way or another, learning activities are well directed. This I attribute to the fact that learners will reveal the knowledge they already have about the item at hand a foundation on which the lesson can be developed. On the other hand it is also a kind of motivation for learners to fully participate in their learning.

In this respect, (Dewey, 1997, p. 84) points out that learners are systematically led to utilize their earlier lessons to help them in understanding the present one, and also to use the present to throw additional light upon what has already been acquired thus promoting experience as a better teacher.

Resources

Learning resources are all those items which may be physical such as infrastructure, tools and equipment, other materials which could be durable such as such as reference books, magazines, journals, curriculum documents and those in form of soft-ware that in any way facilitate learning and those that are non-durable such as materials for use. Also referred to as educational frames, (Tobiassen, 2002, p. 46) asserts that the frames can either be a limitation for the teaching or can give new possibilities for learning situations. Reflecting upon Tobiassen's view, it is my observation that once there is inadequate materials for use in the learning process, then there are many possibilities of learning not to take place. Based on experience as a teacher of VET, I realise that resources particularly those needed for hands-on learning are very essential if learning is to be realized. Their presence makes them to develop the love for the subject, visualise what is abstract, and enable them to develop critical as well as scientific thinking. Furthermore, the presence of appropriate learning resources arouses learners' curiosity and interest in learning. However, if resources are inappropriately used they may also destruct the learners' interest. Therefore the user must be well conversant of the operation and application of the resources for use at a time if effective learning is to be realised. At the time of applying a resource at hand, learners make reflections on the related items they have previously encountered and this is an impetus for them to indulge in further discoveries of the very items hence improving on their scientific thinking. This view is shared by (Dewey, 1997, p. 80) who emphasizes that during learning, there must be more of actual objects and more opportunities for engaging learners in doing things and in discussing what arises in the course of their doing. From Dewey's view it is my observation that as learners do things, the previous learning experiences possessed lead to several spontaneous inquiries and in the process advanced, varied, and ingenious solution are achieved.

Objectives

Johnson and Johnson (1999, p. 3) describe learning objectives as the desired future state of a learner in demonstrating competencies or mastery in the subject area being studied. In this, the phrasing of the objectives must reflect specificity of how the learning should take place. Reflecting on Johnson and Johnson's view, I get an impression that objectives are a guide to all other activities in a learning session since they specify the way in which both the learners

and a teacher are expected to interact in the learning process. However, from own experience, this is only viable if the objectives are well communicated, well understood and their significance in the learning appreciated by the learners. Personally, during my learning I am always more focused and motivated to participate in activities from which I expect to derive satisfying experiences which are deemed beneficial for mental, social and economic development. In this regard, (Johnson and Johnson, 1999, p. 152) asserts that if an objective is valid to all learners, they in turn perceive the associated learning tasks worthy and relevant.

In my opinion, objectives are pre-determined expected outcomes of any venture. With this in mind, objectives stipulate the skills and knowledge learners are expected to master during their learning process and eventually employ them to accomplish life tasks where sought applicable. Although objectives are a guide to the learning, but when I reflect on my learning before I joined teacher training, it is my observation that majority practicing teachers in my country Uganda rarely develop and communicate learning objectives to their learners. In instances where it is done, their phrasing does not reflect what is expected and this is not uncommon with VET teachers since the majority of them are not pedagogically trained. As a result, learners do not commit their efforts in realizing those objectives thus their significance in the teaching and learning process is in most not realized. This observation is also shared by (Johnson and Johnson, 2006, p.70) who point out that once objectives are vaguely stated they may fail to steer the actions of learners. Based on the foregoing observations, it is my submission that the formulation of learning objectives to some extent be a joint activity involving both the learners and the teachers. Under such a state of affairs, the learners are made to own the construction of their learning and also commit themselves to achieve the objectives. The foregoing submission is shared by (Tobiassen, 2001, pg 46) who asserts that when the teacher wants the learners to be responsible for their own learning process, they take part in the process of stating objectives of learning. Personally I do not full concur with Tobiassen's assertion for a reason that a full involvement of the learners in this act is time consuming and reaching a consensus may be relatively difficult. However, I affirm that the act of teachers stating and formulating learning objectives with their learners enables them to build a joint sense of commitment. This is reflected upon by (Senge, 2000, p.72) who point out that in building a shared vision, together a group of people is eligible to build a sense of commitment and also develop the images of the future they want along with the values that are paramount in getting there as well as the series of targets they hope to achieve along the way.

Content

Referred to as subject matter, (Dewey, 1997, 85) describes content as ready-made systematized classification of the facts and principles of the world of nature and man. Reflecting upon Dewey's view it is my observation that content is developed by particular people and given out to teachers for passing on to learners. On further analysis of Dewey's view, it is my belief that pre-developed content is not relevant as the world is never static. People's needs are ever changing, the natural environment is also changing and the technology is also rapidly advancing to suit the peoples' needs. Therefore my understanding of content is all the identified items that are deemed relevant for learning with a purpose of meeting the peoples' challenges of the time. In addition to being worth learning, the content must also be relevant to all the stakeholders of an education system. This view is shared by (Freire, 1996, p. 77) who emphasises that content identification should be based on the country's faculty resources, areas of expertise, needs, expectations of stakeholders such as employers, expected skills for the future as well as advances in technology. In this respect I would like to argue that every practicing teacher must be knowledgeable and skilful at developing of content of his/her area of specialisation so as to boost what is prescribed in a curriculum if available. Furthermore, for learners to own their learning, I suggest that the practice of content development should not leave out the learners as it helps them to build their own knowledge and experiences and to identify and emphasize the key aspect in the content. Although content is not at the centre point of the relations model, but the vocational task reflected at the centre of the model, is in reality the content. Therefore, content is the pivot for any learning activity since it is the one that leads to the generation of learning experiences, identification of appropriate resources for use and the reasons as to why the kind of learning is taken up as well as the process to be observed.

Learning process

It is my understanding that a process is an on-going activity in which the various stages of any venture are clearly exhibited. Therefore a learning process signifies the act of teaching and learning with all its associated activities. It is an inclusive exercise during which the learners' and teacher's actions portray the learning strategies employed by the teacher in a classroom environment. As an activity that governs learning, it should be intensive, with a variety of methods and techniques to cater for all learners. For that matter it is my observation that the learners' participation in learning is dependent on the teacher's creativity in organising a variety of activities and methods for their support and it is a key to their success.

In support of the foregoing view is Tinto (cited in Johnson and Johnson, 1999, p. 209) who argue that the greater the degree of students' involvement in their learning experience, the more likely they persist to graduation and this is reinforced when the students socially involve, integrate and bond as classmates. On analyzing Tinto's view, I would like to point out that the learners' involvement in learning must always observe the pre-determined objectives if they are to yield results. Furthermore, in addition to selected methods, a teacher is expected to have a variety of techniques to motivate the learners as well as making the learning interesting and lively. This state of affairs is promoted by (Dewey, 1997, p. 85) who argues that the methods a teacher is to employ need to be considered at the planning stage of the lesson so as to facilitate its acquisition and possession. The learning process is only complete once learning has been ascertained by the interested person(s) which through an evaluation process.

Evaluation

According to (Johnson & Johnson 1999, p. 6) evaluation is an aspect in a learning process that focuses on a follow up of the progress of learning of a learner. To my understanding the element of progress pointed by Johnson & Johnson is reflected at all stages in a learning process. Based on own experience, three stages of initiation, development and conclusion are considered at evaluating of learning which I call check points in the learning process. In my opinion therefore, evaluation is the process of checking on the learner's progress to ascertain whether learning takes place or not and to work out means of alleviating the situation. I reflect on these check-points as the evaluation processes. (Akello & Kagoire, 1996) describe evaluation as having three stages namely: diagnostic evaluation, formative evaluation and summative evaluation. Reflecting upon Akello & Kagoire's description, the aspect of diagonising implies calling for learners' experience in form of already acquired knowledge and skills about a study item at hand. It is my belief that diagonistic evaluation is a point of depature for effective learning as it provokes the learners and puts them on board ready to learn. Turning to the formative stage, a learner is expected to be checked upon in the process of his/her learning. This kind of evaluation is reflected at the various stages in a learning session. In instances where challenges are identified say in methodology or resources, measures are immediately sought for and implemented for the learning to progress. Formative evaluation is support by (Johnson & Johnson, 1999, p. 157) who argue that it is essential for a teacher to regularly monitor and intervene in learner's learning process to assess the progress. This practice enables the teacher together with the learner to identify the challenge and make a reflection on the previous experiences so as to come up with a solution.

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Through experience everything that has a beginning must have an end. Unfortunately learning has no end point not until the learner passes away from life. The end points in learning are reflected by the various stages in a learning period. In this respect, the end process of learning stages must be assessed and this is what Akello & Kagoire call summative evaluation. The term summative signifies wrapping up something. In this context, it is a stage in learning that is concluded by ascertaining what skills and knowledge a learner has mastered in a given curriculum. In my country Uganda the common means of conducting summative evaluation is by use of paper, pen and pencil a basis of awarding of marks and certificates. Reflecting on this mode of evaluation, I observe that during the learning process there is little learning that takes place instead a high level degree of cramming is exhibited so as to reproduce what was memorised on paper. For this reason, personally I do not believe in such a kind of evaluation particularly in the VET circles because in the world of work where graduates are awaited it is basically competence exhibition that is required not how much one can write about something.

In conclusion, I would like to bring it to the attention of the reader that as pointed out at the beginning of this section, the six elements in the didactic relations model are really interactive and interdependent. For one to operate, the others must be in existence implying that none of the elements can stand in isolation of the others so is the name relations model.

Chapter three

3.0   Methodology

3.1   Introduction

In this section, I present the methodology that I employed in the study. In the presentation, the following items are considered: The fieldwork planning which shows the proposed time schedule for the project, the type of research and the research design employed, the participants in the project, the research methods and tools, data analysis; data transcription, coding, presentation, discussion and analysis as well as data validity.

The research being participatory action research (PAR), I adopted the interview; informal conversational and open-ended, participatory observation and documentary analysis as methods of data collection and a descriptive approach to research design was employed. For the effective use of the mentioned methods, I employed voice recorder, video camera, digital camera, reflective logs and group evaluation minutes as research tools. Furthermore, the participants in the project comprised of practicing instructors from member institutions of UGAPRIVI, teacher trainees and one lecturer of DTTE at Kyambogo University. With data analysis, I transcribed, coded the findings and presented them in themes and subthemes following the objectives addressed by the study.

3.2 Proposed Field Work Plan

The table below shows the fieldwork plan that I had proposed for the implementation of the masters thesis project 2010-11

Week	Date	Activity	Contact place or person
First Phase			
1	15th – 25th June	Meeting the Head of department, head of section and teachers of Technical Teacher Education at Kyambogo University (KyU).	
2 & 3	28th June – 9th July	Meeting the willing teacher to reflect on the content of the project proposal.	Kyambogo University
4	12 – 16th July	Visitation of the field and scheduling for field work.	Nakawa vocational school , Namulanda and St. Joseph's Technical Institute Kisubi
5	19th – 23rd July	Visiting school 1	Nakawa vocational school
6	26th -30th July	Visiting school 2	Namulanda Technical Institute
7	2nd- 6th Aug	Consolidation and Reflection	
8	8th - 13th Aug	Visiting school 3	St. Joseph's Technical Institute Kisubi
9	16th Aug – 20th	Semester start for universities. Orientation week. Consolidating and reflection of the data obtained. Further planning with the participating teacher.	
Second Phase			
1 & 2	23rd – 3rd Sept	Meeting the students presenting the project proposal and planning accordingly	Teacher trainees and lecturer at KyU.
3, 4&5	6th – 24th Sep	Start the implementation of the project	Teacher trainees and lecturer at KyU
6	27th Sept– 1st Oct	Consolidation, reflection and assessment	
Three weeks	4th Oct -22nd Oct	Implementing the project. The successive period will be handled in a similar way	
One week	25th -29th Oct	Consolidation, reflection and assessment. This will be after each implementation stage.	
Two weeks	6th – 17th Dec	End of semester Examination	
Jan, Feb, Mar, Apr		Documentation of the research work	
May		Finalizing and submission of Dissertation	
June		Defending the Dissertation	

Table 2: Proposed field work plan fot the project work 2010-2011

The proposed field work plan above was subject to changes so as to take care of un-predetermined circumstances prevailing at Kyambogo University and in personal programs. In the first place, I had planned to hold meetings with the head of department, head of section and teachers of Technical Teacher Education at Kyambogo University (KyU) in the month of June and July but due to the school practice that was going on at that time; this was rescheduled to the beginning of semester one of the academic year 2010-2011 in August. Secondary, the situational analysis which I had planned to conduct from the Nakawa Vocational Training Institute, Namulanda and St. Joseph's Technical Institutes did not

proceed as planned. This was because of an alternative opportunity to interact with a number practicing instructors that was availed to me by UGAPRIVI I was selected as one of the facilitators of pedagogy training workshops.[22] I accepted the offer with a hope that this group of practicing instructors having undergone VET training and are now training technicians, had encountered similar experiences in the practice which were worth sharing to obtain solutions as advocated for by (Wangusa, 2007, p. 40). It was also my belief that working with the practicing instructors would create a multiplier effect based on transfer of shared experiences into their own practice. This is supported by (Kemmis and McTaggart, 2005, p.563) who argue that if practices are constituted in a social interaction between people then changing practices is equally a social process. In addition, working with a bigger group would enhance my understanding of the current situation in VET institutions on a broader perspective thus enriching the problem formulation as the basis for my undertaking the project.

Observing those two major changes, the project proceeded in two phases, with a few adjustments in time and activities in order to take care of situations at hand. In the first phase, was the situational analysis which was guided by a program drawn by UGAPRIVI. In this phase, I intended to obtain data that I expected to address the challenges faced by technical teachers in the teaching and learning in VET in Uganda, under objective one of this project. The second phase was directed by the participating lecturer and the teacher trainees' opinions and views regarding the project implementation as well as the university calendar of activities. In this phase my target was to experiment the vocational pedagogy approaches of teaching and learning on the teacher trainees. This aimed at obtaining data for objectives two, three and four of the project.

The implemented field work plan is as attached in appendix 1.

3. 3   Type of Research and Research design

3.3.1   Type of Research

Participatory Action Research (PAR) approach was employed in this study. Selener (cited in Reason and Bradbury, 2001, p. 1) describes participatory research as a process through which members of an oppressed group or community identify a problem, collect and analyze information, and act upon the problem in order to find solutions and to promote social and political transformation.

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[22] Pedagogy Workshops were organized by UGAPRIVI with an objective of equipping its member instructors with creative ways of involving the learners in the teaching and learning process, planning for the teaching through preparation of scheme of work and lesson plan as well as preparation of instructional materials. The workshop duration was three days and conducted in the months of June to August 2010.

Reflecting upon the foregoing description, I observe that Selener stresses the coming together of people with a common life challenge and share ideas to develop a solution for their progress. However, she does not clearly show the act of seeking for ideas from outside the troubled community which I think is vital in any kind of research.

Kemmis and McTaggart (2005, p. 563) regard participatory action research as a social process of collaborative learning realized by groups of people who join together in changing the practices through which they interact in a shared social world in which for better or worse, they live with the consequences of one another's actions.

Reflecting on the above description I concur with the dual in the aspect of collaboration which I believe is paramount in undertaking the challenge at hand. In this regard, teaming with practicing instructors, technical trainees and the lecturer at the technical teacher section would bring out the sharing and collaboration in search for the constructive ideas towards the problem under study.

The collaboration in the foregoing text is supported by (Gaventa and Cornwall, 2001: 74-75) who argue that those affected by the problem must always participate in the research process thus an appropriate research approach. In addition, PAR approach being action oriented is advantageous due to its focus not only on problem-solving but also on knowledge generation; which knowledge leads to improvement on my side as a researcher and those involved in the research process. My involvement in the problem solving, knowledge generation and documentation of the story of action as it unfolds was my point of departure to generate a living theory of practice. I derive this theory from the present best thinking which incorporates yesterday into today and holds tomorrow within itself as pointed by (Whitehead and McNiff, 2006).

Employing PAR as a research approach, my target was to collectively direct the research process in terms of the course material and project activities as supported by (Aagaard & Svensson, 2006, p. 56) who argue that PAR strengthens the interaction, information gathering, and decision making. This is also shared by (Whyte and Greenwood, et al, 1991: 20) who advocate for the researcher's collaboration with a part of personnel under the designation of "professional researcher," as this guides the whole process from the preliminary design to the presentation of results and their implications.

It is my observation that through PAR, knowledge is collaboratively constructed for the benefit of the society since it is the major concern. This mode of knowledge construction is shared by Hall as cited in (Reason and Bradbury 2001: 74) pointing out that participatory action research recognizes that knowledge is socially constructed and embedded.

Thus research approaches that allow for social, group or collective analysis of life experiences of power and knowledge are most appropriate. The range of approaches allowed for in this type of research enticed me to undertake it in order to develop a wide knowledge base.

Actions in the project

In regard to this project I undertook the following actions:

I carried out a situational analysis where I interacted with practicing instructors in vocational institutions under the umbrella UGAPRIVI. Together, we identified the challenges facing the teaching and learning in VET institutions and their possible solutions which we could implement as instructors. At this stage the emphasis was on methods of teaching that can be used to train a VET aspirant as a worker needed in the world of work.

Together with the teacher trainees and the lecturer, a similar task of identifying challenges in the teaching and learning in VET institutions was carried out and also possible solutions suggested. As a result, together we formulated the problem under investigation.

Together with the co-lecturer and the teacher trainees, we agreed and adopted vocational pedagogy approaches of experiential learning emphasizing learning by doing, group learning and the vocational didactic relations model. In so doing, a number of activities were undertaken and these included:

Documenting of learning experiences by both the teacher trainees and I derived from the learning sessions conducted and the project activities. These were documented in the reflective logs as shown in appendix 4 and 5 of the dissertation. In addition, participants employed these learning experiences in documenting their own reference notes.

The teacher trainees also transferred similar experiences in planning and designing the plans for implementation in their workplace as an avenue to improve on the challenges being encountered in their institutions.

We held group evaluation meetings during which the trainees were and guided in a series of activities as reflected in appendix 6 minutes of evaluation meetings.

Considering the five stage action research cycle by (Gerald Susman, 1983), I managed to complete one phase of the cycle. Together with my participants we diagnosed the problem, planned for the activities, implemented the actions, and conducted evaluation of the implemented actions and results were obtained. Below is the five stage action research cycle I based on to implement the project.
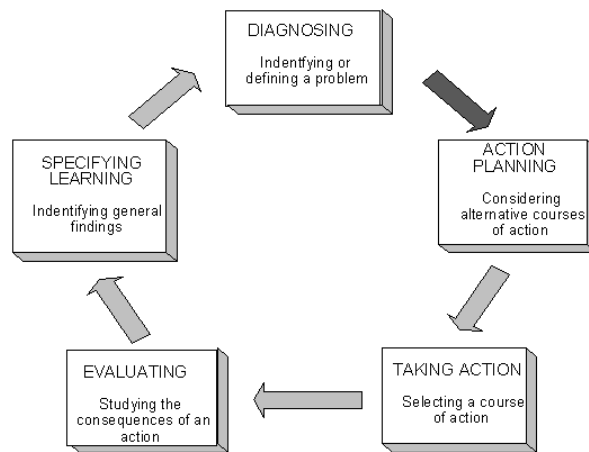
Figure 2: Action Research Cycle

3.3.2 Research Design

I employed a descriptive research design in a participatory action research in order to bring forth the empirical data and the story of action as it is and as it unfolds. (Miller & Salkind 2002, p. 20) write that descriptive survey is concerned with information generally obtained by means of interviews or mailed questionnaires and other sources which include reports or statistics. This is a justification as to why I employed the research design since the data was mainly in form of written descriptions of personal experiences and those of the participants. Most of the data was obtained through field notes generated from observing my actions and those of the participants and reflective logs; interviews; minutes from the meetings as well as documentary analysis. Other than written information, I also used other forms of data and evidence such as photographs, voice recordings and video clips in the study.

3. 4   Participants in the project

The participants were one hundred and ninety three (193). They included twelve technical teacher trainees pursuing a DTTE and in their first year of study; one technical teacher trainer at Kyambogo University; and one hundred and eighty practicing instructors. With the consent of the technical teacher trainees, summarized in the table below is part of their background information which I believe was relevant for this project.

Name	sex	Age range		Work experience (yrs)		Trade/ field of specialization
		20-25	25-30	Industrial/field work	Teaching	
Senscious	M		x	1	5	CJ
Stephen	M		x	2	-	EI
Moses	M		x	-	1	CJ
Gloria	F		x	2	1	TCG
Geoffrey	M		x	2	-	CJ
Richard	M	x		-	-	PL
Justine	F	x		3	-	TCG
Ronald	M	x		1	1	CJ
Laudel	M	x		3	1	PL
Simon Peter	M		x	1	-	PL
Francis	M		x	-	5	PL
Emmanuel	M		x	1	1	BCP

Table 3: Background information for the teacher trainees

CJ- Carpentry and Joinery

TCG- Tailoring and cutting garments

EI- Electrical Installation

PL- Plumbing

BCP- Block laying and Concrete Practice

The practicing instructors were from six regions of member institutions of the Uganda Association of Private Vocational Institutions (UGAPRIVI). The regions were: Eastern, West A, Central A, Central B, South West, Northern and West-Nile. (Refer to appendix I: Implemented Field work plan)

Participating Lecturer for DTTE

The technical teacher trainer at Kyambogo University is Joseph and is also a trainer at a VET institution; Uganda Technical College Bushenyi, and a practicing technician in the field of Electrical Engineering. Furthermore, he has served as a teacher in academic secondary education specializing in mathematics for a period of 20 years. At the time of this project, he was pursuing a masters degree in Vocational Pedagogy under the Noma project at Kyambogo University.

Joseph was my co-facilitator in the Pedagogy training workshops organized by UGAPRIVI. Together we directed the workshop activities and by his consent, he participated in conducting situational analysis for the project. He was resourceful in assisting me administer the open-ended interviews to the practicing instructors in the various regions where I intended to capture the necessary data for objective one.

Due to his commitment and desire of creating a fundamental change in the field of vocational education and training, Joseph willingly accepted to take part in executing the project at Kyambogo University. At Kyambogo; through team teaching, Joseph and I took responsibility of facilitating teacher trainees of year one in Introduction to Educational studies course with a focus of experimenting the vocational pedagogy approaches to their teaching and learning process. The process was intended to obtain data and evidence that would enable me realize the project objectives. I believe that his in-put was fundamental to this project as regards the time, guidance, knowledge and skills he exhibited in the project.

3.5   Methods and tools of data collection

In the data collection process, I employed three methods namely:

- Interviews
- Observation
- Documentary analysis

Greenwood & Levin (1998, p.9) urge that formal qualitative, quantitative and mixed methods are appropriate to differing situations in action research. Based on the preceding statement and the nature of my research, it was imperative to employ a mixture of the above stated methods for data collection. In the process of data collection, I developed and used different techniques. I monitored the learning and actions of self as well as those of the participants as I tried to influence change following my actions as pointed out by (Whitehead & McNiff, 2006). In this regard, I kept a reflective log and also urged the participants to do the same, together we held meetings and reflected on the new approaches to their learning and also encouraged them to read related scholarly views to have a better incite about the new approaches. To have empirical data I employed the following research tools:

Voice recorder

Video camera

Digital camera

Reflective logs and group dialogue minutes

The details of what method, associated tools and how I used them to collect data in order to generate evidence to support and test a claim to knowledge for my living theory is in the following text.

3.5.1 Interviews

Kvale and Brinkmann (2009, p. 3) describes an interview as a conversation that has a structure and purpose and involves a careful questioning and listening approach with the purpose of obtaining thoroughly tested knowledge.

This is also shared by (Sidhu, 2007, p. 147) who points out that interview stimulates the respondent to give an increasingly complete and valid set of responses that gives a broader foundation for the discussion. For that matter, I employed an informal conversational interview and an open-ended interview to collect data from the technical teacher trainees at Kyambogo University and the instructors from the UGAPRIVI member institutions respectively.

Informal conversation interview

The choice to use an informal conversation interview with DTTE teacher trainees was due to its flexibility since questions were emerging from the immediate context and were asked in the natural course of doing things as pointed out by Patton cited in (Mikkelsen, 2005, p. 171). Due to the nature of the teaching and learning interaction that was prevailing in the class, it was not necessary to have a set of questions to administer at the interview time but rather let the questions emerge and be built from observation as the situation unfolded. This in turn increased the salience and relevance of questions since they could be matched with individuals or circumstances. I used the informal conversation interview to obtain data concerning the technical teacher trainees' experience with the new approaches to their learning. I also used it to observe their reactions towards the new approaches during the teaching and learning process since they were obliged to verbally respond. The method was also instrumental at identifying the challenges to learning in VET institutions which led to the development of the statement of the problem for the project.

However, I required high level attention so as to capture responses that were appropriate and relevant for the study. For the required attention, I employed a voice recorder for details of the conversation which would later be transcribed and analyzed. I supplemented the voice recorder by a video recorder and still photographs to have well linked-up data.

Open-ended interview

Patton cited in (Mikkelsen, 2005, pp. 171-173) described open-ended interview as the type of interview where the exact wording and sequence of questions are determined in advance and all interviewees are asked the same basic questions. In this respect, I administered the kind of interview to focus groups of instructors of member institutions of UGAPRIVI during situational analysis in trying to identify challenges facing VET in Uganda. These instructors

were organized in groups of 5-7 and they would brainstorm through the topic in detail with minimum guidance as advocated for by (Fontana and Frey, 2005, pp.704-705). The method incited the participants to give their views since they were at liberty to frame their responses as pointed out by (Sidhu, 2007, p. 133). The responses from the different groups would be shared in a plenary session during which a comprehensive data was generated. For details see appendix 3. I also opted for focus groups because they provide a broad perspective of the situation under study in a short time which would not have been possible with individual interviews of the same people (Mikkelsen, 2005, p. 89).

However, in the process of conducting the open ended interview, I discovered that some group members were less active than others in the sense that some individuals could dominate and other peoples' views were suppressed. In addition, like any other interview, the method required a lot more time and a great deal of skills of handling group dynamics. To counteract this, every member would be allowed chance to say his/her mind about the question at hand. More so, Joseph and I exercised minimum supervision of group discussion to encourage equal participation of members but restrained from influencing the groups' views and ideas.

3.5.2 Observation

I used observation in monitoring how the participants, in their natural settings, were responding to my actions. My objective was to obtain empirical data of the story of action as it unfolded. This was my point of departure to critical analysis that was based on reality of the process as advocated for by (Whitehead and McNiff, 2006). Under this method I adopt a participant observation technique.

Participant Observation

I used participant observation since the project was action oriented and I was obliged to get involved at all times. This aspect of data collection under observation was basically to reinforce the interview method and as a means of validating the quality of data gathered. However, Observation; whether it is direct or participant observation, is subject to selectivity of ideas. The observer's values may influence what is noted. From own experience, I am constantly making choices about what to register and what to leave out, without necessarily realizing that as pointed out by (Miles and Huberman, 1994, p.56). To minimize this, the method was supplemented by a video and voice recorder and digital camera to bridge the gaps between the information noted in the process of observation and what actually occurred at a particular time.

The camera, voice and video recorders have been instrumental tools in my data collection because they allowed detailed recordings of facts and provided a more comprehensive and holistic presentation of the actual situation. However, the use of the video recorder at the beginning was uncomfortable with some of the participants but they later got used.

3.5.3 Documentary Analysis

Also referred to as library and archival survey, documentary analysis, is concerned with all kinds of information hard and soft copies of various categories and artifacts such as buildings and machines. Creswell (1994, pp. 150-151) explains that documents are any written information or physical objects that are analyzed for study to obtain data such as manuals, books, journals, registers, newspapers, letters and minutes. In my research process, I adopted documentary analysis from the very beginning of the study as a means to enrich my understanding of the terms VET; vocational pedagogy and its approaches as put forward by various scholars and in analyzing the indigenous and formal VET in Uganda, which was a foundation of chapter one of this thesis. Furthermore, I employed the method to build up the literature which was a basis for formulating the methodology chapter as well as for the discussion of the findings in chapter five of the thesis. However, I realise that documentary analysis method of data collection is liable to misinterpretation of ideas because documents are non-interactive and are subject to the reader's perception. Therefore, it requires more time and critical reflective skills to analyze and reflect on the information documented so as to derive meaning out of it.

3.5.4 Personal and participants reflective logs

During my research process, I continuously kept a reflective log of my experiences which were a result of my actions and the direct interaction with the participants and observing the action process. Keeping of a reflective log is supported by (Whitehead and McNiff, 2006, p. 65) in monitoring personal learning. In this log I recorded what I used to do and made reflections on what I learned from what I did and generated new knowledge significant to learning. To have a balanced outcome, I initiated log keeping to my participants at Kyambogo University where we shared ideas about it, developed a format and adopted it. The log format consisted of date, activity, learning experiences and how they are learned and suggestions for improving learning refer to appendix 4 and 5. The choice of a particular format was to capture systematic and logical information that would make coding and analysis less cumbersome. However, at the start, my participants found it challenging to keep the reflective log as it was a new phenomenon of data collection.

In addition, they also perceived it as an assessment form, a basis on which marks are awarded. This was overcome by taking them through an elaborative discussion about the reflective logs, their use and purpose in the study.

3.5.4 Group Evaluation Meeting minutes

Throughout the research process, I was always in dialogue with the participants and the same was evident amongst themselves during and after class. With the dialogue, I found a free atmosphere where every participant could put across his/her views in trying to influence one another. This is advocated by Bohm in (Hung, et al., 2009, p.209) who regards dialogue as a free flow of meaning that balances inquiry and advocacy in one's attempt to influence others. Dialogue was useful at the planning stages with the head of the technical teacher education section as well as project planning, problem formulation, data collection and validation with Joseph and the technical teacher trainees at Kyambogo University. During dialogue meetings, we generated a record of minutes of our views, ideas and suggestions on the way forward; for which I have attached a copy of two of the recorded minutes, refer to appendix 6.

The evaluation meetings were an arena where freedom of expression, equal participation, respect of one another's views, empowering one another and democracy were exhibited. For example, during the weekly evaluation meetings, each participant had an equal chance to chair the meeting or be the secretary. All members were free to express their views as others were encouraged to criticise them. It was also aimed at facilitating decision making that would act as a platform for both jointly and individually taken actions as pointed out by (Gustavsen, 2001, pp.18-19).

3.6 Data Analysis

The data analysis process I employed constituted transcription of data from the field, coding, validation, presentation, reflection and discussion. My research being qualitative in nature, I employed qualitative data analysis techniques. This approach to data analysis is supported by (Creswell, 1994, p. 166) who argues that qualitative data analysis primarily entails classifying things, persons, and events and the properties which characterize them.

Transcription

I logically documented the data that I obtained from group dialogue minutes, field notes, personal and the participants' reflective logs following the research objectives. Furthermore, I carefully listened to all the voice recordings and watched the video recordings to reconcile with the information that accrued from the group dialogue minutes, field notes as well as the reflective logs as a form of validation.

This exercise was interpretive and hectic, particularly listening to the recorded voices from the interviews and watching the video recordings and organising the content to match the research objectives. This experience is shared by (Gibbs 2007, p. 10) who points out that transcription take a lot of time and effort to do and the process of transcription is interpretive, an indication that validity of data is essential.

Coding

This study was comprised of four research objectives and questions. The collected data were sought to answer the research questions and a series of questions emanating from the research process. For this reason, the various responses and data gathered with a number of methods and tools in data collection needed classification for easy analysis, hence coding. After data transcription, I classified them into three meaningful themes based on the objectives of the study. These themes were A, B and C which combines data on research objectives and questions 3 and 4. These themes addressed: challenges faced by technical teachers in the teaching and learning in VET institutions in Uganda; vocational pedagogy approaches as applied in the teaching-learning process of technical teacher trainees at Kyambogo University; possible challenges in the use of the vocational pedagogy approaches in the teaching-learning process and workable solution we developed in overcoming these challenges respectively.. These three themes had sub-themes emerging from the collected data and resulted into essential patterns which were paramount in the discussion and the analysis of the findings. This aspect of data analysis process is supported by (Miles and Huberman, 1994, pp. 10-11) who point out that coding is a data reduction technique that involves selecting, focusing, simplifying, abstracting, and transforming the data that appear in written-up field notes or transcriptions for analysis. This coding process enabled me to identify data that was appropriate and significant to the study. However, I must point out that reducing data reduces its richness since it is subject to selectivity of ideas by the researcher. Therefore, in due process, some vital information may easily be left out.

Data presentation

I present the transcribed data following three main themes A, B & C with their emergent subthemes and in some instances presented direct quotes from the participants.

Under theme A, I presented the finding for objective and research question one of the project on challenges faced by technical teachers in the teaching and learning in VET institutions in Uganda.

This theme was further sub divided into two sub-themes which I presented as situational analysis on challenges facing the teaching and learning in VET institutions in Uganda with practicing instructors of member institutions of UGAPRIVI and a reflection on VET challenges by technical teacher trainees at Kyambogo University. These subthemes addressed various questions emanating from research question 1, refer to appendix 2.

Under theme B, I summarised data obtained for objective and research question two concerning vocational pedagogy approaches applied in the teaching-learning process of technical teacher trainees at Kyambogo University. This theme was also further subdivided into a number of subthemes addressing a number of items as were reflected in presentation of findings. The subthemes and their subdivisions are:

- Experiential learning with emphasis on learning by doing which into; Documentation of personal notes, personal reflective log and drafting project proposals for implementation at workplaces.
- Group learning; group formation, leadership in the groups; rules governing learning groups and group meeting.
- The vocational didactic relations model

Finally under theme C, I presented findings for the objectives and research questions 3 and 4 on possible challenges in the use of the vocational pedagogy approaches in the teaching-learning process and workable solution we developed in overcoming these challenges.

In the presentation, direct quotations have been made where necessary whereas in some instance I have paraphrased the statements while maintaining the original meaning in order to improve on the English language. Pictures, transcribed data from the voice and video recordings have been provided where necessary to reinforce the written text in strengthening the evidence base in satisfying the research questions. In data presentation, I also offered a description of what happened, explained how it happened and why each activity was happening and how together with the participants reacted to what happened as advocated for by (McNiff and Whitehead, 2009, p. 32-33).

Discussion

The discussion is based on personal reflection and interpretation of the findings. The interpretation was backed by personal reflections in the electrical engineering field coupled with the experience I acquired during the entire research process. Further, the discussion process was enhanced by scholarly descriptions and views and their analysis to indicate what I incorporated in own thinking or disagreed with.

This is advocated for by Bryman (cited in Mikkelsen, 2005, p. 168) who argues that: 'your findings acquire significance in our intellectual community only when you have reflected on, interpreted and theorized your data. You are not there as a mere mouthpiece.' Some of these scholarly views are reflected in the reviewed literature in chapter two above. Although the discussion logically followed the objectives of the study, findings on theme B and C; which addressed objectives two, three and four were discussed and analyzed concurrently but only key findings were considered. It was after this discussion that I put forward concluding remarks that showed how the research process contributed to my learning and that of the participants as well as laid down recommendations and way forward on how these findings may contribute to the learning of others.

3.7   Data validity.

By employing vocational pedagogy approaches in the teaching learning process of teacher trainees at Kyambogo University, I was trying to exemplify the values that hold in life namely: hard-work, freedom of expression, courage and democracy. The findings depict my experiences and those of the participants acquired during the research process and they are original and a true representation of activities we engaged in. Validity of the data was ensured through continuous evaluation with the participants by reflecting on the data to confirm if it were their true recording. Further, I employed triangulation of methods, a principle that I perceived as a measure to obtain views about an item using more than one method of data collection and comparing the obtained findings from the qualitative research workshops[23] I attended. This enabled me to judge the consistency of the results before analysing the data.

3.8   Summary of Methodology

 The proposed time schedule was subject to changes so as to take care of un-predetermined circumstance prevailing at Kyambogo University and with personal programs. I opted to undertake a participatory action research (PAR) as it allowed room to collaborate with a technical teacher trainer and technical teacher trainees at Kyambogo University in jointly tackling the problems we experience in our teaching practice. Inspired by the need to improve my practice in teaching, I found that it was necessary to collaborate with those who are directly concerned with the research problem.

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[23]This was a workshop held at HiAk from 22nd to 25th March 2010 for Erasmus Mundus student, about qualitative research. It was facilitated by Francois Victor Tochon from the University of Wisconsin Madison USA

The participants in the project comprised of one hundred and ninety three (193) participants namely: twelve technical teacher trainees, one technical teacher trainer at Kyambogo University; and one hundred and eighty practicing instructors.

I adopted the interview; informal conversational and open-ended, participatory observation and documentary analysis as methods of data collection. The use an informal conversation interview with DTTE teacher trainees was fundamental in obtaining data concerning their' experience with the new approaches to their learning and observing their reactions towards the new approaches during the teaching and learning process since they were obliged to verbally respond. On the other hand, I administered the open-ended interview to groups of practicing instructors during situational analysis in trying to identify challenges facing VET in Uganda.

I used participatory observation in monitoring how the participants, in their natural settings, were responding to my actions with an intention of obtaining empirical data of the story of action as it unfolded.

I adopted documentary analysis from the very beginning of the study as a means to enrich my understanding of the terms VET; vocational pedagogy and its approaches as put forward by various scholars and in analyzing the indigenous and formal VET in Uganda, which was a foundation of chapter one of this thesis. During my research process, I continuously kept a reflective log of my experiences which were a result of my actions and the direct interaction with the participants and observing the action process. I too initiated log keeping to the teacher trainees. Throughout the research process, various meetings were held at the planning as well as project planning, problem formulation, data collection and validation with Joseph and the technical teacher trainees at Kyambogo University.

During data analysis, I logically documented the data that I obtained from group dialogue minutes, field notes, personal and the participants' reflective logs following the research objectives. After data transcription, I classified them into three meaningful themes; A, B and C based on the objectives of the project.

The discussion was based on personal reflection and interpretation of the findings as well as backed by personal reflections in the electrical engineering field coupled with the experience I acquired during the entire research process. Further, the discussion process was enhanced by scholarly descriptions and views and their analysis to indicate what I incorporated in own thinking or disagreed with. Validity of the data was ensured through a continuous evaluation with the participants by discussion through the data to confirm if it were their true reflections and by triangulation of methods.

<center>**Chapter four**</center>

4.0   Presentation and interpretation of findings

4.1   Overview

In this chapter, I present and interpret the data I obtained from the field and well thought-out as relevant to the experimentation of the vocational pedagogy approaches of learning to technical teacher trainees and how they can later influence learning in VET institutions in Uganda. The presentation and interpretation sequentially observed the objectives of the study as reflected in chapter one of this dissertation namely:

- To find out challenges faced by technical teachers in the teaching and learning in VET institutions in Uganda

- To examine the influence of vocational pedagogy approaches as applied in the teaching-learning process of technical teacher trainees at Kyambogo University.

- To establish possible challenges in the use of the vocational pedagogy approaches in the teaching-learning process.

- To develop solutions to the challenges in the application of the vocational pedagogy approaches in the teaching and learning process.

Furthermore, the presentation illustrates a reflection of a story of action as it unfolded, my own learning experiences as well as those of the participants acquired while undertaking the study.

4.2   Theme A: Challenges faced by technical teachers in the teaching and learning in VET institutions in Uganda

4.2.1   Introduction

In this section I present and interpret the data which I considered relevant to the challenges faced by technical teachers in the teaching and learning process in VET institutions in Uganda. At the initial stages of the study I focused on practicing instructors from various VET member institutions of UGAPRIVI. This aimed at situational analysis to enhance my knowledge of the state of affairs in VET institutions and to enrich the problem formulation a basis for undertaking this study. Being an action research oriented study I also considered technical teacher trainees pursuing a Diploma in Technical Teacher Education at Kyambogo University together with whom I analyzed the problem under investigation as a point of departure in tackling it.

4.2.2 Situational analysis on the state of affairs of VET institutions with practicing instructors

The opportunity to interact with instructors of the various VET institutions in Uganda was granted to me by UGAPRIVI when it appointed me as a facilitator to conduct pedagogy training workshops[24] which were held from the month of June to September 2010. I sought consent of these instructors to conduct the situational analysis exercise with them for purposes of my project as well as to provide a foundation for the workshops in advocating for improved strategies of teaching and learning.

In regard to the challenges, I paused two questions to the seven groups of VET instructors, refer to appendix 2. To obtain a wide range of views, together with my co-facilitators, we organized the instructors in teams of 5-7 persons so as to allow room for free expression as they brainstormed through the questions to generate detailed information as shown in the pictures below.

Figure 2: Practicing instructors conducting group discussions during situational analysis

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[24] Pedagogy Workshops were organized by UGAPRIVI with an objective of equipping its member instructors with creative ways of involving the learners in the teaching and learning process, planning for the teaching through preparation of scheme of work and lesson plan as well as preparation of instructional materials. The workshop duration was three days.

At the end of the discussion, the teams would converge for a plenary session and individual teams would present their findings as they were critically analyzed by the entire group and a comprehensive list of the information generated.

Figure 1: Practicing instructors presenting group work

A list of all the challenges identified by the instructors from the seven regions together with the suggested possible solutions is attached as appendix 3. Some of the challenges and possible solutions put forward by the groups of instructors are shown in the pictures below.
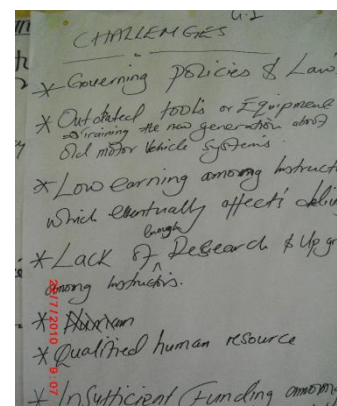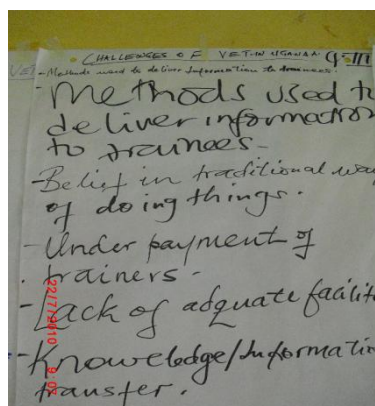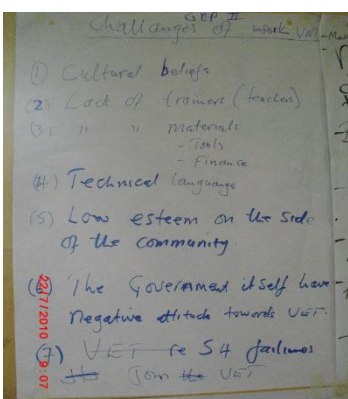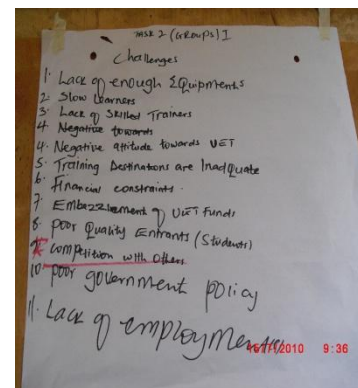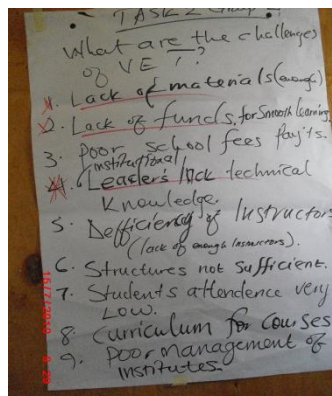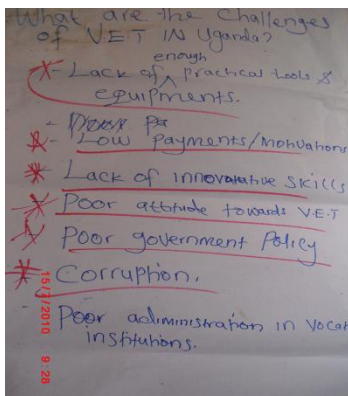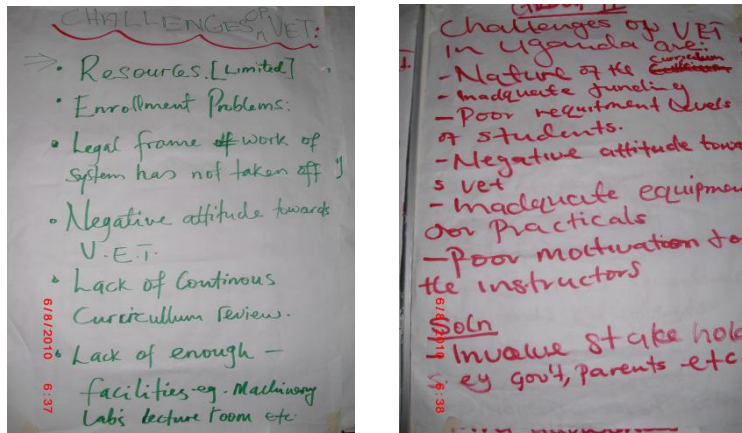
Figure 2: Some of the challenges facing VET in Uganda identified during situational analysis
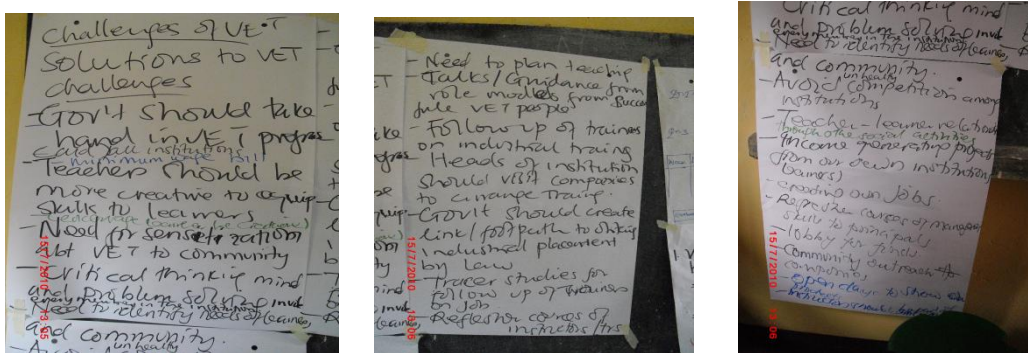
Figure 3: Possible solution to VET to the challenges identified above

After the presentation by the individual teams and a thorough analysis of the identified challenges by the entire group, together we singled out only those challenges faced by the instructors in their practice as trainers. This was the point of departure for the workshop and a platform for advocating for better strategies of improving our teaching practice. Below is a picture showing facilitators sharing with instructors during the situational analysis.

Figure 4: Facilitators sharing with participants in one of the workshops during situational analysis

Out of the generated challenges from the seven regions, the following were observed to be common to all.

Inadequate hands-on skills amongst teachers

In this respect most teachers are at a low level as regards practical skills of transferring theoretical technical knowledge into practice and find it a challenge to empower their learners with hands-on skills.

Pedagogically untrained teachers

On the aspect of professionalism, majority instructors are not pedagogically trained and therefore employ inappropriate methods of information delivery. This is attested by the various pedagogy trainings that are conducted in the country in a bid to equip VET instructors with pedagogy skills. This was testified by the instructor participants as they shared experiences in the course of the workshops

Insufficient training materials and equipment

In most VET institutions there is a general absence of training materials and equipment. This renders a theoretical nature of teaching that is contrary to VET aims. Furthermore, it is my observation that where material and equipment is available, the number of trainees always outweighs the material and equipment and in most cases they are outdated.

Low level of innovative and creative skills amongst instructors

Instructors seem not to be initiative and they are less creative. They are not empowered in the aspect of designing and producing of models, mock-ups and other instructional materials out of locally available materials to aid their teaching. I proved this during the workshops when instructors were required to prepare teaching aids. A number of instructors would find it challenging to think of objects they would need in the teaching of a particular item, develop their designs and transform the designs into reality. However, some of the instructors would produce some items with the empowerment of the facilitators as shown in the following text.

Figure 5: Practicing instructors making teaching aids

Lack career guidance

It is my interpretation that majority students join VET without career guidance so they end up in training programs that are not of their choice and to which they attach low value. In addition, the instructors themselves seem not to have career guidance skills since it is not part of their training program and they testified so during the situation analysis. I further believe that the absence of career guidance is escalated by low attitude towards VET by the public accrued to the insufficient sensitization by the government.

Outdated curriculum

In this aspect, it was revealed that the curriculum observed in VET does not match with the current labour market requirements for which VET is responsible. It is my submission that what is regarded as curriculum is the examination syllabus provided by the Uganda National Examinations Board (UNEB). The feature of the curriculum being outdated is reflected by the new technology and the demands of the people that are less addressed by the present curriculum.

Reading materials

As per the availability of reading material it was revealed that a large percentage of the reading material at the disposal of the instructors is outdated and does not meet today's demands. Instructors seem not to be bothered with writing of books using their experience in the teaching field. Therefore they solely depend of reading material from abroad whose costs are dependent on the importers' decisions.

For purposes of this report, further details were not captured since my interest was to analyze the challenges facing the teaching and learning in VET as a basis for the formulating of problem under investigation in the research project which I believe I achieved. However, the experiences acquired throughout the pedagogy training workshop were incorporated as cited in various aspects of the report.

Throughout the situational analysis process, I learned that VET institutions are faced with similar challenges irrespective of their location. In the process of analyzing these challenges, I learned that to improve the existing situation, it requires attention of all the stakeholders which include the government, management of VET institutions, instructors, trainees and the community at large. In addition, my personal experiences about the prevailing situation in most VET institutions were enhanced by those of the participating instructors due to their long time serving experiences. Therefore the knowledge I generated was dependable and inspiring for this research project.

In this respect and basing on my personal experience about the state of affairs in VET institutions I sought it pertinent also to share views about the VET challenges with the technical teacher trainees at Kyambogo University.

4.2.3 A reflection on VET challenges by technical teacher trainees at Kyambogo University.

Upon completion of the situational analysis with practicing VET instructors from the seven regions according to UGAPRIVI, focus turned to sharing with technical teacher trainees at Kyambogo University. As it was the case with the practicing instructors, two guiding questions were paused to the trainees as a stimulus to identifying the challenges, refer to appendix 2. The trainees in question opted to make a reflection on the challenges as a group.

To have a balanced reflection of the existing situation in the VET institutions, I requested the trainees who had been practicing teachers before joining the university to give challenges using their experience as they practiced teaching. On the other hand, I requested the rest to base on to what they experienced while they were students in VET institutions. The process was governed by respect for all views, criticisms and in case of ambiguity clarification was sought for. At the end of the reflection, findings were presented. Below is a picture showing the identified challenges and the possible solutions.
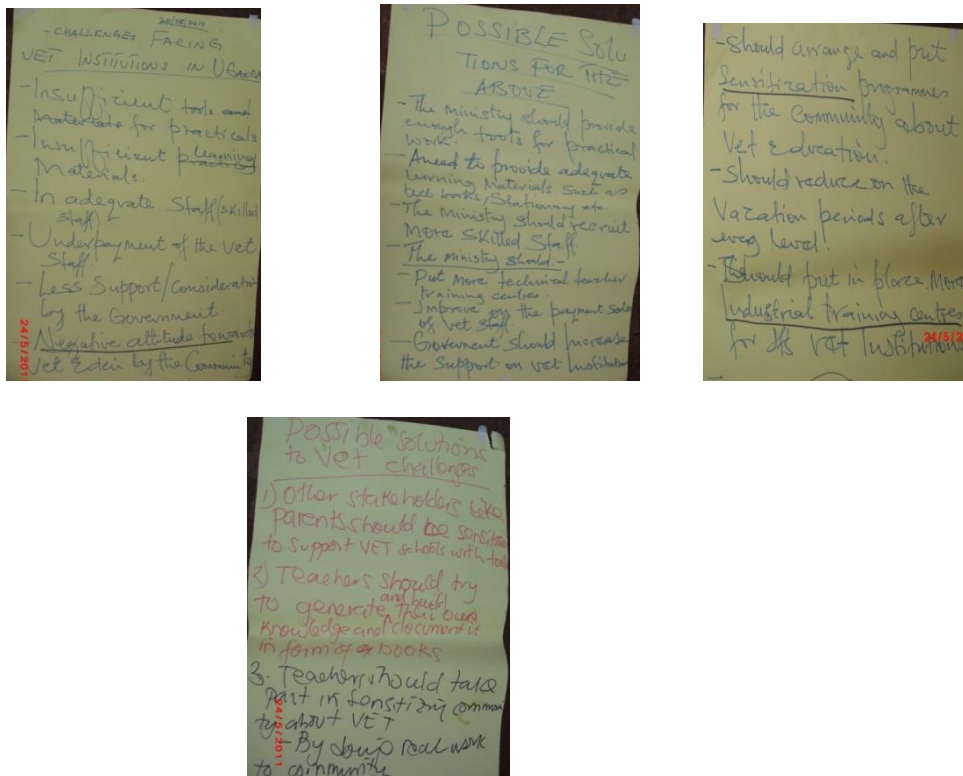
Figure 6: Challenges to the teaching and learning in VET and possible solutions from teacher trainees

Upon the presentation I observed that all the suggested solutions to challenges were zeroing at the government. This is reflected by statements such as;

> Ministry of Education and Sports should: Provide enough tools for practical work; provide adequate learning materials such as textbooks, stationary etc; should arrange and put sensitization programs for the community about VET education. (Refer to suggested solutions to VET challenges in the chart 2 and 3 above)

In this respect, together we agreed that as teachers of VET, there was need for us to initiate something to overcome some of the challenges since we are on the ground in the institutions and our efforts could be a point of departure for the government. Therefore together we critically analyzed the identified challenges and singled out four that are a setback to the teaching and learning practice and we also came up with possible solutions, refer to chart four in the picture above. The critical reflections, viability and the way forward on implementation of the suggested possible solutions are discussed under objective two of this thesis. The challenges which were agreed upon are in the text that follows.

Insufficient tools and materials for practical purposes

In this regard it is my interpretation that the training which goes on in VET institutions is more of theory than practical. On the other hand, it is also my belief that VET institutions would have enough of the tools and materials but the number of trainees in the institutions is what outnumbers the available tools and materials.

The suggested solution to this challenge was that other stake holders such as parents should be sensitized to support VET institutions with scholastic tools and materials.

Inadequate reading and reference materials

This challenge was highly emphasized by teacher trainees in the fields of tailoring, carpentry and joinery as well as plumbing. According to my understanding the three categories of trainees were right to express their dissatisfaction with the available reading and reference books. This is because people from the different geographical regions have different tastes according to their cultures and environment. For example, a book written by a Briton concerning tailoring would address tastes for the British people. Similarly plumbing in countries that experience winter would be different from that of the tropical countries. Furthermore, Ugandans have had little interest in writing books for VET in addition to low level skills of documentation and records keeping hence rely on books from foreign countries which are sometimes challenging for the trainers to use because of the unfamiliar examples.

The suggested solution to this challenge was that teachers should try to generate and build their own knowledge and document their experiences in form of books so as to use them as references during the teaching.

Low attitude towards VET by the public

The trainees pointed out that through their experiences; VET in Uganda has been at low ebb. The low attitude by the public is a result of the people associating VET with manual work where one is exposed to bodily injuries coupled with sweat. Furthermore, the number of recruits to VET institutions in Uganda majorly constitutes those who fail to score high and cannot compete in the general academic circles. In addition, VET is also joined by those who cannot afford academic secondary education so it is regarded a kind of education for the unprivileged and many people do not want to be associated with it. In this respect one trainee had this to say:

> When I completed primary seven, my father could not afford fees for secondary education. He therefore suggested taking me to a technical school since the charges were low. In the first place I resisted since I had scored a first grade because I knew that technical education was for academic failures. However, since I had no option I accepted. However, today I am happy and comfortable with what I do in my practice as a carpenter.

In supplement to the trainee who was convinced by the father, many others attested that VET was not their priority option for further studies but there were circumstances beyond their control which forced them into VET. However, due to what they have so far achieved such as being self sustaining after pursuing VET, they expressed appreciation to VET and its role to their communities. On the side of the participants, the low attitude towards VET was attributed to the low levels of sensitizing the Ugandan community about the benefit of the kind of education.

The suggested solution to this challenge was that teachers should be exemplary and portray good image to the public by producing quality goods and services which will motivate other members the community to get interested in VET works.

Inappropriate methods of teaching

Under this area the participants expressed their dissatisfaction with the methods employed by VET teachers. They pointed out that trainees in VET institutions are allowed very little chance to construct their learning. Most teachers always regard trainees as having no knowledge and their work is to impart knowledge in them.

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In complement one teacher trainee pointed out that:

> During my training at a VET institution, my teacher of mathematics could
> only employ those formulae stipulated in the textbook and insisted that
> everybody should adapt them. I was denied chance to employ my other
> formulae which could sometimes be simpler than those by the teacher.
> This was so frustrating.

Participants further revealed that the teaching focused only at passing national examinations
at the expense of acquiring the necessary knowledge and skills required in the world of work.
In this respect, a participant pointed out that:

> One of my former teachers at the institute would often absent himself at
> the time of practical lessons implying that he could have been less
> competent at hands-on. It was a demoralizing experience which almost
> made me lose interest in the field.

The suggested solution to this challenge was that as teachers in the training, they expected to
be equipped with teaching methods that will enable them become better teacher in handling
their learners.

In the process of analyzing the challenges facing VET with the technical teacher trainees, I
learned that these students were knowledgeable of state of affairs of VET in Uganda. The
identified challenges were similar to those faced by the practicing instructors in VET
institutions as was reflected in the situational analysis. Therefore the similarity is an
indication that the suggested solutions shall be applicable in real life situation.

The participants too shared their learning experiences as stated below:

> VET institutions in Uganda are affected by similar challenges because
> students from different institutions in different parts of the country pointed
> out similar problems.

He also learned that some of the challenges facing VET in Uganda can be solved by teachers
themselves. This experience was also shared by some participants who clearly pointed out
that:

> I learned we should not always relay on the government to provide
> solutions to the challenges we are facing in our institutions but build
> capacity as teachers and pave a way forward to these challenges.

Similarly, one participant commented that as a group, they managed to comprehensively
generate various views regarding challenges facing VET in Uganda and in so doing; he
learned that people reason differently and again two heads are better than one. These
experiences have been obtained from the participants reflective logs, refer to appendix 5.

The process of analyzing VET challenges with teacher trainees at Kyambogo University formed a foundation for us to work together in improving the existing situation for better learning and teaching of our learners. Therefore, vocational pedagogy approaches described hereafter were thought appropriate in improving the existing situation in VET institutions in Uganda.

4.3 Theme B: Vocational pedagogy approaches and the teaching-learning process of technical teacher trainees at Kyambogo University

In this theme, I present and interpret the data which was generated as we applied vocational pedagogy approaches in the teaching and learning of technical teacher trainees. I focused on particular vocational pedagogy approaches with a target of addressing VET challenges identified in Theme A; how we employed these approaches and also the learning experiences acquired. Each vocational pedagogy approach employed constituted a subtheme and addressed the above items.

4.3.1 Experiential learning with emphasis on learning by doing

A thorough analysis of the VET challenges in Uganda followed by identification of those affecting the teaching and learning practice as well as suggested solutions, was a point of departure of adopting experiential learning. This approach to learning empowered the teacher trainees to learn experientially by getting involved in their learning activities through sharing their experiences, and personal reflections and ideas about a task. By this kind of learning environment I believed that the challenges of insufficient reading and reference materials; and teachers' failure to encourage learners' participation and self independence in their learning process would be solved. The description of what ideas and how we implemented them is in the following text.

4.3.1.1 Documentation of personal notes

In our prior planning for the teaching, Joseph and I discussed on how best we could implement the suggested solutions to challenges facing the teaching and learning process in VET institutions in order to bring out the desired learning outcomes. One of the ideas we shared was to empower the students to document their experiences as were generated from the lecture discussion and make a follow up the progress. This act would eliminate the practice of memorizing of lecture notes given out by the lecturers without students understanding, but only to reproduce the very notes at the time of examinations.

The teacher trainees getting adapted to documenting their own notes would in turn enable them to transfer similar experiences to their practice in teaching. Furthermore, it would enable them to develop writing skills, self impression and reflection skills. It is also my belief that eventually it would act as a point of departure to documenting the acquired knowledge and experiences by the teacher trainees in their respective fields of specialization in form of books for references during the teaching and learning process. In doing so, the challenge of insufficient reading and reference books experienced in VET institutions would be minimized.

Implementation of the documentation personal notes

From the very beginning of the lectures that I conducted, the teacher trainees were made aware of the new practice and the reasons for its implementation. In doing so I emphasized noting of only what an individual felt to be important to his/her learning. Furthermore, I pointed out that individual participation in the learning process is paramount to documentation of personal notes. I also emphasized that detailed elaboration on points noted during the discussions is hinged on previous experiences and those acquired throughout the learning process.

On seeking for comments and suggestions from the participants about the idea, a positive response was received with an inquiry as to whether documentation was to be done as a group or individually. When I asked for their opinion about how they preferred to do it, some members suggested that it would be better if they discussed as a group and documentation is done individually. After a brief sharing of ideas about the merits of individual documentation, they finally agreed on individual documentation preceded by group discussion.

Follow-up of individual documentation

I carried out the follow-up of the individual documentation through holding group evaluation meeting and administering written assignments. This I intended to ascertain how the participants were fairing with the practice. Under group evaluation meetings, together we would evaluate all the past learning activities in which they had engaged; empower one another with ideas of improving individual learning and also suggest measures to any hindrances in their work progress. Written assignments were mainly individually done for purposes of continuous assessment as recommended by the university regulations but at times group assignments were carried out. The two avenues to the follow-up exercise have been extensively described under theme C and the subtheme of vocational didactical relations model respectively.

However, during group evaluation meeting, a few challenges to documentation were put forward by the participants and they are:

- Difficulty in identifying the important points for noting during the discussion.
- Lack of computers to facilitate their documentation both at the university and at VET institutions
- English language for self expression at documentation.

Details of how we dealt with the mentioned challenges have been discussed under theme C of the findings.

4.3.1.2 Personal reflective log

Another way of encouraging the participants to improve their documentation skills was through making personal reflective logs. As already indicated under methodology in chapter three a personal reflective log was a tool to aid data collection. However, it was also intended to empower the participants to learn reflecting on their learning experiences as well as to transform these experiences into written information for future reference.

Implementing the idea of making personal reflective log

Having kept a log during my first year field work and observing how it works, I introduced the idea to my participants. We discussed what a log is and its significance in the learning process. I therefore asked them if they had ideas of how we could employ it documenting our learning experiences. They were reluctant to respond and I therefore suggested a four column log format; similar to the one I was using at HiAk indicating date, done, learnt and better to do. We discussed what each item required of us and we agreed to adapt to that. However during our normal class meetings, I kept inquiring if they have managed to implement the log writing idea but in vain. They later revealed that it was difficult for them to employ the suggested format. They mentioned that they had not clearly understood what exactly to note in each column and how to do it which I attributed to the fact that they had not contributed to its formulation. They suggested that we could make it more detailed and we modified it as; Date, activity, learning experiences and how they are learned and suggestions for improving learning, refer to appendix 4 and 5. Even with this modification of log format, only a few students were able to note something in their logs about their learning. I carried out a further investigation during one of our class discussion meeting to find out what the matter was. It was then that some participants pointed out two issues that were challenging them in using logs and they include:

- They perceived it as an assessment form, a basis on which marks are awarded and they feared noting ideas that would score them low grades.

- It was still unclear to some participant about what to note or leave out.

The process of how we tackled these challenges encountered in implementing the idea of making personal reflective logs have been discussed in theme C of this study.

4.3.1.3 Drafting project proposals for implementation at workplaces

As a way of enhancing experiential learning, together with the participants and in one of the group evaluation meetings, we reviewed the identified challenges to the teaching and learning in VET institutions. In doing this, participants suggested and together we agreed to document the ideas and views for minimizing the challenges in form of project proposals (refer to appendix 8). I therefore requested each participant to employ the experiences acquired and document the possible solutions to the challenges. In my reflection about the consensus I felt that it was paramount to have an organized record of ideas and views for a systematic implementation process and for easy presentation to the heads of institutions as well as to any other interested individual(s).

Adhering to the agreement, each participant embarked on the proposal writing and in the following text is a summary of what was put forward by the some participants in their project proposals. This is to tip-off the reader about the participants' future plans and strategies of improving the challenges faced in the teaching and learning practice in VET institutions.

Name: Richard   Field: Plumbing

Title: Vegetable growing

Background

Inadequacy of tools and equipment for practical work is a major cause of most students' failure of practical examination. This is attributed to the meager financial resources in most VET institutions' coffers coupled with low tuition fees paid trainees. As a result training institutions cannot afford the expensive tools and equipment for training purposes. It is therefore my submission that most VET institutions being located in rural areas and have land can embark on vegetable growing for commercial purposes since their gestation period is short. The proceedings can be used to purchase some of the required tools and equipment.

Purpose

      To develop the students' interest in income generating projects so as to be self reliant in regard to training equipment.

Objectives

- To provide basic tools for the students.
- To have hands-on training in VET institutions

Name: Laudel   Field: Plumbing

Title: Documentation of personal experiences

Background

Throughout my studies I have been studying mathematics and I have observed that many students have a low attitude toward this subject. This is accrued to the VET teachers' inability to show its applicability in the work life. Upon realizing this challenge, with time and through practice, I could find out the validity and applicability of the mathematics that is taught in VET institutions to plumbing as my trade. However, due to the ignorance of documentation of experiences I was not able to deal with the challenge.

Coupled with the above, for the time I have been the teaching practice, I have realized that some of the items that we teach are invalid to the present situation. This is because of the outdated reference books that are in use. Therefore, being introduced to the practice of documenting of experiences is an opportunity in fulfilling my dreams of writing books.

Purpose

> To write books in the fields of mathematics and plumbing for use in teaching.

Objectives of the project

- To relate the principles, theorems, laws and ideas with the advancing technology.
- To develop skills of transforming experiences into texts.

This information was extracted from the participants' draft of their project proposal, of which I have attached copies, refer to appendix 8.

All the participants worked on similar projects except for one person who opted not to participant in project proposal writing despite his involvement in other activities of the study. He pointed out that his previous experiences were associated with the business field and that he needed more time to get familiar with VET issues. Other participants carried on with the documentation process; while focusing on putting forward their suggestive measures of improving any of the identified challenges described under theme A above. For easy follow up, group evaluation meeting were conducted to discuss their work progress, challenges being encountered as well as to empower one another in achieving their objectives. Further details about group evaluation meetings have been discussed under theme C of this dissertation.

4.3.2   Group learning

I employed this teaching and learning strategy to address the challenge of: *'Inappropriate methods of teaching currently practiced in VET institutions.'* We adopted this strategy from the beginning as a means of encouraging the participants to actively get involved in their learning as well as being responsible for each other's learning. It was my belief that once the participants get exposed to this learning method, they would transfer a similar experience to the teaching and learning process of their learners after training. In addressing this strategy, the following items were put into consideration: group formation, leadership in the groups; rules governing learning groups and learning in groups/ group meeting.

4.3.2.1 Group formation

The initial stages of group formation were dependent on what prevailed in the class at that time. Therefore there was no definite criterion employed. We set off our teaching and learning with self introduction of all members of the class then followed by students expressing their expectations from the course. This was on the 19th day of August, 2010. Later the learning exercise was opened by a reflection on Introduction to TVET in Uganda: definition, purpose, aims and its objectives; challenges facing TVET and the possible solutions as the first item in the outline of the course unit "Introduction to Educational Studies", refer to appendix 8.

Together with my colleague we requested the class to suggest ways by which they would wish to attempt the first task of describing TVET and identifying its purpose. In response one student who happened to have been the class coordinator suggested working in a group since they were a small number. On requesting the other participants to comment about group work and also to suggest otherwise, by consensus they agreed upon working as one group. They argued that they needed more time to know one another before they could split to various groups which I honored as part of experiential learning.

On the days that followed, the number of students in the class increased to nine and they expressed a need to split into three groups of three members for effective discussions and learning. Basing on the trades they freely formed the three groups where members of the same trade were not allowed to be in the same group. Students of different trades constituted a group. At the end of the exercise and on inquiry whether they were comfortable with the members they had teamed up with and no complaint was registered an indication that they were comfortable. These groups were maintained for nearly one month.

During our first evaluation meeting on 24th September, 2010, participants revealed that they were finding it difficult to work in the learning groups of three. They pointed out that in circumstances when a member or two are absent it there is hardly any work.

Therefore, for the effecting operations of the groups the third learning group was dissolved and its members were integrated into the other two groups. However, when three more students reported for the course a few days later, participants requested for the renaissance of the third group where each of the three new members joined a group consequently increasing the number of members to four. These groups were maintained as learning groups for the rest of the semester period.

4.3.2.2 Leadership in the groups; Rules governing learning groups

Leadership in the groups

Regarding leadership in the groups, when I asked them how they wanted it to be conducted, three of the participants were suggested to take up leadership in the groups. It was also agreed upon that the other members should carry equal responsibility in the running of group activities such as chairing of group discussion, recording of discussion proceedings as well as presenting of group findings. Throughout our lectures, we encouraged each member to participate in one activity or another. Group members ensured that if an individual say chairs a group discussion, then in the discussion that follows he/she takes up a different role. Responsibility in the operation of the learning groups was rotational.

Rules governing learning groups

Concerning the setting rules governing learning groups, members felt a need for self discipline and to act responsibly by honoring ideas by fellow members as well as group decisions about how to carry out tasks. There were no definite set rules for the group operations.

4.3.2.3 Learning in group

In this area, participants resolved to have their own arrangements concerning when and where to meet depending on convenience and on the workload at hand. Their decision was justifiable because their semester workload is divided into various course units being handled by different lecturers. More so, they alternately use the lecturer rooms with students of other study programmes making it difficult have a definite schedule of the meetings.

Although the groups had each agreed to converge and design a provisional schedule, from my observation this was not immediately effected as I could see group tasks being done as the entire class. In addition, they did not give me the schedules as promised for my follow-up exercise. It was not until the 24th September, 2010 when we held the first evaluation class meeting that I officially knew of their challenges in the groups. On inquiry during the meeting held on the 24th of September, they indicated that they were still being challenged to find ample time that suits all members in the groups.

However, they pointed out that tentatively they had decided to meet either on a Monday or a Friday from 2: 00- 4:00pm when they were free of lectures as per the general timetable for the section of Technical Teacher Education. On the 30th September, 2010, I declared that group discussion were not effective when we assigned them a task of reading and making a reflection on the history of VET in Uganda before 1877. I based my declaration on what was presented by four participants who had individually carried out the task. Tendencies of some groups failing to do their tasks persisted until we resolved to convene a brief group meeting on the 8th October, 2010, to discuss the matter.

During this meeting, participants raised two main issues namely: some of the group members were nervous and absent themselves during group discussions. They also requested for my reading of their work, give comments to ascertain their progress. The details about these issues have been addressed in theme C of this thesis.

Learning experiences acquired

Through group learning method I acquired more skills in facilitating group learning and settling of conflicts emanating from group dynamics. Participants too shared their experiences as: this builds their confidence since they were able to stand boldly before the class without panic. Furthermore, they indicated that the method is advantageous in that it makes all learners active, promotes sharing and widens individual knowledge as different experiences are shared. They also indicated that new knowledge is constructed through discussion and sharing of ideas and experiences.

4.3.3   The vocational didactic relations model

The vocational didactic relations model is a design that indicates the preparation of the teaching and learning process. It clearly lays down the planning, accomplishment, evaluation and critical analysis of vocational-specific teaching and learning processes. I was introduced to the model during the course of my study while pursuing a masters degree in vocational pedagogy at HiAK. The model relates six items namely: learning experiences, content, objectives, resources, learning process and evaluation which I believe to be fundamental in a teaching and learning process. Through experience and by comparison, the vocational didactic relations model is similar to the scheme of work employed for the preparation of the teaching and learning that is commonly used in my country Uganda. Although the vocational didactic relations model adopted in Norway and the scheme of work adopted in Uganda address similar items, they are perceived and employed differently in the teaching and learning process. The details of this have been addressed in chapter two of this dissertation.

We adopted this model for purposes of exposing the teacher trainees to an alternative and a more creative way of planning the teaching and learning. The creativity in the model is reflected by its advocacy for involving the learners in constructing their learning as well as its assessment process. The activities prescribed by the model if well adhered to would improve on the methods of teaching adopted by the instructors in Uganda's VET institutions as reflected under theme A of this chapter. The on-going text is a brief account of how we addressed the six items of the relations model for effecting a change in the teaching and learning of the technical teacher trainees at Kyambogo University.

- **Learning experiences**

As a matter of fact, individuals are different from one another physically, psychologically, socially and intellectually. With this in mind, I realised a need to take care of the individual differences in the teaching learning process of the technical teacher trainees. In this study, self introduction and seeking for individual expectations from the course was a point of departure in getting to know one another and creating an atmosphere of free interaction. The picture showing the trainees' expectations is as shown below.
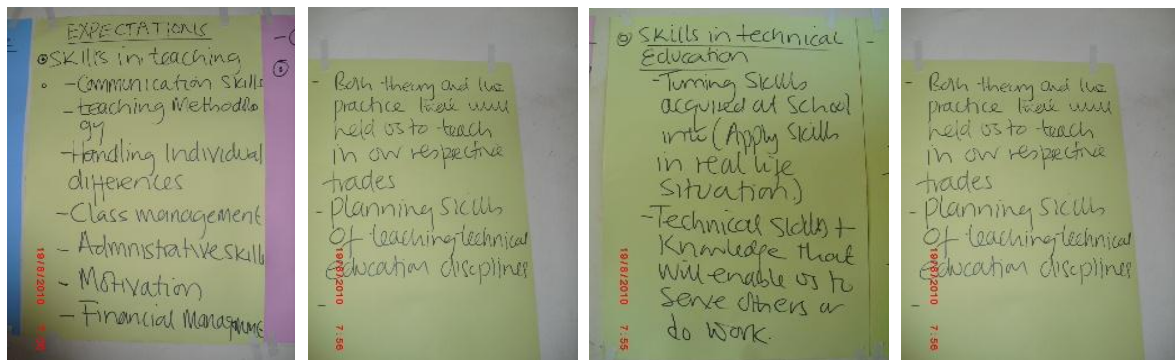
Figure 7: Expectation from the Technical Teacher Trainees at the beginning of the project

At all times during my interaction with the participants and most especially while in class, I would request for individual past learning experiences that would be related to the item at hand. In this regard, at the beginning, the participants found it so strange for a teacher to ask for what learners knew. Extracting information from some of the trainees was a difficult experience. I could rephrase my statements a number of times for a few to respond positively. However, after some time during the course of my interaction with them, their response gradually improved. In addition, whenever I could have an opportunity of a one-to-one interaction I discovered that some of the participants had the will to share their experiences but English as a language of communication was a challenge. I shared this challenge with the entire class and we agreed that since English is simply a means of communication, we should always feel free and communicate using the little we know for purposes of our learning.

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With that in their mind towards the concluding stages of the study, all participants could contribute using the English they had and they expressed their gratitude towards the method of learning. In this respect one participant pointed out that:

> This kind of teaching builds more knowledge to the teacher because of the various experiences provided by the different learners about the item under study. Furthermore, learners are encouraged and also motivated whenever an idea put forward is welcomed by the lecturer. Also the learners' curiosity in the field is developed.

I further found out that the idea of employing previous learning experiences in building new learning was an encouragement to keeping of a reflective log. To boost their learning experience, I organised two film shows one about skills completion in Japan and the other portraying a Ugandan craftsman under the episode titled Hand in Hand. This gave them more encouragement in the line of learning experiences and their significance to building new learning.

- **Resources**

Under this item, together with Joseph my colleague we ensured the procurement of the necessary resources for the fruitful study apart from those that were beyond our reach. The learning resources included two laptop computers, a beamer, a digital camera, a video recorder, manila cards, markers and highlighters. At the initial stages of using manila cards, some of the participants were overheard commenting that; *"we are going to be taught like primary children"*. My interpretation of this was that they last experienced the use of manila cards at primary school level an indication that their teaching and learning was dominated by the word of mouth and a chalkboard. However, later on all the participants developed interest in the use of manila cards for reasons that they were working in groups and it is where they could easily express their ideas before presentation. On one occasion I did not avail them with manila cards and they were so reluctant to use the chalk board in the discussion.

The use of a video and voice recorder was so fascinating for the participants and this would make them prepare very well for any presentations before the entire class. I observed that the participants could enjoy watching the coverage of their teaching whenever time could allow. Over this a participant had this to say:

> If all teachers were taught using such equipment they could leave the training institutions when they are confident of what they do. Watching a recording of the way you conducted a presentation makes me realise the mistakes and try to avoid them than being told what you did when there is no evidence. Further you are able to hear the way you talk and your pronunciation of words. I wish all our lecturers could do the same.

Following the comment from the student, it is evident that the participants appreciated the use of such equipment and it was an eye opener to them. On the other side I found out that it is simply the lack of exposure amongst the academic staff of the university that makes them fail to request for such equipment for use in the teaching and learning. The university can afford to avail a recorder or two for each section in a given department.

During the time of our discussions in class, I would sometimes act as a guide to the discussion and my colleague would record the outcome using a computer and a beamer on a projected screen. At the end of the discussion the generated information would be printed and passed on to the participants to serve as a guideline in documenting their reference notes other than being given hand-outs to which they have no input as it is normally done at the university. I observed that the use of a beamer enabled the trainees to learn its operation.

However, although I had planned to avail computers to my participants at the university, this was not possible but I managed to employ my laptop computer and that of my colleague to carry out the study. When I asked other lecturers as to why they do not employ the same equipment, their responses indicated that it is the responsibility of the university to provide for the students learning. My interpretation to this was that the lecturers have low interest in the learning of their students.

Objectives

During the course of study, we focused at realising various set objectives which included: objectives of the course unit as per the university curriculum (refer to course outline attached appendix 7): the objectives of the research project and the participants' expectations. The objectives of the participants were generated as expectations at the beginning of the course having taken them through what was meant for them to cover. The objectives were made clear to the participants and the learning activities were directed at achieving the set objectives. For each item covered, together with the participants we would reflect on the expectations to ascertain whether any of them was been achieved.

Through experience during the time of the study, I observed that the set objectives enabled us to be focused during our discussions and also to effectively utilise the limited time that was allocated for the course unit. Furthermore, participants would identify areas they felt were not exhaustively covered basing on the intended objectives and together we could address the identified gap. I also observed that participants were so keen and often reflected on the set objectives of the items to be covered. My interpretation of this was that setting objectives makes the learners more active during their learning process and they ensure that they learn what they are intended to learn.

On the other hand it also made me more vigilant in sourcing for information that learners expect to have at the end of the day. At one point during the course of the study one participant requested for a group reflection on the set objectives claiming that he was confused at that time. This was a confirmation to me that the learners were following whatever they were going through during their learning process and it made me to be keener on the set objectives. Finally with the set objectives I found it quite easy to formulate questions that were subjected to the participants at the end of the semester as stipulated by the university regulations.

Content

The experience I acquired during the situational analysis at the beginning of this study enriched me with knowledge and skills that I needed for the study. I was so much privileged that the course unit that I facilitated had part of its content encompassed in my research project framework, refer to appendix 7.

At the time of introducing the course unit to the participants at the university, we had an opportunity to discuss it though briefly. This brief discussion of the course units' contents was an empowerment to the participants to be focussed on whatever was ahead in the unit. I found out that on a number of occasions, participants could source for related information before hand and this made the learning lively. During our discussions they could actively participate by contributing to the item under study and also by seeking for more information through questioning. Furthermore, the presence of the course content helped me to identify the appropriate teaching methods as well as in the preparation of the appropriate learning resources.

It is my submission that the active participation of the teacher trainees is attributed to the practice of prior reflection on the topic at hand. I found out that it made the learning process interactive and interesting.

Finally, teaming up with Joseph my co-facilitator who had a long serving experience in teaching was instrumental in executing the course activities. He had several related experiences as regards the required content and this was an empowerment in the study process. However, to some extent the extended part of the history of education in Uganda that was to be covered as per the course outline became boring to the participants. This was reflected by one participant seeking for its significance in teaching a career they are being trained for.

Learning process

The experience I acquired during the time of my teaching at St. Josephs' Technical Institute Kisubi together with that I acquired during the course of my study of the masters degree in Vocational pedagogy at HiAk was a foundation to effect a change in the learning process of teacher trainees at Kyambogo University.

My teaching practice during the study project involved a variety of methods and techniques intended to cater for the learners' needs in their learning process. The teaching methods I employed included: group learning, individual learning, team teaching, brainstorming and questioning. A series of learning activities that I administered during the study included: documentation of individual logs; reference notes; participation in group activities, as well as film shows. All these were intended to encourage learners' participation and also at achieving the predetermined objectives as already described above. As most of the methods have been discussed above, in this section I would like to reflect on questioning, brainstorming and team teaching as we employed them in the teaching and learning process of technical teacher trainees.

In most of the learning I would pose a question to the participants and request for contributions from the entire class. A number of ideas would be put forward after which together with the participants we could carry out an analysis of each idea and record only those that would be appropriate. At some point in the course of teaching I could write guiding questions on the chalkboard and students would brainstorm in their learning groups. Later each group would be allowed time to present its findings and a consensus would be reached through a general class analysis hence a basis for further dialogue.

By the use of these methods I found out that the participants felt free to express their views. Participants who were shy at the beginning gradually developed self confidence and began participating. Furthermore, at the time of analysis I would observe a free state of exchange of ideas with criticism where no one could feel offended for having put forward the point in question. One participant pointed out that:

> The questioning method keeps me active and opens my mind to reflect on my past experiences. I have come to learn that in the learning process learners need a variety of questions to keep their mind set to the topic under study which enables them to easily understand. Through brainstorming I understood faster than with other methods.

In addition, another participant pointed out that:

> Even in the instances of a new topic of study, I am able to generate views when it is introduced by the use of questions. I have learned that it is not only lecturers who should bring out every idea during teaching but

allowing students a chance to contribute is motivating and an encouragement to the learner.

As I employed team teaching, I found that the teachers involved develop more skills of working together. I learned to accept criticism from my colleague, accept individual differences of fellow workers as well as those of learners.

However, I found out that questioning and brainstorming as methods of teaching require a lot more time than other methods despite all the good aspects they possess.

Evaluation

With the objective of trying out the vocational pedagogy approaches of learning to technical teacher trainees, I employed various check-points to ascertain whether learning is taking place. In addition I had also to ensure that the study project objectives are realized. To have these, all stages of the study process had check-points.

At the beginning of a learning process in any of the lecturers I facilitated, we would first seek for the students' experiences on the topic at hand. By this I would be diagnosing what the trainees have concerning the topic so as to choose the appropriate methods and activities to employ in the teaching as well as to determine the depth of the content to be covered in relation to the course unit's specifications. Although it was not healthy for the trainees at the beginning, it become so interesting for them to air out their experiences as a point of departure to the learning session they trainees liked the act.

During the act of teaching and learning, we would have breaks to reflect and consolidate the items so far covered. This would be through questioning from the trainees and the lecturers. The act of questioning intended to establish whether learning had taken place. Concerning this, it is my submission that although the truth is revealed, but it requires al lot more time.

At the concluding stage of any learning session, I would request the learners to point out items learned and together we would highlight on key items discussed and give clarity where need arose. This would then give the learners chance to expound on the key points. The intention of this was to empower the trainees to generate their reference notes as earlier on discussed. My observation on this was that a few were happy with the act of not giving notes while others were not happy as reflected from comments their logs in the column under the item of suggestions for better learning. They believed that what a lecturer gives is final and the most appropriate.

Furthermore, as a means of assessing whether the desired learning outcome had been achieved, I assigned group and individual tasks and whose results were accumulated to form part of the final assessment as per the course requirement.

To minimise tendencies of unhealthy competition and selfishness among the groups, only comments on strong points and areas which required improvement would be reflected in their work but not marks, refer to appendix 9. Concerning this, I found out that some of the trainees were unhappy with the practice since they were used to the competitive nature of learning from the beginning of their studies.

At some point during the study process, I would involve the students in the formulation of the questions for the group tasks which I believe were instrumental in their experiential learning. Samples of the formulated questions are shown in the picture below.
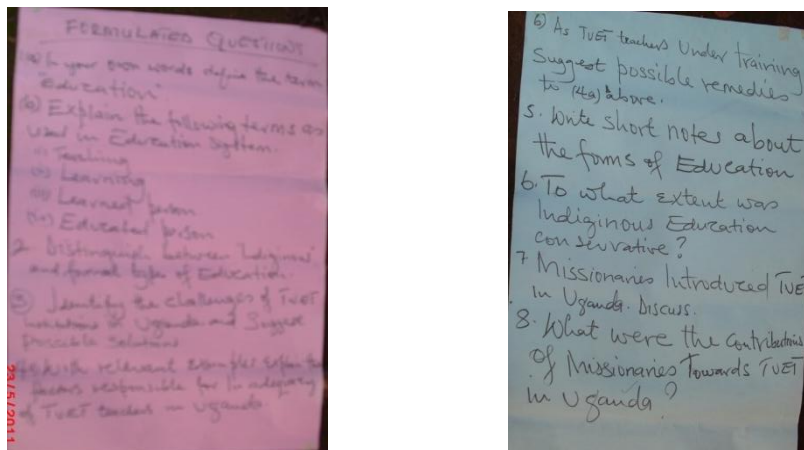
Figure 8: Sample questions formulated by Technical Teacher Trainees for their evaluation

This practice was welcomed by the students. One participant pointed out that:

> Formulating of questions together with learners is advantageous to them in the sense that they also learn to formulate and moderate questions for their discussions and also setting of questions as teachers hence promoting learning.

Although my participants knew why I conducted their learning in an unusual way they always questioned why other lecturers could not adopt similar techniques.

4.4   Theme C: Possible challenges with vocational pedagogy approaches in the teaching learning process and the workable solutions

Vocational pedagogy approaches as a new phenomenon in the teaching-learning process of the technical teacher trainees and also being my first time to apply these approaches, I could not rule out challenges at implementation. To achieve my objectives and those of the trainees, I found it inevitable to address these challenges as they arose and together we worked out solution to pave the way forward. In regard to this, we adopted group evaluation meetings as a tool for aiding dialogue in addressing challenges emanating from the use of vocational pedagogy approaches.

Group evaluation meetings

As already indicated above, one of the avenues for addressing the challenges encountered during the use of vocational pedagogy approaches was through group evaluation meeting. During these meetings, we would converge and discuss the participants' progress with the work both individually and as groups, address the challenges being encountered as well as empowering one another in achieving the set objectives. Below is a picture showing participants in a group evaluation meeting.

Figure 9: Technical Teacher trainees during group evaluation meeting

Organizing the group evaluation meetings

The group evaluation meetings were scheduled at participants' most convenient time of which Wednesday at 2:00pm of the every week was the agreed day and time for the meetings. However, due to other un-predetermined circumstances which included participants' commitment to workload from other study program course units, we could not afford to meet on a weekly basis as was initially planned. Each participant had an equal chance of chairing the meeting as well as take down minutes arising from the meeting which idea was highly cherished. Encouraging the participants to play an active role in the group evaluation meetings was intended to enhance and reinforce documentation skills. Several meetings were held and issues pertaining to the project activities discussed; of which two of the meeting minutes have been attached, refer to appendix 6.

The group dialogue evaluation meeting were adjourned in the month of November to provide room for individual guidance with their project proposal documentation, consolidating project activities as well as preparing for end of semester examination that were due the 22nd November 20210. Discussed hereafter are the challenges I experienced in the application of the vocational pedagogy approaches together with their remedies that we addressed during the group evaluation meetings for the success of the project.

Documentation by the trainees

At the beginning of the project, participants found difficulties at identifying key points worth documenting from the discussion. One participant pointed out that:

> A number of ideas are discussed and various experiences shared in the process of our learning making it difficult for us to pick out what to document and what to leave. We feel every idea discussed is vital.

Based on personal experience, the failure for the trainees to identify what to write and what to leave out is attributed to the nature of learning where students must be given already made notes. Hence even at higher levels of learning students expect written notes from lecturers.

Coupled to the above, I found out that some of the participants had a challenge of expressing themselves in writing English language. This was also an added factor for their failure to document personal notes. This could also be reflected by the shyness exhibited by those participants whenever they were to present findings of the group discussions during the teaching and learning process.

My interpretation to challenge of English language is a failure for the children to master their mother languages before they are introduced to English. In Uganda, English speaking is taken as a pride and parents feel grate to hear their children speak English. In schools, right from pre-primary English language is a media of communication. But because children are introduced to the secondary language before mastery of their mother languages, many fail to grasp it and that challenge is carried forward.

In an attempt to improve on the above challenge, together we resolved to identify and kept a summary of key points discussed on a particular item. In addition, I encouraged participants to be more keen and attentive so as to note any related details they felt important for their individual development and learning.

On the other hand, I encouraged participants with difficulties of writing in English to write using the simple English they had so as to describe the key points noted and make a foundation for intervention. In addition, group documentation was adopted alongside individual work to enable participants learn from one another, develop and enhance their writing skills. This was emphasized when doing course work assignments. To ascertain whether learning took place, I could request for their scripts the together with my colleague we read what participants had documented and made comments for their progress.

With that remedy I found out that all participants managed to document and even those who had a challenge of English language started progressing. This was an indication to me that learners need more empowerment from fellow learners if they are to progress.

Reflective logs

Keeping reflective logs was challenging to a number of participants as a new phenomenon in their learning process. Some of them were uncertain about what experiences to note. I realized that the failure was due to my underestimation of the concerns associated with the use of reflective logs. I did not give it due attention at the time of its introduction to the participants and yet it was a new venture to them. As a result the majority of the participants perceived a log as an assessment form a basis on which marks are awarded and they therefore feared noting ideas that would score them low grades.

Although the participants seemed not to have got the intent of a reflective log, it is my interpretation that the ideology of learning being associated with passing exams and grading was still predominant among the participants.

However, together we tried to solve the challenge by undertaking fresh elaborative discussion about a reflective log, its use and its purpose in the study. For the participants to gain impetus keeping a log we shared views about my personal log and also a few from participants who had managed to note something. This was intended to enrich their perception of what is expected to be kept in the logs. Furthermore, I explained to them that what one takes to be a new learning experience is what should be reflected in the log to avoid repetition of similar experiences.

As the study continued, all participants were in position to keep a reflective log and were happy with this new technique in the learning process. However, because a reflective log is personal, participants with a challenge of writing English language still remained uncomfortable which led them into noting a few ideas.

Group learning

Although group learning was welcomed by the participants, during the implementation process some participants expressed their concern about the misconduct of some group members. It was pointed out that some group members were not committed to the group activities as it was reflected by their absenteeism at the time of discussions.

I found out that the reluctance of the said members to participate in group activities was due to the ignorance of the significance of group dynamics skills which was a major setback to group learning. Furthermore, considering the small number of participants per group implied that the absence of one or two would render the group incapable of executing any task at hand. It is for this reason that some groups would fail to accomplish the assigned tasks before the class meetings are held. Consequently I could find it difficult to make a follow up of the group activities that were organized outside the scheduled time for teaching and learning.

To avert the situation, together we resolved to conduct some of the group activities during the scheduled class session periods. This implied assigning short learning tasks which could be discussed and presented with in the two hours period of the class session. Below is a picture showing participants handling group tasks.

Figure 10: Shairing in groups

After sharing, each group could select a representative who would present the findings as shown in the picture below.
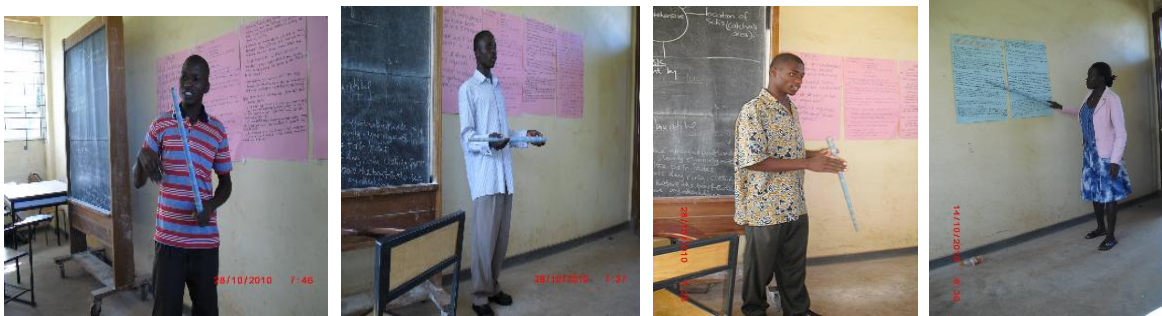
Figure 11: Presentation of group work by Technical Teacher trainees

As a result attendance was mandatory and all members were obliged to participate. This made all participants to benefit and also to get acquainted to group dynamics. However, whenever the groups were to meet outside the scheduled time, still some members could not attend. My interpretation to this was that those who worked against their groups were from institutions where they were used to being forced to learn. They were never allowed to learn independently of the teachers. However, we continued encouraging all the participants to try to schedule group meeting at time most convenient to all the members and to proceed with the assigned tasks irrespective of the number present.

4.5   Summary of key findings

As I conducted the project and experimented the vocational pedagogy approaches to the teaching and learning of technical teacher trainees; the following are the key findings I obtained and are worthwhile discussing and analyzing in the succeeding chapter.

During the situational analysis under theme A; regarding challenges faced by technical teachers in the teaching and learning in VET institutions in Uganda with practicing instructors from various VET member institutions of UGAPRIVI and teacher trainees at Kyambogo University, we found out that:

There is a challenge of insufficient training tools, materials and equipment for practical purposes and incase when they are available, the number of trainees always outweighs the material and equipment and in most cases they are outdated. This has rendered a theoretical nature of teaching that is contrary to VET aims.

Inadequate reading and reference materials as highly emphasized by teacher trainees in the fields of tailoring, carpentry and joinery as well as plumbing, was another challenge encountered by instructors in the teaching and learning process in VET. It indicated that a large percentage of the reading material at instructors disposal is outdated and does not meet today's demands. This is constrained by little interest of Ugandans in writing books for VET in addition to low level skills of documentation and records keeping hence rely on books from foreign countries which are sometimes challenging for the trainers to use because of the unfamiliar examples.

Furthermore, the teaching and learning in VET institutions is faced with a challenge of low attitude towards this kind of education by the public. Majority people associate VET with manual work where one is exposed to bodily injuries coupled with sweat and for that matter, its recruits mainly constitutes those who fail to score high and cannot compete in the general academic circles. In addition, VET is also joined by those who cannot afford academic secondary education so it is regarded a kind of education for the unprivileged and many people do not want to be associated with it. The low attitude towards VET was attributed to the low levels of sensitizing the Ugandan community about the benefit of the kind of education.

It was also indicated that VET teachers adopt inappropriate methods of teaching which allow very little chance to learners to construct their learning. In addition, most teachers always regard trainees as having no knowledge and their work is to impart knowledge in them. Participants further revealed that the teaching focused only at passing national examinations at the expense of acquiring the necessary knowledge and skills required in the world of work.

Under theme B, I focused on particular vocational pedagogy approaches as applied in the teaching and learning process of technical teacher trainees with a target of addressing VET challenges identified in Theme A. In so doing, the following are the key findings I obtained on each approach and are well thought for discussion in the chapter five.

Experiential learning with emphasis on learning by doing

A thorough analysis of the VET challenges in Uganda followed by identification of those affecting the teaching and learning practice as well as suggested solutions, was a point of departure of adopting experiential learning. This approach to learning was intended to empower the teacher trainees to learn experientially by getting involved in their learning activities through sharing their experiences, and personal reflections and ideas about a task. To achieve this, Joseph and I shared the idea of empowering the students to document their experiences as were generated from the lecture discussion and make a follow up the progress.

Another way of encouraging the participants to improve their documentation skills was through making personal reflective logs which were intended to empower the participants to learn reflecting on their learning experiences as well as to transform these experiences into written information for future reference.

As a way of enhancing experiential learning, together with the participants and in one of the class evaluation meetings, we agreed that each participant employs the experiences acquired and document the possible solutions to the challenges to the teaching and learning in VET institutions. Group evaluation meeting were conducted to discuss their work progress, challenges being encountered as well as to empower one another in achieving their objectives.

Group learning

I employed this teaching and learning strategy to address the challenge of: *'Inappropriate methods of teaching currently practiced in VET institutions.'* We adopted this strategy from the beginning as a means of encouraging the participants to actively get involved in their learning as well as being responsible for each other's learning. In addressing this strategy, group formation, leadership in the groups; rules governing learning groups and group meeting were considered.

The initial stages of group formation were dependent on what prevailed in the class at that time. Therefore there was no definite criterion employed. Participants by consensus agreed upon working as one group for the first tasks on describing TVET and identifying its purpose. As the number of students in the class increased to nine and they expressed a need to split into three groups of three members for effective discussions and learning. During our first

evaluation meeting on 24th September, 2010, participants revealed that they were finding it difficult to work in the learning groups of three because when a member or two are absent it there was hardly any work. Therefore for the effecting operations of the groups the third learning group was dissolved and its members were integrated into the other two groups. However, when three more students reported for the course a few days later, participants requested for the renaissance of the third group and these were maintained as learning groups for the rest of the semester period.

Regarding leadership in the groups, three participants were suggested to take up leadership in the groups but was also agreed upon that other members have equal responsibility in the running of group activities such as chairing of group discussion, recording of discussion proceedings as well as presenting of group findings. Responsibility in the operation of the learning groups was rotational.

Concerning the setting rules governing learning groups, members felt a need for self discipline and to act responsibly by honoring ideas by fellow members as well as group decisions about how to carry out tasks.

Regarding group meetings, participants resolved to have their own arrangements concerning when and where to meet depending on convenience and on the workload at hand.

The vocational didactic relations model

The vocational didactic relations model is a design that indicates the preparation of the teaching and learning process as involving the planning, accomplishment, evaluation and critical analysis of vocational-specific teaching and learning processes. The model relates six items namely: learning experiences, content, objectives, resources, learning process and evaluation which I believe to be fundamental in a teaching and learning process. Described below is how we addressed the six items of the relations model for effecting a change in the teaching and learning of the technical teacher trainees at Kyambogo University.

Learning experiences

As a matter of fact, individuals are different from one another physically, psychologically, socially and intellectually which calls for a need to take care of the individual differences in the teaching learning process of the technical teacher trainees. In this study, self introduction and seeking for individual expectations from the course was a point of departure in getting to know one another and creating an atmosphere of free interaction. Extracting information from some of the trainees was a difficult experience at the beginning but this gradually improved during the course of the project.

Resources

Under this item together with Joseph my colleague, we ensured the procurement of the necessary resources for the fruitful study apart from those that were beyond our reach. The learning resources included two laptop computers, a beamer, a digital camera, a video recorder, manila cards, markers and highlighters. In addition, the use of a video and voice recorders was so fascinating for the participants and this would make them prepare very well for any presentations before the entire class. During the time of our discussions in class, I would sometimes act as a guide to the discussion and my colleague would record the outcome using a computer and a beamer on a projected screen.

However, I had planned to avail computers to my participants at the university but this was not possible.

Objectives

During the course of study, we focused at realising various set objectives which included: objectives of the course unit as per the university curriculum; the objectives of the research project and the participants' expectations. The objectives of the participants were generated as expectations at the beginning of the course having taken them through what was meant for them to cover. The objectives were made clear to the participants and the learning activities were directed at achieving the set objectives. Setting of objectives enabled us to be focused during our discussions and also to effectively utilise the limited time that was allocated for the course unit. Finally with the set objectives I found it quite easy to formulate questions that were subjected to the participants at the end of the semester as stipulated by the university regulations.

Content

The experience I acquired during the situational analysis at the beginning of this study enriched me with knowledge and skills that I needed for the study and was privileged to have part of course unit's content, which I facilitated encompassed in my research project framework. The discussion was an empowerment to the participants to be focussed on whatever was ahead in the unit. On a number of occasions, participants could source for related information before hand and this made the learning lively since they could contribute to the item under study and also seek for more information through questioning. Furthermore, the presence of the course content helped me to identify the appropriate teaching methods as well as in the preparation of the appropriate learning resources. However, to some extent the extended part of the history of education in Uganda that was to be covered as per the course outline became boring to the participants.

Learning process

My teaching practice during the study project involved a variety of methods and techniques intended to cater for the learners' needs in their learning process. All these were intended to encourage learners' participation and also at achieving the predetermined objectives as already described above.

Evaluation

I employed various check-points to ascertain whether learning is taking place in addition to ensuring that the study project objectives are realized. During the act of teaching and learning, we would have breaks to reflect and consolidate the items so far covered where questioning was predominately employed. At the concluding stage of any learning session, I would request the learners to point out items learned and together we would highlight on key items discussed and give clarity where need arose. Furthermore, as a means of assessing whether the desired learning outcome had been achieved, I assigned group and individual tasks and whose results were accumulated to form part of the final assessment as per the course requirement. At some point during the study process I would involve the students in the formulation of the questions for the group tasks.

Under theme C, I focused on possible challenges with vocational pedagogy approaches in the teaching-learning process and the workable solutions. Vocational pedagogy approaches being a new phenomenon in the teaching-learning process of the technical teacher trainees and also being my first time to apply these approaches, I could not rule out challenges at implementation.

At the beginning of documentation process, participants found difficulties at identifying key points worth documenting from the discussion. Coupled to the above, I found out that some of the participants had a challenge of expressing themselves in writing English language. This could also be reflected by the shyness exhibited by those participants whenever they were to present findings of the group discussions during the teaching and learning process.

In an attempt to improve on the above challenge, together we resolved to identify and kept a summary of key points discussed on a particular item. I encouraged participants with difficulties of writing in English to write using the simple English they had so as to describe the key points noted and make a foundation for intervention. In addition, group documentation when doing course work assignments was adopted alongside individual work to enable participants learn from one another, develop and enhance their writing skills.

Keeping reflective logs was challenging to a number of participants as a new phenomenon in their learning process. I realized that the failure was due to my underestimation of the

concerns associated with the use of reflective logs. As a result the majority of the participants perceived a log as an assessment form a basis on which marks are awarded and they therefore feared noting ideas that would score them low grades.

However, together we tried to solve the challenge by undertaking fresh elaborative discussion about a reflective log, its use and its purpose in the study. We also shared views about my personal log and also a few from participants who had managed to note something all intended to enrich their perception of what is expected to be kept in the logs.

Although group learning was welcomed by the participants, during the implementation process some participants expressed their concern about the misconduct of some group members. To avert the situation, together we resolved to conduct some of the group activities during the scheduled class session periods. This implied assigning short learning tasks which could be discussed and presented with in the two hours period of the class session. As a result attendance was mandatory and all members were obliged to participate. This made all participants to benefit and also to get acquainted to group dynamics.

<div align="center">**Chapter five**</div>

5.0   Discussion and analyses of findings

5.1   Overview

In this chapter I discuss and analyze the findings accruing from the story of action during the experimentation of vocational pedagogy approaches to the teaching and learning process of the technical teacher trainees. In the discussion I only focused on findings which I presented in the summary of each theme as reflected in chapter four of this thesis and I sequentially observed the order of presentation of the findings. Throughout the discussion I largely depended on personal interpretation and description coupled with own experiences and cross referencing with the related reviewed literature where deemed necessary. Also in the discussion is how the vocational pedagogy approaches can be of influence to the teaching and learning in VET institutions in Uganda.

5.2   Challenges faced by technical teachers in the teaching and learning in VET institutions in Uganda.

In this section; is the discussion and analysis of the areas that I identified as the key challenges that are faced by the teachers in the teaching and learning in VET institutions in Uganda. They include:

Insufficient training materials and equipment

Inadequate reading and reference materials

Inappropriate methods of teaching

Low attitude towards VET by the public

Insufficient materials and equipment

The findings indicated that training materials and equipment for hands-on is a challenge in the teaching and learning process in VET institutions in Uganda. In instances where they are available, the trainees outnumber the equipment and materials. Such a situation is an indication of limited hands-on learning which is contrary to the aims of VET in Uganda. This is supported by (Kohn et al, 2006, p. 17) who point that VET institutions in Uganda are characterised by inadquate training infrastructure in terms of buildings/facilities, equipment, tools and training materials. It is also shared by (Okinyal, 2006) who states that BTVET institutions lack instructional material, and infrastructure like lecture rooms, teachers' houses, workshops, tools, equipment, books and libraries. I observe that VET is a practical oriented discipline, its success is dependent on materials and equipment.

Therefore, failure to provide such training facilities renders VET graduates less competent for the world of work since learning exhibit little practice.

Furthermore, findings indicated that the absence of training materials and equipment is due to the high cost which makes their acquisition difficult for the parents as well as the training institutions. In regard to this, (Nalumansi et al, 2002) argues that effective BTVET is relatively expensive an indication that even the government cannot afford to equip training institutions. For this matter, learners are made to work in large groups sharing the few tools and materials available and in some cases teachers resort to the theoretical nature of delivery.

The inadequacy of the training requirements also denies a learner the chance to learn by doing a practice advocated for by Dewey who asserts that vocational education requires real tools and materials that are used to execute tasks in the word of work. The inadequacy of training materials is also pointed out in the National Development Plan 2010/11-2014/15, (Uganda, 2010, p. 218) that the inadequate physical infrastructure such as scholastic materials, classroom blocks, water and sanitation and power supply are constraints to performance of Education and Sports sector. Findings further revealed that even in situations where trainers could improvise, the spirit of being initiative amongst the trainers is lacking. Trainers are not creative and it is my observation that they are not empowered in the aspect of designing and producing of models, mock-ups and other instructional materials out of locally available materials to aid the teaching and learning activities.

During the situational analysis the trainers of the Tailoring course revealed that in situations when there are no materials for practical work, they use papers of cement packaging. These help them in simulating the making of model garments. Although it is a good practice, it is my belief that it does not bring out the desired learning outcome as learners are more interested in making real items than just models. This is reflected upon by Tobiassen (2002, p. 46) who states that the absence of resources restrain the learners learning process by curtailing the art of innovativeness and creativity that are facilitated by doing; a centre of vocational learning. Therefore, having experienced a situation where learning was constrained by insufficient resources at my undergraduate studies and as a teacher in a vocational institution, I consider this aspect very significant in the learning process and worth obtaining a measure for its improvement it in this study.

Inadequate reading and reference materials

Inadequacy of reading and reference materials was highly emphasized by the technical teacher trainees and practicing teachers in VET institutions. It is my belief that the little interest possessed by Ugandans in writing books for VET is a major cause for this.

Through experience, I have come across a number of books for different disciplines in general academia written Ugandan authors which is not the case with VET. This situation has led to a dependency syndrome in VET where nearly all reference books and reading materials are foreign. These books are sometimes challenging for the trainers to use because of the unfamiliar examples. In addition, the reading and reference materials at both the trainers' and trainees' disposal are outdated and do not fully meet today's demands not to mention the outdated curriculum. This weakness is pointed out in a report on the training needs assessment conducted by the Uganda Association of Private Vocational Institutions (UGAPRIVI, 2004, p. 7) that:

> Little attention is given to organizing the teaching material, up grading of taught information, syllabi or curricula in VET training institutions and some of the information taught was found to be dating back to 30 years ago.

The curriculum observed in VET does not match with the current labour market requirements. It is my belief that the out dated curriculum for VET is to some extent a limitation to the interested Ugandans to write reading and reference books for VET. This situation is also pointed out by (Kikomeko, 2010, p. 58) in his research study entitled, "*The Relevance of Uganda's Formal Vocational Education to the Labour Market Requirements"* that:

> Most training institutions have continued to follow the examination syllabus with content that was left behind by the colonial government at the time of independence.

The use of outdated curriculum is pointed out by (Liang, 2004, p. 40) who stated that much of what is taught is a Ugandan adaptation of the old Oxford/London syllabuses of the 1950s. It is my observation that the needs of Uganda today are very different from needs of the Colonial Uganda of the 1950s. Therefore the curriculum needs reviewing and discussing in terms of development and implementation so that it is matched with the to-date societal needs and technological advancements. This will in turn provide room for people to incorporate the newly acquired experiences in their respective fields and enable them to write and publish reading and reference materials.

Inappropriate methods of teaching

The findings indicated that VET teachers adopt inappropriate methods of teaching which allow very little chance for learners to construct their learning. As one of the teacher trainees revealed that denying the learners a chance to participate in their own learning is frustrating and cannot reflect on previous experience thus limiting expansion and generation of new ideas.

From own experience, on several occasions I have observed teachers failing to seek for the learners' experiences as a point of departure in the teaching process. This implies that learners are regarded as having no knowledge and they are simply recipients of knowledge from teachers. Learners are taken as passive elements in the learning process. This was attested by the practicing teachers at the time of situational analysis during my interaction with them. I regard this as inappropriate to the teaching and learning process. These inappropriate methods of teaching are indicated as capacity gaps in education constraining the performance of Education and Sports sectors in Uganda. This is pointed out in the National development Plan (Uganda, 2010, p. 218) that:

> The teaching methods are old fashioned and books are not only inadequate but even those that are available are not always used effectively.

I attribute the use of inappropriate methods of teaching employed in VET institutions to the few institutions that train VET teachers in the country. As a result, the majority of teachers in VET institutions are not pedagogically trained hence little is expected of them. The issue of less competent teachers in VET institutions is pointed out by (Nalumansi et al, 2002), in the study report on the need for modern BTVET under the theme "Matching Social Needs and Economic Requirements of 2002",[25] where they revealed that VET institutions often have poorly trained staff (instructor and managers) an indicator of low academic levels. It is true that such pedagogically untrained teachers are not equipped with effective and creative ways of involving learners in the learning process[26]. As a result, they resort to teaching by attempting national examinations past papers with a target of preparing their learners to pass examinations at the expense of knowledge and skills acquisition required in the world of work as was revealed by the participants. I assert that this kind of teaching is contrary to TVET aims where emphasis is on the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life as cited by (ILO, 2002, p. 7). In addition, (COMEDAF, 2007, p.9) emphasizes that the delivery of quality TVET is dependent on the competence of the teacher in terms of theoretical knowledge, technical and pedagogical skills as well as being abreast with new technologies in the workplace. It is therefore my submission that to achieve quality VET, there is need to equip its teachers with modern methods of teaching such as the vocational pedagogy approaches I am advocating for

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[25] For more details about this see: A study on the need for mordern business, technical and vocational education and training (BTVET) entitled, Matching Social Needs and Economic Requirements of 2002.

[26] This was my observation during the pedagogy training workshops organized by UGAPRIVI to which I participated as a facilitator during the years of 2009, 2010 and 2011.

Low attitude towards VET by the public

Findings indicated that majority people associate VET with manual work where one is exposed to bodily injuries coupled with sweat. Consequently the youths who are recruited as trainees in VET institutions are majorly those whose scores are low in general academic examinations and cannot compete favorably at higher levels in the general academic circles. The low attitude does not only exist amongst the recruits but also amongst the teachers, proprietors of VET institution and the general public as was affirmed by the practicing teachers and the technical teacher trainees. It is my submission that the low attitude is attributed to the low level of community sensitization of the kind of education by the government. Indeed because many people do not know the benefits of VET, they do not want to be associated with it thinking that it is for the academically and financially unprivileged persons. Through experience I have been approached by a number of parents requesting me to obtain vacancies for their children in VET institutions. To my surprise whoever has approached me, claims that the child is academically poor and cannot pursue further academic studies rendering VET a field for academic dwarfs. On the other hand, some parents with financial challenges also feel that their children should join VET which they believe is cheaper than the general academia hence rendering it a kind of education for the poor. This poor image and stigma associated with VET in Uganda is also recognized by the MoES as revealed by (Egau and Bachu, 2009) who pointed out that:

> The Ministry of education and Sports through UPPET policy recommends sensitization of the community on the importance of BTVET courses and investment in teaching equipment, learning materials and processes.

It is my belief that if this is implemented will help improve on the low attitude associated with this kind of education. Therefore, teacher trainees opting to work with this challenge in the project was justifiable and we thought it imperative teaming with the MoES in realizing its objectives of sensitizing the community about VET.

The process of analyzing VET challenges through the situational analysis with both practicing instructors and teacher trainees was very enriching for this study. As a researcher I was empowered with experiences which were a basis of formulating the problem under investigation and a ground for advocating for improved methods of teaching and learning to teacher trainees. One of the participants also pointed out by one that:

> I learned not always rely on the government to provide solutions to the challenges we are facing in our institutions but rather as teachers, work together in building capacity of paving a way forward to these challenges.

The foundation formed during situational analysis has been a ground for working together with the teacher trainees in improving the existing situation; for which vocational pedagogy approaches were thought appropriate for the better learning and teaching of our learners.

5.3 Vocational pedagogy approaches and the teaching-learning process of technical teacher trainees at Kyambogo University

As already indicated in chapter four, the study involved the use of three main vocational pedagogy approaches namely: Experiential learning with emphasis of learning by doing; group learning and vocational didactic relations model in the teaching and learning process of technical teacher trainees with a target of addressing VET challenges identified in Theme A (Refer to chapter four of the findings) I hereby discuss and analyze findings from theme B and C concurrently. In this case, findings on each vocational pedagogy approach above are discussed and analysed in conjunction with the challenges encountered in its use as well as the workable solutions we developed. This has been done to ensure coherence and systematic flow of information from the story of action of the research.

5.3.1 Experiential learning with emphasis on learning by doing

My exposure to experiential learning as a masters student of vocational pedagogy at HiAk, compelled me to extend a similar learning process to technical teacher trainees at Kyambogo University. This was backed by a thorough analysis of the VET challenges in Uganda with a focus on those affecting the teaching and learning practice. During my encounter with experiential learning strategy I realized the following:

My learning was through performing tasks and documenting learning experiences derived from the tasks as well as reflecting upon these experiences in relation to the previously acquired experiences. Through this I could envisage the applicability of my newly acquired knowledge to my practice as a teacher for its improvement.

I must affirm that I derived satisfying learning experiences each time I accomplished a task. This standpoint is supported by (Dewey, 1997, p. 73) who points out that to learn from experience is to make a backward and forward connection between what we do to things and what we enjoy or suffer from things in consequence. Dewey further emphasizes that under such conditions, doing becomes a trying; an experiment with the world to find out what it is like; the undergoing becomes instruction-discovery of the connection of things.

Furthermore, my understanding of experiential learning was strengthened while I was conducting my end of first year study project at HiAk entitled: *"Teaching and Learning as Directed towards Work Demands in VET Institutions: A Case Study of Electrical Trades in Upper Secondary Schools in Norway."* During that study, I observed how electrical disciplines were being facilitated and found out that: Learners were involved in the planning and execution of their learning tasks either individually or in groups after which they would document their experiences regarding the task. The documented work would then be submitted to internet aided electronic platform for the teachers to assess, comment and grade (Arinaitwe, 2010). Reflecting upon this kind of learning and own learning at HiAK, I felt it imperative to carry on similar experiences to the real teaching and learning situation. In doing so, I would get more acquainted with their applicability as well as to expose the technical teacher trainees to same kind of learning which they can later adopt and employ in their teaching practice.

This approach to learning was intended to empower the teacher trainees to learn by getting involved in their learning activities through sharing experiences, personal reflections and ideas about tasks. To obtain results out of it, together with Joseph my co-teacher, we shared the idea of empowering the students to document their experiences as they were generated from the lecture discussion and make a follow up of the progress. This act eliminated the practice of memorizing of the lecture notes given out by the lecturers without students comprehending, but only to reproduce the very notes at the time of examinations. From personal experience, receiving and giving written literature in form of handouts was a common practice while pursuing my undergraduate studies at Kyambogo University as well as during my practice as a teacher. The act of being given handout would make me feel that what the lecturer has provided was the final truth and I would be forced to memorize it so that I can reproduce it when required for exams. If an item was difficult to perceive, I would at least rehearse through it a number of times until I memorized it. This act was so stressful especially during examination period. Having learned experientially through doing, self discovery by reflecting and building on own experiences, it was justifiable adopting this strategy. This is also advocated for by (Dewey, 1997, p. 80) where he asserts that:

> Where children are engaged in doing things and in discussing what arises in the course of their doing, it is found, even with comparatively indifferent modes of instruction, that children's inquiries are spontaneous and numerous, and the proposals of solution advanced, varied, and ingenious.

In addition, the documentation process would enable the teacher trainees to develop writing skills, self impression and reflection skills. In order for them to learn these skills, it was imperative for each person to practice individually. This is supported by (Johnson and Johnson, 1999, p. 157), who point out that the purpose of individualistic goal structure is for students to attend to a specific task and master it to their own. In addition, they contend that establishing an individualistic structure would be to learn specific information or simple skills to be subsequently used in cooperative learning situation (Johnson and Johnson, 1999, p.155). It is my belief that the knowledge and skills acquired during the documentation practice by the teacher trainees would be transferred to their respective fields of specialization in documenting of books for references during the teaching and learning process. This practice once promoted would minimize the challenge of insufficient reading and reference books experienced in VET institutions.

On seeking for comments and suggestions about the idea, the participants positively responded with some members suggesting group discussion but individual documentation process.

I was in agreement with the suggested idea because each of the trainees needed to acquire documentation skills for improvement of own practice in their respective institutions. As a teacher, I considered the individual involvement in executing of tasks as paramount to developing self confidence, a sense of responsibility in managing tasks as well as promoting curiosity and self discovery which are fundamental in learning. This is supported by (Dewey, 1997, p. 81) who points out that excessive reliance upon others for data, whether got from reading or listening is to be depreciated. Personally I observe that others, the book or the teacher give ready-made solutions to scenarios, instead of giving knowledge and skills that one would need to adapt and apply to the situation at hand. Furthermore, individual documentation helped me to guide, support and monitor the personal development of the teacher trainees with the learning strategy.

Although the idea of documentation of own notes was welcomed and embraced by the participants, it did not go without challenges. Findings indicated that participants found difficulties at identifying key points worth documenting from the discussion. Through personal experience I accept that getting familiarized to a self reliant kind of learning is challenging. I was used to observing a prescribed time schedule for learning, receiving instructions from the teachers on what to do and being given readymade study material.

At HiAk when I was faced with a new approach to learning, all the necessary learning materials and resources were availed to me and it was my duty to plan for my learning and put it to effect with minimal intervention from the supervisor. I testify that getting started was difficult. I spent nearly a month at HiAk wondering what to do and how to do it until I realized that I needed to be self reliant in such situations. Based on that experience, the failure for the teacher trainees to document is partially attributed to the nature of learning which is teacher-centered where everything is availed by the teacher and learners are passive elements in the learning process. It is my submission that learners' being passive in the learning process hampers their thinking capacity as well as creativity. It further incapacitates them whenever they are faced by the strange situations that require thinking.

To counteract the afore-mentioned challenge, I promoted group work and summarising of the important points generated in the discussions, I also encouraged participants to be more keen and attentive. This enabled them to note any related details which they felt important for their individual development and learning. This situation is advocated for by (Dewey, 1997, p. 74) who points out that even if learning needs the application of the mind, some bodily activities have to be used. The senses especially the eye and ear, have to be employed to take in what the book, the map, the blackboard and the teacher say.

The noted details would be incorporated in their experiences as they form the notes thus making the practice of documenting own notes more simplified.

Coupled to the above, I found out that some participants had a challenge of expressing themselves in writing English language. This could also be reflected by the shyness exhibited by those participants whenever they were to present findings accruing from the group discussions before the class during the teaching and learning process. I encouraged such participants to write using the simple English so as to describe the key points noted. In addition, group documentation when doing course work assignments was adopted alongside individual work to enable participants to learn from one another, develop and enhance their writing skills. Personally, I am convinced that like any other learning process, participants need encouragement and empowerment from one another to get started and to keep focused. It is also my belief that in order for learners to strengthen their documentation skills, they needed practice through trying and failing, learning from their mistakes until mastery of the skills. This is supported by Chilean, Maturana and Varela (cited in Senge, 2000, pp. 37-38) who assert that: "All doing is knowing and all knowing is doing." This is also shared by constructivist theorists who recognize that there is no such a thing as knowledge "out there" independent of the knower, but only knowledge we construct for ourselves as we learn.

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We help the learner understand the world, but we don't ask him/her to construct his or her own world.[27]

Furthermore, I have also observed and experienced that most learning require a great deal of motivation and encouragement from the experienced person facilitating it. Therefore, as an educator of the teacher trainees, I took it upon myself to keep encouraging them through sharing personal experiences and availing myself whenever they needed guidance. Gradually as the project progressed, I begun to realize improvements in their documentations as was reflected from scripts they submitted to for comments, refer to appendix 9. This was an achievement in my project work and it was a point of departure to drafting project proposal for future implementation in their workplaces as described ahead.

Personal reflective logs

To improve on the documentation skills was the adoption of personal reflective logs. These were intended to empower the participants to learn to reflect on their learning experiences as well as to transform these experiences into written information for future reference. The idea of adopting personal reflective logs is supported by (Johnson and Johnson, 1999, p. 118) who point out that: "Learning logs and journals help students document and reflect on their learning experiences." I opted to adopt the idea of log writing to enhance the practice of reflecting on what one experiences in the learning process in addition to life experiences. The teacher trainees needed to reflect upon the content of the items covered and experiences obtained in the course of interacting with others so as to be able to note something in their logs concerning the generated knowledge. From own understanding, the act of reflection constitutes thorough analysis and thought about an item under consideration. In doing so, an individual develops critical reflective thinking skills and widens his/her knowledge base. This is advocated for by (Dewey, 1997, pp. 75-76) who asserts that reflection also implies concern with the issue, a certain sympathetic identification of our own destiny, if only dramatic, with the outcome of the course of events. He further mentions that thought or reflection is the discernment of the relation between what we try to do and what happens in consequence. No experience having a meaning is possible without some element of thought. This is also shared by Piaget (cited in Kolb, 1984, p. 23) who points out that the dimensions of experience and concept, reflection and action form the basic continua for development of an adult.

The findings reflect challenges participants went through to get acquitted with log keeping. Participants perceived log keeping as an assessment tool and a basis for awarding marks. This perception is an indication that the participants had never experienced anything related to log

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[27] http://www.exploratorium.edu/ifi/resources/constructivistlearning.html. Retrieved on 20th April, 2011

keeping. Furthermore, they had a belief that whenever they document something, it is some kind of assessment since the education system is examination oriented and they are always on tension. Dewey (1997, p.75) indicated that every perception and every idea is a sense of the bearings, use, and cause, of a thing; participants' perception of a reflective log was justifiable. When I reflect upon own experience concerning log keeping at HiAk, I admit that taking up a new venture is always difficult. I get so much afraid of failing because I always want to do things perfectly. It was after a thorough thinking about the idea, weighing its consequences and with encouragement from my supervisors that I managed to pick up the log keeping practice.

It was through discussing the significance of log keeping in relation to documentation that participants managed to keep a log. This experience puts me to an understanding that for an individual to ably do something, must first clearly understand its benefits to him at that very moment and in future. The practice of instructing learners to do things without them understanding why and what benefits is common in our education system. A lot is taught without learners attaching meaning to them apart from answering questions as examinations at the end of the day. This made me learn that I must always discuss an item with the learners before I request them to adopt it.

I must always give a study item due attention at the time of its introduction, allow opportunity for learners assimilate and accommodate it in their previously acquired learning experiences. This is advocated for by Piaget (cited in Kolb 1987, p. 23) who argues that learning lies in the mutual interaction of the process of accommodation of concepts or schemas to experiences in the world and the process of assimilation of events and experiences in the world into existing concepts ad schemas. Possibly if I had availed them ample time to assimilate[28] the idea of log writing; they could have realized how significant, applicable and useful it is to their learning. Thus, they would not have rejected it because I believe that as human beings, we tend to reject knowledge that is abstract and whose application is far from our life situations.

In addition to perceiving log keeping as an assessment tool, participants could not easily identify what to write and to leave out. This failure was a signal to me that participants were not used to personal documentation of the things they learn. They had a belief that it is the lecturer to identify what to write and what to leave out since lecturers are taken as providers of knowledge and learners are simply recipients.

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[28] For which I understand assimilation as a process where new knowledge is quietly added to former experiences and knowledge

It was through intensive discussion with a lot of sharing experiences that the participants were able to write. As the study progressed all participants were in position to keep a reflective log.

However, participants with a challenge of writing English language still remained uncomfortable as reflected from a few ideas noted in their logs. It goes without saying that *'better tried than never.'* I believe that even those who managed to note just one learning experience too learned something of benefit to their practice. This is pointed out by (Dewey, 1997, p. 75) who asserts that:

> An ounce of experience is better than a ton of theory simply because it is only in experience that any theory has vital and verifiable significance. An experience, a very humble experience, is capable of generating and carrying any amount of theory (or intellectual content), but a theory apart from an experience cannot be definitely grasped even as theory.

As the story is revealed above, the learning experiences I acquired from facilitating log writing process will remain fundamental to my learning and vital when choosing to undertake other ventures. I learned not to undermine any learning; small or big because once misunderstood, the desired learning outcome is not realized. Therefore, I will always give due attention to all aspects of my teaching without having to assume that some items are simple and easily perceived by the learners; which calls for constant inquiry from the learners if the idea at hand is well understood. My experiences were enhanced when I reflected upon Peter Siege idea that no school's experience can be applied to another's situation wholesale. All schools and situations are unique and require their unique combination of theories, tools and methods for learning (Senge, 2000, p. 6).

Drafting project proposals for implementation at workplaces

As a way of enhancing experiential learning, together with the participants in one of the class evaluation meetings we held, we agreed that each participant employs the acquired experiences and develop the possible solutions to the challenges of teaching and learning in Uganda's VET institutions. The need for individual development of solutions to the challenges arose after participants realizing that no particular solutions if collectively generated, would apply to each and every situation. The argument for this was based on the variation in magnitude of the challenges faced by the institutions. In addition, is the variation in the resource base and administrative capabilities of the VET institutions for improving the situation. The suggestion to draft project proposals is an indication of a positive change in the participants following the situational analysis process and the documentation activities they engaged in at the beginning of the project.

Furthermore, the participants seemed to have gained confidence at transforming ideas and views into actions which would improve the challenges already analyzed. In support of this is (Dewey, 1997, p. 81) who argues that to think effectively one must have experiences which furnishes him with awareness for coping with the difficulty at hand. A difficulty is an indispensable stimulus to thinking, but not all difficulties call out thinking.

Reflecting on Dewey's views, I promoted the idea of drafting project proposals with each individual engaging in a thorough reflection of a particular situation for its improvement. Furthermore, it is also my view that the suggestion to draft project proposals by the participants is an implication of a development of interest and motivation in their learning. This development of interest and motivation is advocated by (Johnson and Johnson, 1999, p. 53) who point out that self-motivation is key aspect of individualistic tasks. The participants' action to implement the writing of their proposals convinced me that words alone do not effect change unless followed by actions since they are easily forgotten. This situation is supported by (Dewey, 1997, p. 81) who asserts that learners who have stored their "minds" with all kinds of material which they have never put to intellectual uses are sure to be hampered when they try to think. They have no practice in selecting what is appropriate, and no criterion to go by everything is on the same dead static level.

To obtain the best result out of their suggestion, participants suggested and together we agreed to document the ideas and views for minimizing the challenges in form of project proposals. Personally, I felt that it was paramount to have an organized record of ideas and views for a systematic implementation process and for easy presentation to the heads of institutions as well as to any other interested individual(s). Adhering to the agreement, all the participants worked on similar projects except for one who opted out despite his involvement in other activities of the study. He pointed out that his previous experiences were associated with the business field and that he needed more time to get familiar with VET issues. Reflecting on his reasoning, I was not convinced that for the time we had interacted with him through situational analysis in addition to him being a graduate of VET that he had no any previous experience he would reflect upon and bring forth in formulating improvements regarding the challenges. However, I attributed his decision to low personal motivation and interest in the idea. In addition, it gave me an impression that drafting of project proposals was not in his interest because at one point he had mentioned that he had no intentions to practice teaching after the training at Kyambogo University. Such a situation is reflected upon by (Dewey, 1997, p. 69) who points out that the mind appears in experience as ability to respond to present stimuli on the basis of anticipation of future possible consequences, and with a view

to controlling the kind of consequences that are to take place. With this in mind and honoring my value of democracy in learning, I respected the participant's standpoint but I was encouraged by his presence in group evaluation meeting as we discussed other participants' views.

With the knowledge of the ethics of research, the participants were at liberty to taking decisions regarding their participation in my project activities as I clearly explained it at the beginning of the project for justification of my actions. In addition, I acknowledged the law of learning that people learn better when they are motivated and ready to learn as supported by (Senge, 2000, p. 59) who point out that learning does not occur in any enduring fashion unless it is sparked by the learner's own passionate interest and curiosity which in turn means that the learners need to see where they want to go and to assess where they are.

During the drafting process, I adopted a one-on-one approach. I took up this approach so as to empower every participant in his/her endeavors and also to have a smooth follow up their progress. It shouldn't go without pointing out that I was personally impressed by the enthusiasm and creativity participants exhibited in their work, refer to appendix 8. The implementation of experiential learning with the teacher trainees broadened my teaching skills and improved my capacity of taking care of individual differences during the learning process. It also made me to learn empowering of the learners to develop interest and confidence in their learning as reflected by commentary from two of the participants in the text below.

> Through the documentation process, I have experienced what is call 'true learning' where I made own notes for future reference through noting experiences derived from learning process. This state of affairs opened up my mind and increased my understanding capacity and the ability to reflect on many previously acquired experiences as a point of departure to new learning. This encounter has made me to realize that learning is not all about receiving of already made notes coupled with explanation from the lecturers but personal involvement is paramount. Surely, it has boosted my interest to learn than before.

On the same note, another participant commented that:

> The documentation process has been an eye opener to my learning. Through this practice, I have realized that what to document is within an individual and what is needed is to transform it into written text. I now realize that documenting of personal learning experiences is not as complicated as I thought.[29]

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[29] Refer to a copy of participants reflective logs attached in appendix 5

I must point out that such experiences as clearly portrayed, if genuine, are worth mentioning and they are an indication that new knowledge was generated throughout the documentation process.

5.3.2   Group learning

I employed this teaching and learning strategy to address the challenge of: *'Inappropriate methods of teaching currently practiced in VET institutions.'* We adopted this strategy from the beginning as a means of encouraging the participants to actively get involved in their learning as well as being responsible for each other's learning. I believed that this would enable them become self reliant in their learning. Instead of students idly waiting for me to teach; they can easily organize their learning in their groups. Learning in this sense takes a different approach; from teacher-centered approach as commonly practiced in many institutions to learner- centered approach where the learner is actively involved in constructing his/her learning in collaboration with others. This is supported by (Dewey, 1997, p. 5-6) who asserts that not only does social life demand teaching and learning for its own permanence, but the very process of living together educates. It enlarges and enlightens experience; it stimulates and enriches imagination; it creates responsibility for accuracy and vividness of statement and thought.

From own experience during my undergraduate studies at Kyambogo University, I realize that being in a learning group was instrumental to my learning. Whenever we were assigned learning tasks, together with my colleagues, we would then share the involved tasks as individuals or in teams of two. Each team would then source for the required information on a given item and later we would jointly discuss the findings. We would even reflect upon the covered content material as a team so as to deeply internalize it. This would enable us to jointly develop a new knowledge base. Such a learning approach is supported by (Dewey, 1997, p. 14) who asserts that common subject matter accustoms all to a unity of outlook upon a broader horizon than is visible to the members of any group while it is isolated. I affirm that combining group members' efforts made our learning less cumbersome and tasks would easily be accomplished in a shortest time possible. This is supported by (Senge, 2000, p. 74), who emphasizes that with team learning, even though people retain their individuality their efforts will naturally move in a common direction. They waste less time and effort to reach a common goal because they understand one another more completely. With this foundation, I justify the need to introduce group learning to teacher trainees.

Furthermore, I experienced a free learning atmosphere when working with colleagues in a learning group while pursuing my undergraduate studies. I could freely and easily seek for clarification whenever I failed to clearly perceive an item unlike when in a general class. Therefore, opting to introduce learning groups was intended to empower the shy and slow learner participants to freely express their views and actively engage in their learning thus developing confidence. I must testify that in most cases, I could easily perceive concepts when explained to me by a colleague than a lecturer. In addition, I benefited so much from the experiences of my colleagues who had trained as electricians before joining the university. I managed to learn works associated with house wiring which I could not access at the university. In support of this is (Johnson and Johnson, 1999, p.13) who point out that it is obvious that groups outperform individuals especially when performance requires multiple skills, judgment and experiences. The act of empowering of one another in the learning process is also shared by (Bjerknes, 2002, p.8) who argues that experience is built through interaction between the individual and the environment and is enhanced when an individual acts together with others at least in a social context.

Furthermore, learning groups promote high level of interaction and sharing as well as exchange of ideas over the learner's reflections whereby individuals encourage and facilitate each other's efforts to learn thus promoting collaborative learning. This is supported by (Mjelde, 2006, p. 23) who asserts that learning takes place through activity and collaboration. She further emphasizes that students cooperation on working tasks constitutes a real learning resource as they learn from one another (Mjelde, 2006, p. 98). Therefore, having benefited from group learning, I felt it imperative to introduce the same to the teacher trainees so that they too experience and learn to work with it. It is my belief that the experiences gained would be a point of departure in adopting learner- centered approaches in their practice as teachers.

In addressing this learning strategy, group formation, leadership in the groups; rules governing learning groups and group meeting were considered.

Group formation

I left the formation of groups in the hands of the participants with an objective of ensuring that they learn the process of group development and the skills involved. Findings indicated that the participants went through several stages back and forth until they finally came up with what was appropriate. The stages they encountered were dependent on what they experienced as they progressed with assigned learning tasks as reflected in the findings. I liked what they went through as learners for a reason that it reflected experiential learning.

This situation is supported by (Kolb, 1984, p. 26) who argues that experiential learning theory proceeds from a different set of assumption, that ideas are not fixed and immutable elements of thought but are formed and re-formed through experience. The various stages were experienced due to the fact that each participant had different ideas which he/she felt vital to development of the learning groups. As findings revealed, the first group was formed on grounds that participants needed more time to know one another before they could split to various groups. This I honored because I was personally convinced that knowledge of one another was vital in forming stable and effective learning groups since people tend to feel secure, comfortable and confident with people they are familiar with. Such a scenario supported by Kleiverland[30] (2009), who points out that knowing and appreciating each other as member in the same group is an important aspect at the initial stage, that is, the forming stage of a learning group.

Findings also indicated that as the number of students in the class gradually increased participants were prompted to split into smaller groups for effective discussions and learning. This action by the participants was an indication that they had begun to realize the consequences of working as a big group. Reflecting on own learning group at my undergraduate studies, more time would be spent to reach a consensus and also to satisfy each and every member's learning needs whenever we would discuss as a large group. Sometimes the discussion which would be intended to benefit our learning would result into an extended argument resulting into accomplishing less than planned. Basing on personal experience, it is my submission that dialogue is easily established and sustained when working in a smaller group than as the entire class. In this regard, decisions are easily taken and a follow up of group members done thus ensuring individual accountability to group activities. With this in mind, participants' splitting into smaller groups was deemed crucial for the smooth running of group activities.

On their progression I believe that a lot was learned and they are to promote the same when they are out in the field practicing teaching. Based on personal experience, I believe that as individuals we learn better when we experience and discover things on our own other than being fed with ready processed information. This learning technique is advocated for by (Johnson and Johnson, 2006, p. 50), who assert that learning is more effective when it is an active process than one which is passive.

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[30] Jostein Kleiverland is a professor at HiAK. He facilitated to a group of international masters students pursuing Vocational Pedagogy, of which I was party, on Learning Group Facilitation on 16th September, 2009.

If a learner takes on a theory concept or practice and tries it, he or she understands it more completely, integrates it more effectively with past learning and retains it longer. He further emphasizes that people believe more in knowledge they have discovered themselves than knowledge presented to them.

Although group learning was welcomed by the participants, findings revealed that it yielded some setbacks during the implementation process. These included absenteeism of members at the time of discussion and other learning activities and the small number of members in a group. For those situations I encouraged the group members to develop the spirit of togetherness if they were to succeed in their endeavors. From own understanding, group dynamics[31] skills like any other skills are not learned by magic or merely by observing people act in a group but by experientially engaging in group activities. Such kind of learning is promoted by (Dewey, 1997, p. 75) who argues that all our experiences have a phase of "cut and try" in them what psychologists call the method of trial and error. Reflecting on the trial and error in many instances we simply do things, and when we fail, we try otherwise, and keep on trying until we succeed and then we adopt that process as a rule of thumb measure in subsequent procedure. The participants had through experience to gradually learn one another and develop group dynamics for their effective learning which I believe they really did. Reflecting on the constructivists' theory of learning, people learn to learn as they learn. Learning in this case consists both constructing meaning and constructing systems of meaning[32].

Leadership in the groups

Findings indicated that leadership in the groups was in hands of three people but with every group member having equal responsibility. This gave opportunity to every member chance to chair a discussion, present discussion outcomes among others. Such an atmosphere in the groups was one avenue of developing in the participants a sense of belonging and possession to groups thus ensuring effectiveness of a group. This is supported by (Johnson and Johnson, 2006, p. 25) that equal participation and leadership ensures that all members are invested in the group's work, committed to implementing the group's decision and satisfied with their membership. In addition, it is my belief that the idea of equal responsibility and leadership in the running of group activities would empower all members of the group thus enhancing their capacity to acquire group dynamic skills.

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[31] I employed the term group dynamics in a similar sense as described by Kurt Lewin in Johnson and Johnson (2006) as: "The science study of the nature of groups, behavior in groups, group development and the interrelations between groups and individuals, other groups and larger entities."

[32] Refer to http://www.exploratorium.edu/ifi/resources/constructivistlearning.html, retrieved on 1th April 2011

In support of this is (Mckenzie, 2005) who describes the act as involving enablement and engagement characteristics found in groups that recognize leadership emerging within their activities. Reflecting on the argument by Mckenzie, I made sure that every member participated in all group activities physically, intellectually, socially and emotionally. In the process a sense of ownership developed amongst group members whenever they could identify their contributions being endorsed by the entire class at the time of presentations.

Rules governing learning groups

Concerning the setting of rules governing learning groups, findings indicated a need for self discipline and acting responsibly. Basing on own experience in a learning group at my undergraduate studies, we did not have set rules upon which we operated but members showed commitment to the group activities. However, having no set rules may result into tendencies of misconduct such as absenteeism and neglect of group activities among others. This I experienced in my group at undergraduate studies. Some members would not regularly attend group discussions; they would sometimes join in only when the item under discussion was of their interest. With the teacher trainees, I tried to encourage them not to defy the set agreements although they were not rules. They tried to observe the agreements, however, as humans, there were instances where members would abrogate the set agreements. I allowed group members a chance to decide issues pertaining to a particular learning group. It was my belief that if decision were self initiated, it would sustain self drive; increase their motivation and team spirit as well as to foster a sense of responsibility towards the operation of the groups. This is supported by (Freire, 1996, p. 79) who asserts that if the people are aware of their activity and the world in which they are situated; acting in function of the objectives which they propose; and having the seat of their decisions located in themselves, they are capable of transforming the world by their creative presence.

Learning in groups

From the findings it is observed that, groups had their own arrangements concerning when and where to meet depending on convenience and the workload at hand. As already mentioned I found their decision justifiable because of circumstances that surround their learning such as the semester workload which constitutes a series of course units and administered by different lecturers. With such a situation, to have a definite schedule for meetings would be difficult. Reflecting on the afore mentioned, I observe that the ineffectiveness in the groups is likely to have been caused by the nature of the learning arrangement at the university. The failure to have a definite schedule for group meetings was so challenging to me most especially when it came to making a follow up of the group

activities. It is my submission that this could also have hampered the effective operation of the groups as participants were more familiar with the teacher-centered approach to learning where learning hardly takes place in the absence of a teacher.

Findings also indicated that at the beginning the groups failed to do their tasks appropriately until when we convened a meeting that discussed and came up with workable resolutions. The act of convening a meeting and coming up with a solution is an indication of experiential learning. The participants also realized that once in a group things are possible. The resolution was to conduct the part of the group activities during the scheduled class sessions. With this, short learning tasks were assigned to the groups and presented with in the two hours period of the lecturer session. As a result attendance was mandatory. Making group participation mandatory was intended for all participants to benefit from the course material being taught. In addition, it was a way of empowering participants to develop group skills and get acquainted to group dynamics which promotes cooperation through working together as they empower and learn from one another. This is supported by Lewin (cited in Johnson and Johnson, 2006, pp. 1-2) who asserts that knowing group dynamics has the potential to change the way we think about groups and, consequently, the way we function in groups.

However, it is my submission that the act of making group participation mandatory, though justified, does not fully lead to the development of self reliance amongst participants. I observed that when group discussions were conducted in the presence of my colleague and I, there were tendencies of groups seeking for guidance even in circumstances where they could discover things on their own given due time and attention. With such a tendency, group sustainability would be difficult if teacher supervision is discontinued.

I largely attribute the ineffectiveness of learning groups to the education system at the university. The curriculum for DTTE course is split into a number of course units being facilitated by different lecturers and employing different learning strategies. This nature of learning is to some extent confusing to the learners in the sense that they fail to get tailored to a particular method. In addition, the system is examination oriented where learners are ever thinking of what to write in the examinations at every end of the semester. Lecturing and individual learning method are the most predominantly practiced learning strategy. In this regard, (Kyakulumbye, 2008, p.114) also observed that the content for DTTE is craft based, highly theoretical and the teaching methods developed in the trainees are mostly teacher centered. It is my observation that the teaching strategies employed coupled with the examination oriented system promote competition and individualism amongst learners.

As I continuously encouraged the participants to work in groups, I could still observe individualism exhibited by some participants.

One would access appropriate reading material and fails to share with colleagues a signal of individualism and competitiveness. From own experience, individuals under such conditions, tend to be more committed to achieving individual success than group's success. Therefore, they devote more time and efforts to doing tasks which benefit them as individuals rather than getting committed to achieving group goals. Such a situation is also reflected upon by (Johnson and Johnson 2006, p. 19), who point out that members in a traditional group believe that they will be evaluated and rewarded as individuals, not as members of the group. Therefore, some members loiter seeking a free ride on the efforts of their more conscientious group mates which forces the conscientious members to feel exploited and do less.

Therefore, I must admit that the idea of group learning had a harsh landing as participants were at crossroad of adapting two contradicting learning strategies which on one side encouraged cooperation under groups, and on the other individualism and competition promoted by other lecturers. It is further my submission that it must have been challenging to the participants to assimilate to the idea of group learning given that their past experiences were linked to individualist and teacher-centered approaches to learning. I also assert that the participants lacked group maturity as well as teamwork skills to enable them resolve conflicts emanating from group dynamics. However, as we progressed in learning to work together, participants gradually placed more value on the benefits of learning groups despite other lecturers doing differently. This is supported by (Johnson and Johnson, 1999, p. 74) who point out that group members need time and experience working together to develop into an effective group.

Although the idea of sustaining learning groups was challenging, the experiences I acquired were far enriching to improving my skills of facilitating the nature of learning as well as getting acquainted with the skills of group dynamics. What transpired as I introduced and implemented group learning was as a learning process to formulation of learning groups and making them operational for the benefit of the learners as well as the teacher. It is my belief that if this is promoted, would in turn be one of the ways of improving the challenges of inappropriate teaching methods currently prevailing in most of the VET institutions in Uganda. During my experimentation process with the teacher trainees on group learning, I discovered that introducing a new idea to people requires a feasibility study of their current situation. I believe that if I had reflected upon conditions surrounding the teaching and learning of the participants, such knowledge would direct my decisions regarding group

learning. I have realized that for effective operation and sustainability of the learning groups, first there is need to orient the concerned about the practice so that they develop group skills and learn to handle conflicts arising from group dynamics. However, the head of the technical teacher education section, Joseph my colleague and the participants expressed their gratitude towards the introduction of the practice of group learning. This is reflected by the students' comments in chapter four of the findings.

5.3.3 The vocational didactic relations model

Findings indicated a description of how we addressed the six items of the relations model to effect a change in the teaching and learning of the technical teacher trainees at Kyambogo University. The items included: learning experience, resources, objectives, content, learning process and evaluation. It was intended for improving the planning, accomplishment, evaluation as well as critical analysis of teaching and learning process of teacher trainees. I am certain that if the items prescribed by the model are well adhered to, would improve on the methods of teaching adopted by these teacher trainees in their VET institutions. Tobiassen (2002, p. 45) points out that the model explains how the six items relates to one another which I believe is fundamental in the teaching and learning process. It is my observation that a teacher needs knowledge of these items, to know their interrelationship and be able to employ them in the teaching and learning process. This is also shared by Aakre in her paper entitled: "*Vocational Teacher Education: A Norwegian Context,*" where she pointed out that the model is commonly used as a starting point throughout all the years of teacher education in Norway and emphasizes that the six items interactive. Therefore there is great need for their analysis and should be considered when the teacher is planning for any teachings session.

Learning experiences

Under learning experiences, findings indicated that requesting for past experiences from the participants was the order of practice in the learning process. This state of affairs was so strange to them at its initials stages because they were used to being passive listeners in their learning process. They were not used to direct participation in the learning. However, after some time they got used and were so appreciative for such an exposure in their learning process. This was reflected by one who commented that the practice of sharing past learning experiences leads to building of new knowledge. Through own experience with the vocational didactic relations model, I have observed that knowledge of learners abilities coupled with experiences are fundamental and directly interact with the other items in the model.

This is highly reflected at the formulation of learning objectives, identification of content as well as choice of methods to be employed in the learning process. In this respect (Tobiassen, 2002, p. 45) points out that it is necessary for the teacher to consider the student's past learning experiences when planning the organisation of the intended teaching and learning activities. During my interaction with the participants and most especially while in class, I would request for individual past learning experiences related to the item at hand. This was guide to me when planning for my lessons and it was also a source of new knowledge and understanding of my learners. Furthermore, encouraging the teacher trainees to reflect on the past acquired experiences in relation to the item at hand was a good starting point for the development new knowledge during our interaction. It is my belief that individuals have a tendency of sharing experiences which they have internalized and take to be influential in their lives. Therefore, the act of sharing such experiences is itself educative as pointed out by (Dewey, 1997, pg. 6) who asserts that to be a recipient of a communication is to have an enlarged and changed experience. One shares what another has thought, felt and has his own attitude modified, and nor is the one who communicates left unaffected. Reflecting on Dewey's point of argument, I observe that as humans we learn a lot from others by hearing what they say and reflecting on them. Whether plays, church sermons, stories by elders or peers and songs when we hears and reflect on them and then integrate with what we already have new knowledge is always developed.

Learning experiences from the participants were influential in determining the extent of our discussion since they unveiled the depth of knowledge on the items we had selected for learning. In addition, they enabled us to cater for those items that would be left out unknowingly while preparing the content hence providing a smooth path for our teaching and learning. This state of affairs is promoted by (Kolb, 1984, p. 21) who asserts that:

> Immediate personal experience is the focal point for learning, giving life, texture, and subjective personal meaning to abstract concepts and at the same time providing a concrete, publicly shared reference point for testing the implication and validity of ideas created during the learning process.

The practice of seeking for the participants' previous experiences before embarking on a new item under study was also intended to make their minds set for it. In so doing, participants could get attracted and give due attention during the learning process. The teacher trainees would feel recognised as active members and develops confidence in him/her whenever we would accept, complement and appreciate their ideas during the learning session.

This view is shared by Kjartan[33] (2009) who points out that for a facilitator to facilitate so that the person in focus contemplates and develops; there is need of the person in focus to be seen and his presence recognized as well as be taken seriously by valuing what he/she contributes to the discussion.

Findings also indicated that the idea of employing previous learning experiences in building new learning was an encouragement to keeping of a reflective log. As earlier on discussed, keeping a reflective log necessitates one to thoroughly reflect upon his learning in order to visualise the learned items. Similarly, for the participants to be able to share their previous experiences on the item at hand, they needed to deeply and critically reflect on the experiences which promote critical reflective skills. It is my submission that the act of seeking participants' previous learning experiences empowered them to execute other activities of the project which included keeping logs, preparing own reference notes as well as drafting project proposals. In this regard (Dewey, 1997, p. 84) points out that wiser teachers ensures that their student are systematically led to utilize their earlier lessons to help understand the present one, and also to use the present to throw additional light upon what has already been acquired.

Findings indicated that the two film shows one about the Skills Completion in Japan and the other portraying a Ugandan Craftsman under the episode titled; Hand in Hand, were an encouragement to the participants in regard to learning experiences. It was also a motivation to building new knowledge and learning.

It is my belief that such learning strategies not only break boredom in the learning process, but also enrich and enhance the learners' perception of what they are training to be at the end of the day. Furthermore, such exposure arouses learners' interest and love for their trades which would in turn improve on the public perception of VET. This view is shared by (Dewey, 1997, p. 74) who points out that the qualities of scene and touched things have a bearing on what is done, and are alertly perceived to have a meaning.

Resources

Concerning resources finding pointed out the equipment and materials I employed in the project and how the participants responded to them. At the initial stages of my project at the university, participants expressed their disappointment with the use of manila cards claiming that manila cards are used by primary children.

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[33] Kjartan Kversoy was the head of department for master degree in vocational Pedagogy at HiAK. He facilitated to the international M. A. Vocational Pedagogy group, for which I was party, on Facilitation of Students/ Technical Vocational Teachers on the Tuesday 29th September, 2009 at Akershus University College

Their reaction was an indication that all through their learning process beyond primary education they were used to the chalkboard and listening to teachers talking to them without their involvement. However, later on participants realized that they way manila cards were being used was so beneficial to them and whenever I missed to carry some they would find learning difficult because they had got used to discussing as they noted their points on manila cards for presentation.

For the little time I have been in the teaching and learning practice, I have observed that the availability of learning resources is very essential in executing the learning tasks. Learning resources motivate learners; develop their interest and also develop the learners' sense of creativity. The use of computers, a beamer, digital camera, a video recorder, voice recorder in addition to the manila cards and the associated tools as learning resources aroused the learners' interest although at the beginning I observed some tension amongst them. I affirm that the participants' interest and desire to learn was so much stimulated by the use of these resources. This was reflected by the way individuals would prepare for the presentations before the entire class and their attentiveness when interacting with them and also by their comments The attraction of learner's attention by the learning resources is shared by (Bruner, 1960, p.72) who points out that perhaps anything that holds the child's attention is justified on the ground that eventually the child will develop a taste for more self-controlled attention. Reflecting on Bruner's view I realize that a learners' attention can be fully attracted by tangible items which they can touch in addition to seeing than simply hearing. From experience I have observed that humans derive satisfaction by touching and not by seeing or hearing about something.

The use of the computer together with the beamer was instrumental to our teaching and learning as it made easy the preparation, retrieval and display of the information developed during the learning process. Findings indicated that I would sometimes guide the discussion as my colleague recorded the outcomes using a computer and a beamer on a projected screen. This saved us the burden of writing on the chalkboard and also made it easy to retrieve the recorded information whenever needed for reference during the learning sessions.

The computer was of great use as it enabled the production of the generated information in hard copies which I could distribute to participants to serve as a guideline in documenting their reference notes other than being given hand-outs to which they have no input as it is normally done at the university. In addition, the trainees also got a chance of learning how to operate a beamer and I believe that once they happen encounter a beamer in their daily lives they will be in position to use it.

The use of such advanced resources in the teaching and learning process is fundamental in educational technology since their returns cannot be overshadowed. They are clean, save time, attract the learners' attention, arouse curiosity and make quick retrieval of information easy among others. I am glad that we could access and avail such resources to the teacher trainees, an exposure which I believe generated memorable experiences which they will later share with their learners as they go out to practice the teaching profession.

It is my submission that the participants generated memorable experiences which they can employ in future is supported by (Freire, 1996, p. 14) who argues that if an individual is provided with the proper tools and materials, then he can gradually perceive the personal and social reality and the contradictions in it. This therefore implies that the individual turn out to be conscious of his perception of that reality and eventually deals with it critically for his benefit and that of the society.

On a sad note as indicated in the findings, I failed to avail computers to my participants for use in their work as I had planned. In this respect I would like to submit that this failure made the participants' documentation process cumbersome. Based on own experience during the time I practiced teaching and when I was pursuing my undergraduate studies I underwent difficult times accrued to the insufficient learning resources. The effects of inadequate learning resources is shared by (Tobiassen, 2002, p. 46) who emphasizes that the absence of the resources restrains the learners' learning process by curtailing the art of innovativeness and creativity that are facilitated by doing which is centre of learning. Reflecting on Tobiassen's view, I assert that learning at any level requires appropriate resources and in sufficient quantity if the learners are to develop interest and benefit from it.

Objectives

According to the findings, it is revealed that we focused at realising the objectives of the course unit as per the university curriculum; the objectives of the research project as well as the participants' expectations. In addition, the objectives were made clear to the participants and the learning activities were directed at achieving the set objectives. From own observation, having common objectives created a ground for our collaboration in experimentation of the vocational pedagogy approaches. I admit that the participants were dedicated to accomplishing the assigned tasks with the hope of realizing these objectives. In support of this is (Senge, 2000, p. 72) who asserts that in a building shared vision, a group of people build a sense of commitment together. They develop images of the future they want to create together, along with the values deemed important in getting there and the goals they hope to achieve along the way.

In addition, participants being dedicated to achieving the set objectives, made them so keen and more active during their learning process by ensuring that they learn what they are intended to learn. This was an indication that they often reflected on the set objectives of the items to be covered. I appreciate their efforts and I assert that it really pays collaborating with highly committed and motivated participants. This kept me motivated and focused on the project endeavours amidst the challenges encountered as already identified above. This is supported by (Johnson and Johnson, 1999, p.152), who point out that if the goal is perceived as important for each student; they see tasks as worthwhile and relevant since each of them expects to eventually achieve the goal. This view is also shared by (Johnson and Johnson, 2006, p. 70), who emphasize that group goals direct, energize, motivate and coordinate the behavior of group members.

Furthermore, findings indicated that the act of setting of objectives enabled us to be focused during our discussions and also to effectively utilise the time that was allocated for the course unit. When I reflect upon my teaching practice at St Joseph's Technical Institute Kisubi, I realize that sometimes my learners would lead me into discussing items outside the intended area because of not having clearly laid out objectives. Considering the limited time with in which to I had to execute the project, it is my submission that it was worthwhile having set objectives which guided our activities. This enabled us to accomplish the project work within the stipulated time frame. This state of affairs is promoted by (Johnson and Johnson, 2006, p. 70) who point out that group goals guide the actions of members and allow them to plan and coordinate their efforts. Reflecting on Johnson and Johnson's view I observe that it is the set objectives that result into proper coordination and finally lead to the accomplishment of tasks. Furthermore, the findings indicated that the set objectives enabled the participants to identify areas they felt were not exhaustively covered and together we could address the identified gap. In this regard, I realise that during the teaching and learning process there is often a lot that is left out unknowingly due to the absence of guiding objectives. Therefore objectives must always be developed since they are crucial at unveiling learning that is more valued by the teacher, students and the training institution not forgetting the community where all the stakeholders come from. In addition, with the presence of objectives I was made more vigilant at sourcing for information that my learners expect to have at the end of the day. Similarly my learners too had the obligation of sourcing for information since they knew the way forward. I devoted my efforts to availing the learners with the necessary resources, reading materials, selected appropriate methods, organised a number of learning activities all aimed at realising the set objectives.

Finally with the objectives in place I found it quite easy to set the examination questions that were subjected to the participants at the end of the semester as specified in the university regulations. Setting of the examination questions following the predetermined objectives enabled me to ensure that these objectives are realised during the learning process. Further to ascertain the realization of the objectives was a reflection on the knowledge and skills the participants exhibited in their answers to the attempted examination questions. This was a baseline and one of the check points for ensuring that the objectives were realised. I conclude that, having set objectives did not only guide the evaluation process but directed the progress of the entire project.

However, from own experience, if objectives are vaguely set, that is, not precise, clear and time bound; they may be confusing to the learners thus not yielding the desired learning outcome. This I experienced during the school practice exercise at my undergraduate studies. I must admit that I would set the objectives simply to satisfy the supervisor and I would not communicate these objectives to the learners and neither request for the learners' expectations concerning the study. Therefore the significance of the objectives was left unrealised in the teaching and learning process. With such past experience, this time, I was more keen and ensured that the set objectives are adhered to not only for the success of my project but also to better the learning of technical teacher trainees at Kyambogo University.

Content

I this regard the experience that I acquired during the situational analysis at the beginning of the study was fundamental to the content of the course unit which I shared with the technical teacher trainees. These experiences coupled with the subject matter I previously had about the course unit were paramount to the success of the project. On this note, I must mention that teaming with Joseph who had a long time serving experience in teaching and which was related to the course content was an empowerment in the project execution. I am glad to reveal that participants welcomed the idea of taking our experiences as a point of departure to effect their learning. In this regard one of the participants commented that: "*Teachers sharing their personal experiences with the learners while teaching; enables me to understand the concepts from the reality.*"

This comment was an indication that knowledge generated from personal experiences has a potential to stimulate learning when shared with others than abstract information detached from reality. This state of affairs is supported by (Bruner, 1960, p. 31) who asserts that the best way to create interest in a subject is to render it worth knowing.

This implies that gained knowledge must be put to use by the beholder beyond the circumstances in which it was acquired if it is to be of benefit.

Reflecting on the findings, it is evident that together with the participants we shared experiences on challenges facing the teaching and learning in VET institutions. This as content enhanced and broadened the participants' perception of VET hence paving way for further dialogue on tackling the challenges and also a point of departure to advocate for vocational pedagogy approaches during the project execution.

As indicated in the findings, the brief discussion of the course units' contents at the time of its introduction to the participants also maintained them focussed on what was in the unit. In this regard, I found out that, on a number of occasions participants could source for related information before hand. It is my submission that this practice made the learning process so interactive and lively. This situation is shared by (Bruner, 1960, p. 73) who argues that if teaching is done well and what we teach is worth learning, there are forces at work in our contemporary society that will provide the external urge that will get learners more involved in the learning process.

Furthermore, findings indicated that at some point during the execution of the project, boredom developed amongst the participants. I attributed this to the extended historical section of the course unit which covers the history of education in Uganda. Although it was interesting to hear the birth of formal education in Uganda, learners tended to question as to why they are subjected to it and some of them could not sustain self drive. I must admit that we laboured so much to deliver this section of the course unit to the participants as pointed out in the findings. In the process of sharing that section, I was made to discover the challenges associated with teaching people who attach less significance on what is taught. I realized that lots of effort, dedication and patience are needed on the side of the teacher and the process is not only tedious but also time consuming. Such a situation is pointed out by (Dewey, 1997, P. 70) who argues that a person just either will or will not apply himself to the matter in hand. The more indifferent the subject matter, the less concern it has for the habits and preferences of the individual, the more demand there is for an effort to bring the mind to bear upon it. Reflecting on Dewey's view together with own experience while still an undergraduate student, I recall scenarios when I would totally lose interest in some of the items in the study programme. The reason would be the abstractness of the content which would make it difficult for me to visualise its significance however much the lecturer would explain. Basing on own experience, I came to understand that as individuals we tend to dedicate our efforts to learning things that we feel beneficial in our lives.

I therefore assert that the participants who were bored by the prolonged part of on history of education in Uganda could not visualize the impact of knowledge from this section however much we tried to make it known them.

Learning process

I encountered a different kind of teaching and learning experience with the teacher trainees while experimenting the vocational pedagogy approaches in their learning. I must admit that having practiced the teacher-centred approach for a long time, taking a new trend necessitated a different set of exposure for which the knowledge and skills I acquired while undertaking my masters study in Vocational pedagogy at HiAk was a foundation to this effect. In this regard, my choice to employ a variety of methods and organising a number of activities was intended to cater for the learners' needs in their learning process, encourage equal participation as well as to facilitate the achievement of the predetermined objectives. It is my belief that if a learning process is enriched with a wide range of methods and activities, learners ably attain their 'zone of proximal development[34]. Moll (cited in Harry, 2001, p. 59) indicated that collaboration and direction; and assisting children through demonstration and leading questions are some of the forms of social assistance to learners that constitute a zone of proximal development. At this point in time, I commend among other methods the questioning method for the way it influenced the learning process of my participants.

It is pointed out in the findings that guiding questions were instrumental to the students brainstorming in their learning groups. This state of affair created a free atmosphere where participants would freely express themselves and others developed confidence in themselves which they did not have before. From own understanding, I observe that as individuals, we tend to think when faced with a challenge that demands a solution and the process of searching for the solution, in many instances, leads to discovery of many ideas. This is supported by (Freire, 1996, p. 14) who argues that learning is a way of discovering oneself and a potential to name things around us. Every human being, no matter how ignorant, is capable of looking critically at the world and manipulates it with others for survival. Reflecting on Freire's view it is my observation that if people are empowered then they are capable of making their own internalization and analysis of the world around them and make use of it as they interact with others.

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[34] Vygotsky (cited in Mjelde, 2006, p. 94) defined the zone of proximal development as: 'The distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers'

This view is also shared by (Bruner, 1960, p. 50) who points out that one of the least discussed ways of carrying a student through a hard unit of learning is to challenge him with a chance to exercise his full powers so that he may discover the pleasure of full and effective functioning. In respect to Bruner's philosophy, I assert that when my participants realized that we insisted not to avail them with ready made reference notes, they had to think otherwise and got involved in their own learning which later enabled them to go through.

Turning to the learning activities, findings indicated that learning was dominated by doing. Participant had to personally engage in performing tasks in order to learn the associated skills. This was reflected by the way of sourcing for required information, mode of presentation and self expression among others. The act of learning by doing is emphasized by Vygotsky (cited in Harry 2001, p. 35) who asserts that:

> Just as you cannot learn how to swim by standing at the seashore, to learn how to swim you have to, out of necessity, plunge right into the water even though you still don't know how to swim, so the only way to learn something, say how to acquire knowledge, is by doing so, in other words, by acquiring knowledge.

Although learning by doing yields better results, but to reach the desired outcome requires a lot more time on both the learner and the teacher. This was very much reflected under questioning and brainstorming as indicated in the findings. Once a question is posed and it fails to yield the appropriate responses, one has to rephrase it before being floated to the learners for a second time. Sometimes, it would require us to give hints on how to go about the questions which demands time. In addition, I also observed that formulating of clear and precise questions require high level skills if they are to yield the desired learning outcomes.

Evaluation

Evaluation being a process through which the validity, effectiveness, relevancy and applicability of events is ascertained by rendering value judgment, I had to adopt check points to that effect. The check points were observed; before, during and at every end of the teaching and learning session. As already mentioned, at the beginning of every learning session I would carry out a diagnosis on the participants to ascertain previous experiences about the item under study. The outcome would ease the choice of appropriate methods and activities to employ in the teaching as well as determining the depth of content. From own experience I have found diagnostic evaluation a fundamental requirement for a smooth learning process. Therefore as teachers we need to be knowledgeable and skilful on how best to conduct it and also to accord it the proper attention.

Since the elements under the vocational didactic model are interrelated, it is evident that diagnostic evaluation was embraced under learning experience the first element in the vocational didactic relations model.

Reflecting on formative evaluation as check point during the learning process, I realised that it was during this time that the participants could reflect and consolidate the already covered items on the subject under study. The reflection break would make the participants focused and attentive during the subsequent stages of the learning session.

From own understanding, the mental relaxation experienced during the break prepares both the teacher and the learners for the proceeding session thus observing the law of readiness in learning[35]. Similarly if the same activity is to progress in the next session, learners are able to reflect on what they encountered during the earlier session and thus bring forth their reflections for further discussion. During the reflection I could also assign tasks for the participants to consolidate the already discussed items thus promoting the law of exercise in the learning process.[36] On assigning tasks, some participants would express dissatisfaction since they were used to being given written notes and not tasks which require their efforts. However, after a series of rounds under the same practice, all the participants realised the significance of their participation in constructing their learning. In regard to the break interval between learning session, the practice in Uganda's learning institutions is in most cases contrary to what is advocated for in vocational pedagogy practices. My experience is that lessons ran continuously without break intervals, as one teacher leaves the class room, another one is at the door ready to enter and begin teaching. It is my observation that under such a state of affairs learners are so much strained, their learning is ill affected and at times some students end up losing interest in some of the disciplines in a study programme.

Turning to summative evaluation, although at a small scale, at every end of a learning session I would assign a task that required each group to read and compile a write-up for their assessment; a condition set by the university. In this respect, I could read their work, assess it and award marks which I could keep for records purposes but could not be reflected on their scripts. I could only write comments on strong points and areas which required improvement. With this strategy, I was certain that tendencies of unhealthy competition and selfishness would be minimised.

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[35]For detail refer to http://www.drillpad.net/DP_IRL_Laws.htm. Retrieved on 01.04.2011
The Law of Readiness means that a person can learn when physically and mentally adjusted (ready) to receive stimuli. Individuals learn best when they are ready to learn, and they will not learn much if they see no reason for learning.

[36] For details also see: http://www.drillpad.net/DP_IRL_Laws.htm. Retrieved on 01.04.2011

The failure to reflect the awarded marks on the scripts was not welcomed at all. I attributed this to the Uganda's education system which is characterised by competition and individualistic tendencies. At one point one of the participant had to point out that:

> We need to know our scores in whatever we do. If we fail to attain the pass mark then we are bound to retake the course unit and it is very expensive. We hear students say that it is course work that that can liberate one because the examinations are difficult.

The students comment was asserting the fact that learning in Uganda is directly related with examination grades and not knowledge and skills acquisition. In this regard, with the awareness I have acquired during my study at HiAk concerning mark scores, I had to convince and explain to the participants the merit and demerits of reflecting marks and grades on their scripts to their learning. My actions were justified on the ground that reflecting grades on their assignment scripts would de-motivated, bias and discouraged participants, if at all they obtain a low score, thus influencing their learning process. This is supported by (Johnson and Johnson, 1999, P. 120) who reveal that teachers need to assess student learning and progress frequently, but they do not need to give grades. They assert that grades are symbols that represent a value judgment concerning the relative quality of student's achievement during a specified period of instruction.

On the other hand, it is my observation that assigning grades, to some extent has the potential to motivate and boost the learners' interest as well as sustaining self drive in learning something since the learner expects to be rewarded at the end of the session. Based on own experience at my undergraduate studies, I observed that some students used to relax during the semester study period and only concentrated towards the examination time an indication that they associated learning with mark scores and grades. Therefore, with such students if the assignments are not graded, they develop tendency of relaxing on the side of their studies. This is supported by (Bruner, 1960, p.48) who points out that how sustainable an episode a learner is willing to undergo depends upon what the person expects to get from his efforts, in the sense of such external things as grades but also in the sense of a gain in understanding. Reflecting on Bruner's view, I observe that it is contrary to vocational pedagogy principle which discourages competitiveness and individualism amongst learners. It is my belief that vocational education aims at producing labour force which is skilled and cooperative since all work is a social activity in which every participant is expected to execute his/her role to the set standards.

In addition to group tasks, every participant was required to generate reference notes from the discussion. This could also help them to generate what they documented in the reflective logs and also boosted their retention rate. This state of affairs is reflected under the law of recency.[37] From own experience I observe that things last encountered cling most in our memories and we tend to recall them easily. Therefore, I assert that summing up the lesson content is intended to bring forth the key aspects in the learning session thus making recalling easy.

Finally, as indicated in the findings, assigning of group and individual tasks was another way of assessing whether the desired learning outcome had been realised. The questions assigned as tasks were directly generated from the objectives. Recalling that learning takes place in the mind of the learner, I could only assess it using indicators although I could not ascertain that the indicators reflected the right outcome. However, I regarded the knowledge and skills exhibited in the answers to the attempted questions a reflection of the reality that could have been learned by the participants. Furthermore, as findings indicated, the participants welcomed the idea of engaging in setting learning tasks in form of questions. It is my belief that this act was a point of departure for the teacher trainees to acquire the knowledge and skills necessary in the formulation of the assessment tasks which is a cardinal in the teaching and learning practice. It also enabled them to learn how to evaluate their own work which leads to ownership of the learning process in addition to acquiring skills of formulating appropriate questions. I therefore proved that allowing learners an opportunity to participate in decision making regarding how they are going to be assessed and learn; motivates them to learn as it was emphasized by Trond;[38] in one of our class meetings at HiAk, during the time a masters degree student in Vocational Pedagogy.

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[37] For details see: http://www.drillpad.net/DP_IRL_Laws.htm. Retrieved on 01.04.2011

[38] Trond Smistard is an assistant professor at HiAk and one of the supervisors of the international master students pursuing M.A in Vocational Pedagogy. He facilitated a consolidation and reflection session on the various workshops that were held during the months of September and October; on the 6th October 2009, at Akershus University College.

Chapter six

6.0 Conclusions, Recommendations and the way forward.

6.1 Overview

In this chapter, I present the conclusions, recommendations and the way forward accruing from the discussion of the findings under the four objectives that were a foundation of this study project. The objectives in question are:

- To find out challenges faced by technical teachers in the teaching and learning in VET institutions in Uganda

- To examine the influence of vocational pedagogy approaches as applied in the teaching-learning process of technical teacher trainees at Kyambogo University.

- To establish possible challenges in the use of the Vocational pedagogy approaches in the teaching-learning process.

- To develop solutions to the challenges in the application of the vocational pedagogy approaches in the teaching and learning process.

6.2 Conclusions

6.2.1 Challenges faced by technical teachers in the teaching and learning in VET institutions in Uganda.

The teaching and learning in VET institutions in Uganda is characterized by insufficient tools, equipment and training materials. In instances where these are available, the ratio of the resources to the trainees is alarming. This state of affairs results into a theoretic nature of delivery at the expense of hands-on training hence rendering VET graduates less competent in the world of work which is contrary to VET aims in the country. The inadquecy of the tools, equipment and materials is largely attributed to the low value of the country's shilling against the dollar which is used for their procurement as well as our failure to produce them.

The absence of local authors who are well conversant with the country's needs make both trainers and trainees to only access foreign books whose content is sometimes not related to county's situation as reflected by the abstract and strange examples. Furthermore, because of the high costs, these reference books are in insufficient numbers compared to the trainees in VET institutions and in some instances they are out dated hence do not fully meet the labour market demands of a technician. This situation is largely attributed to the low motivation coupled with little interest Ugandans have in writing books for VET, not forgetting the outdated curriculum.

Turning to strategies employed by trainers, the teaching and learning methods adopted by majority VET teachers in Uganda allow very little opportunity for learners to construct their learning. This situation frustrates learners since they cannot reflect on previous experience thus limiting the expansion and generation of new ideas. The inappropriate methods of teaching employed in VET institutions are attributed to fact that majority instructors are not pedagogically trained hence they are not equipped with effective and creative ways of involving learners in the learning process. In addition, the limited number of technical teachers' training institution in the country cannot produce sufficient numbers for VET institutions in the country.

The discussion brought out the low attitude towards VET as a characteristic feature amongst the VET aspirants, the trainers, proprietors of VET institution and the general public. Majority Ugandans associate VET with manual work where one is exposed to bodily injuries coupled with sweat. VET aspirants mainly constitute those who fail to score high grades in general academics and cannot compete at high levels of general academic circles. In addition, some percentage of these aspirants is from the unprivileged families which cannot afford to support their children at higher academic education. Consequently, many Ugandans do not want to be associated with this kind of education. The low attitude towards VET is largely attributed to the low level of awareness amongst the Ugandan community about its role in the country's endeavors to prosperity.

6.2.2 Vocational pedagogy approaches and the teaching-learning process of technical teacher trainees at Kyambogo University

Experiential learning empowered the teacher trainees to learn by getting involved in their learning activities through sharing experiences, personal reflections and ideas about tasks. The project activities which required participants' involvement in documenting own reference notes and making personal reflective logs as well as drafting project proposal for implementation at their work institutions largely enforced this practice. As Dewey (cited in Kolb, 1984, p.35) emphasized that experience does not simply go inside a person, when it does; it influences the formation of attitudes, desire and purpose; and every genuine experience has an active side which changes in some degree the objective conditions under which experiences are acquired. Therefore, I am certain that the learning experiences acquired during experiential learning practice, if extended by the participants to their practices, would improve on the challenge facing the teaching and learning in their institutions.

Experiential learning like most learning approaches requires a great deal of motivation and encouragement to the subjects for it to yield the desired learning it is a tasking venture.

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The practice of group learning was welcomed by the participants with a harsh reception as they were at crossroad of adapting two contradicting learning strategies one from the other lecturers promoting individualism and competition, and that of group learning promoting sharing and togetherness. The harsh reception that was accorded to group learning is largely attributed the education system at the university which does not encourage togetherness amongst the teaching staff. Each member of the teaching staff believes in doing things his own way. Lecturers never sit to reflect on how best they can improve on the teaching strategies. Despite the harsh welcome, group learning empowered all the learners to the extent of bringing out the shy and slow learners to freely express their views and actively engaging in learning process. In addition, it also facilitated execution of other project activities of documenting own notes, reflective logs and project proposals.

The vocational didactic relations model I employed in the teaching and learning process of teacher trainees was an exposure to a more creative and interactive way of planning, accomplishment, evaluation as well as critical analysis of learning processes. Their involvement at all the preparatory stages made them own their learning was exhibited by their active participation. Enriching the learning process with a wide range of methods and activities catered for the learners' needs and encouraged equal participation as well as facilitating the achievement of their learning goals. The practice improved their retention rate which was reflected by the maturity exhibited in their arguments during discussions in the learning sessions. I am, therefore, certain that if my participants adhere to operation of the model, they would improve on the mode of teaching when they opt to practice the profession.

In this respect, it is my submission that although I introduced vocational pedagogy approaches to improve learning in VET institutions, but the scale at which I tried it out is so small that its impact may be negligible. Therefore it requires a continuous dissemination process and introduction in the technical teacher training curriculum if it is to get cemented in the system. However, vocational pedagogy approaches to learning requires a great deal of experience and skills as I observed from the efforts and guidance put in by my co-teacher at implementation.

6.3 Recommendations on the way forward

6.3.1 Challenges faced by technical teachers in the teaching and learning in VET institutions in Uganda.

The revealed situation prevailing in VET institutions in Uganda indicates that both government and privately owned and funded institutions are equally affected with the

exception of a few donor aided institutions. Therefore, this calls for immediate attention by all its stakeholders namely; the teachers, trainees, parents, institute administrators, government as well as the public at large. With that I present my recommendation as follows:

Funding

The tuition fees levied on trainees for the running of VET institutions should be beefed up with additional funding from the national budget, for both private and government institutions. This will enable them acquire the necessary facilities for smooth and effective operation.

VET institutions need to start up income generating projects running side by side the existing training facilities and those without need stocking with the necessary machinery as this will improve on their financial base.

Training equipment and material

I strongly recommend that government institutes a department in charge of importation of equipment for TVET institutions so as to eliminate the public market difficulties where at present equipment is procured at very high cost due to the heavy taxes levied on it by the revenue authorities.

Trainee-Resource ratio

VET institutions should always recruit trainees proportionally to the available resources. This will improve on the hands-on learning which is fundamental in VET.

VET Curriculum

The government of Uganda through the National Curriculum Development Center (NCDC) needs to think of reviewing VET curriculum so that it is matches the societal needs and technological advancements. The review process will provide chance for people to incorporate the newly acquired experiences in the various VET fields that are relevant to the country's needs.

Public awareness of VET

There is need for continued creation of awareness amongst the public of the significance of VET in the country's prosperity to eliminate the stigma public has about VET.

VET Teacher Training Institutions

More VET teacher training institutions should be established to reinforce Kyambogo University the today sole training institution in the country. The training should not operate in isolation from of countries with vibrant VET.

6.3.2 Vocational pedagogy approaches and the teaching-learning process of technical teacher trainees at Kyambogo University

Introduction of new systems

I recommend an extensive discussion of a new idea with the subjects before its adoption so as to allow them an opportunity to assimilate and accommodate it in their previously acquired learning experiences. Once the idea is clearly perceived, it is smoothly implemented, or otherwise, once misunderstood, the desired learning may not realized.

There is need for a feasibility study of their current situation before introducing a new idea to subject. The kind of knowledge directs the decisions and actions at execution process.

VET Teacher Trainees

Teacher training should reflect more of the practicing teaching through micro-teaching so as to employ the knowledge and skills acquired in the process of training than the paper work currently observed. This would make it possible for both the trainers and trainees to identify and bridge any gaps.

The teacher trainees need to appreciate that they are different beings with different personalities, therefore, need to learn and develop the spirit of togetherness in learning groups.

I urge the teacher trainees to continuously advocate for the use of vocational pedagogy approaches in effecting the teaching and learning at their various levels of learning. This will ease the dissemination of the ideas which will in turn improve on vocational education and training in Uganda.

Staff Development

The administration of Kyambogo University should encourage its teaching staff to keep abreast the changes in technology and the world demands through refresher courses, workshops and seminars as well as taking up further studies. This will improve on their mode of delivery.

Training equipment

There is an urgent need of computers and internet facilities for the department of Teacher Education and Development Studies which houses the Technical Teacher Section for both the lecturers and students use.

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Appendix 1: Implemented fieldwork plan for the masters dissertation project 2010-11

Months/year	Date	Activity	Contact place or person
First Phase Situational analysis with UGAPRIVI practicing instructors			
June 2010	16th – 18th	Workshop of Northern Region- Lira	Ivory Guest House Gulu
	23rd – 25th	Workshop of Central B Region- Masaka	Nile Vocational Institute Masaka
July 2010	6th – 8th	Workshop of Central A Region- Kampala	Nshambya Sharing Hall- Kampala
	13th -15th	Workshop of West A Region- Kabale	Mbarara Institute of Social Development
	21st – 23rd	Workshop of Southern Region- Hoima	Kagadi Community Hall
	28th - 30th	Workshop of West Nile Region- Arua	Nile Institute of Management & Social Administration Arua
Second Phase Project implementation			
August 2010	1st -15th	Consolidating and reflection on the data obtained from the various workshops as above.	Kyambogo University (KyU).
	16th Aug – 18th	Semester start for universities. Meeting the Head of department, head of section and teachers of Technical Teacher Education.	Kyambogo University (KyU).
		Orientation week. Further planning with the participating teacher.	Kyambogo University Participating lecturer
	19th- 25th	Start the implementation of the project Meeting the students presenting the project proposal and planning accordingly	Teacher trainees and participating lecturer at KyU.
September, October, November 2010		Implementing the project; executing various activities, follow up, and evaluation.	Teacher trainees and the participating lecturer at KyU
Nov and Dec 2010	22nd Nov - 10th Dec	End of semester Examination	Kyambogo University
Jan, Feb, Mar, Apr		Documenting project work	HiAk
May		Submission of the dissertation	HiAk
June		Defending the dissertation	HiAk

Appendix 2: Guiding questions for situational analysis on challenges facing the teaching and learning in VET institutions in Uganda

Section A: VET practicing instructors from member institutions of UGAPRIVI

1. What challenges are facing VET in Uganda?
2. Suggest possible measures we can employ to bridge the existing gaps in VET in Uganda.

Section B: Teacher trainees of DTTE at Kyambogo University.

1. What challenges are facing VET in Uganda?
2. Suggest possible solutions to the challenges
3. Among the indentified challenges facing VET in Uganda, which ones are hindrances to your teaching and learning process that we can tackle as teacher trainees?
4. What practical solutions can each one of you suggest and plan to implement in your various situations to improve the challenges you are facing in question 3 above?

Appendix 3:   A list of comprehensive data generated during situational analysis with VET practicing instructors

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Data generated from the workshop of Northern region held at Ivory guest house Gulu from 16th - 18th June 2010

Challenges facing VET institutions in Uganda
- Skills; no enough skilled people to teach VET
- lack skills of applying technical knowledge into practice that is teachers are not trained to empower learners with hands on skills leading to poor craftsmanship.
- Creativity and innovation and initiative skills lacking

Challenges Continued
- Less government support
- Syllabus not appropriate
- Insufficient textbooks
- Lack of carrier guidance
- No enough awareness about VET/sensitization
- Low attitude towards VET
- Insufficient tools and equipment

Possible solutions of improving the challenges faced by VET institutions in Uganda

- **Skills gap**
- Need for teacher to update ourselves with modern technology.
- Study tours or executions; these are needed to expose our students to facilities which are lacking in our institutions.
- Community out reach; let learner go to the community and see what is needed/ demanded of them.
- **Knowledge gap**
- Through research; reading from a variety of sources that are relevant to our fields.
- Consult; seek information from other people ie individuals, groups, institutions and internet.

Solutions continued

- Through discussions and reaching a consensus
- Team work; working together
- Attend workshops, seminars or refresher courses and conferences
- **Attitude gap**
- Sensitizing parents during school visit/ general meetings
- Instructors should act as role models; exemplary.
- Community outreaches; involve in community work to show our involvement.
- Organizing skills exhibition (open day) show latest models of products being produced from our schools.
- Career guidance.

Data generated from the workshop of Central B region held at Nile Vocational Institute Masaka from 23rd -25th June 2010

- **Challenges facing VET institutions in Uganda**
- Lack of tools, equipments and materials
- Low attitude towards VET
- Lack skills, that is, practical and relevant skills
- Things taught do not reflect real life situation.
- Lack of cooperation and coordination amongst institutions
- No empowerment from principals and directors (Personal decision and initiative)
- Knowledge gap
- Poor management

Data generated from the workshop of Southern region Hoima held at Kagadi Community Hall from 21st - 23rd July, 2010

Challenges facing VET institutions in Uganda
- Cultural beliefs
- Lack of trainers or teacher(poor methods of information delivery)
- Lack of materials, tools and finances
- Technical language
- Low esteem on the side of the community
- The government itself have negative towards VET
- Academic failures are the ones who join VET
- Government policies through outdated curriculum
- Obsolete technology used for training
- Low pay to instructors
- Low level of research
- Insufficient funding to vocational training institutions

Data generated from the workshop of Central A region held at Nshambya Sharing Hall Kampala from 6th 8th July, 2010

Challenges facing VET institutions in Uganda
- Lack of proper career guidance to trainees
- Lack of formal education
- Improper skills of imparting knowledge to the trainees by the teacher
- Inadequate/lack of enough teaching materials proportional to the number of trainees
- Leadership problems
- Low levels of sensitization about VET
- Not enough funds
- Low salaries to motivate teachers
- More theory than practical

Challenges continued

- Improper old syllabus and current up to date information
- Use of vocational schools as last resort
- Poor Government policies
- Poor time management
- Lack of startup capital to start business
- Limited syllabus examined by examining body
- Lack of enough practice during training
- Limited business (entrepreneurial)skills to open businesses
-

Possible solutions of improving the challenges faced by VET institutions in Uganda

- Need for specialization for teacher to gain expertise in the trades
- Net working through sharing ideas, consulting other members or institutions.
- Liaising of vocational schools and industries.
- Time management for our daily life duties and activities ie scheduling our day today tasks.
- Interaction i.e. working together and sharing
- Communal preparation of syllabus.
- Maximizing of current information eg internet and other reading materials.
- Multi-tasking

Data generated from the workshop of South West region Kabale held at Mbarara Institute of Social Development from 13th -15th July, 2010

Challenges facing VET institutions in Uganda

- Lack of materials
- Lack of funds
- Poor school fees payment
- Leaders lack technical knowledge
- Inefficient instructors
- Insufficient structures
- No curriculum for courses
- Poor management
- Lack of practical tools and equipment
- Low payment

Challenges continued

- Lack of innovative skills
- Low attitude towards VET
- Poor government policies
- Corruption
- Untrained teachers
- Lack of collaboration between institutions and companies
- Merging different levels of learners with different academic background
- Examining in English
- Unhealthy competition amongst institutions

Possible solutions of improving the challenges faced by VET institutions in Uganda

- The government should take hand (minimum wage) in VET programs
- Cost sharing between institutions and governmet
- The teacher should be creative to equip skills and learners as well
- Need for sensitization about VET to community. This can be achieved through community outreach
- Critical thinking and analyzed mind and problems solving involving every member in the institution
- Need for identifying the needs of learners and community
- Avoid unhealthy competition among institutions by aiming at their own objectives and missions concerning their institutions

Solutions continued

- Ensure teacher-learner relationships by listening to learners, other social activities like games and group discussions.
- Income generating projects from our own institutions and create own jobs
- Refresher courses of management skills to principals
- Lobby for funds through donors and government.
- Need to plan and improve our teaching methods
- Talks/guidance from role models from successful VET people
- Follow-up of trainees on industrial training
- Government should create link or foot path tolerating industrial placement by law
- Tracer studies for follow-up of trainees
- Refreshers courses of instructors or teachers

Data generated from the workshop of Southern region Hoima held at Kagadi Community Hall from 21st - 23rd July, 2010

Challenges facing VET institutions in Uganda

- Cultural beliefs
- Lack of trainers or teacher(poor methods of information delivery)
- Lack of materials, tools and finances
- Technical language
- Low esteem on the side of the community
- The government itself have negative towards VET
- Academic failures are the ones who join VET
- Government policies through outdated curriculum
- Obsolete technology used for training
- Low pay to instructors
- Low level of research
- Insufficient funding to vocational training institutions

Challenges facing VET institutions in Uganda

- Low payment of instructors
- Low income base collected from learners
- Lack of support from government towards private VET institutions.
- Undermining VET by community
- Admission of poor students who have failed academically.
- Heavy work load on each instructor
- Inadequate training skills

Challenges continued

- Inadequate teaching facilities
- Language barrier
- Lack of updated curriculum
- Lack of modern learning materials
- Poor and limited infrastructure
- No specialization in teaching subjects
- Lack of creativity
- Untrained instructors in teaching

Possible solutions of improving the challenges faced by VET institutions in Uganda

- Government be encouraged to support VET school
- Sensitization of the community should be done
- Government should train more instructors
- Upgrading and providing refresher courses for the staff
- Lobbying for funds from stakeholder
- Improvement of teachers' welfare or packages.
- Need to update the current curriculum
- Need to specialize on the side of instructors so as to become more efficient in that field
- Need to inculcate in the learners a positive attitude towards VET at an early age.
- Community should be involved in VET affairs

Appendix 4: Personal Reflective Log

The table below shows learning experiences I acquired during project while experimenting the vocational pedagogy approaches in the teaching and learning of teacher trainees of DTTE year 1, 2010 for Introduction to Educational Studies Course unit.

August- September, 2010

Date	Activity	Learning experiences and how they are learned	Suggestions for improving learning
19.08.10	-Introduction of the teachers and students. -Obtaining course outline - Brief introduction of the course -Seeking students' expectations from	Brainstorming method, students stated their expectations from the course unit. We expounded on these ideas through a joint discussion. I was enlightening about what	This was a good starting point but could have yielded more out come if conducted in groups to allow room for free interaction.

		they expected to have achieved by the end of their training. This was to act as a base in guiding them	
20.08.10	Formulation of group learning. Group discussion about challenges facing TVET in Uganda and possible solutions to overcome the challenges. Introducing the ideas of documenting own reference notes and their learning experiences in a log.	Members suggested working as one general group of 7 members present at that time. They argued that they needed more time to know each others' strength and weakness.

I learned that students were knowledgeable about challenges of TVET. The forwarded challenges were similar to those pointed out by practicing instructors from UGAPRIVI during situational analysis prior to the project.

Brief description to the participants about the log use in documenting learning experience. I suggested a log format which I was using at HiAk and they agreed to adopt it.

We too introduced the idea of documenting own notes by requested the students to make reflections, on the key items covered, in their groups and try to document these reflections in a simplified form or notes. | During the discussions, I observed that 7 members were too big a group to hold a short time discussion because it led to a long argument and was time consuming.

Some students were dominating the discussions while others were shy to speak thus their input not realized.

I realized a need to split up the members in to at least two groups but it was necessary that the learners realize it by themselves. |
| 26.08.10 | Further group discussion and analysis about the suggested possible solutions to TVET challenges | A number of challenges were identified together with possible solutions. I observed that the suggested possible solutions were pointing at the government alleviate the situation.
So we decided to analyze them one by one to ascertain those we can tackle as teachers and thus single out four of which were our focus in the project. | Participants require more time to reflect on these challenges. This is because they are still amazed whether they can be of any influence in improving TVET challenges |
| 2nd and 3rd. 09.10 | Reformation of learning groups. | As members increased in number, the students decided that we form more groups for | There is a need on to limit the group members to at |

	Group discussion of Aims and objectives of VET in Uganda.	smooth running. Three groups were formed of four & three in two of the groups. I learned that it is good to let people experience situation and be able to take decisions depending upon the arising need. I observed that three members per group is too few a number to sustain a detailed and comprehensive discussion.	least four to make the learning groups more effective. Need to be patient and allow participants a chance of figure out by themselves how learning groups operate.
9 &10 .09.10	Group work and discussion on education and forms of education and brief history of education in Uganda.	Group discussions yielded a number of experiences regarding the forms of education from the students This boosted the learning. However, I observe that some few participants are still not so firm to share their experiences	Need for further encouragement for those who are less active.
16 &17 .09.10	Further discussion on education and forms of education and brief history of education in Uganda	Most students seem to be interested and knowledgeable about the topics at hand as reflected from their active participation.	
24.09.10	Group Evaluation Meeting: Follow up of all the projects activities; Generating ideas on how we could improve the four stated VET challenges in Uganda.	A number of ideas; suggestions on the way forward were raised. This was an indication that participants had a thorough reflection on the stated challenges thus their active involvement in finding a way forward to the challenges. Participants also suggested documenting their views in form of project proposal. I welcomed since it is a way of having organized work that is easy to present to other concerned parties at implementation.	Each participant tries to document their ideas and views which are applicable in solving challenges they are facing in their own institutions. Therefore, it was important the each person reflects on their real life situation.
	Follow up of: Learning groups Documenting reference notes & making reflective	Participants indicated that group learning was not effective since most members in group are always absent.	I was still patient about the effectiveness of the learning group though we kept encouraging the idea

	logs.	They suggested that one group be disintegrated and its members join the other two groups so as to increase members in a group members. This meant that participants were trying to discover through their experiences the appropriate means of making group learning more effective.	of working as a group in sharing ideas to enrich their learning experiences and increase participation. There is need to allow students a chance to decide the way they would like to learn in their groups
		Concerning reflective logs, participants indicated that they had not clearly understood what to note. I learnt that there was need to involve the participants in formulating the log format other than suggesting the use of the one already made. Participants too indicated that they were trying to effect the idea of documenting own notes, though with a few setbacks. Refer to evaluation minutes of 24th Sept, 2010	Need to find more time during study time and make a further analysis of the log and if possible improve the format to a form that is easily understood by the participants.
30.09.10	Group assignment on History of VET in Uganda before the coming of missionaries in Uganda in 1877.	Majority members had not done prior reading on the assigned task. Those who had did so individually. Joseph suggested that in order for us to progress with the learning session, a member reads aloud while others listen and highlight key items in the text. Personally, I was not in favor of the idea because it would make the participants more reluctant. I discovered that some participants were not yet committed to group work.	There is need for proper coordination of ideas especially with team teaching. There was a need to have let the participants conduct the group discussion during that session, in our presence, instead of resorting to reading as a general class. This would have made them realize the need to do the assigned tasks beforehand.

OCTOBER 2010

Date	ACTIVITY	LEARNING	SUGGESTIONS FOR

		EXPERIENCES AND HOW	BETTER LEARNING
01.10.10	Further discussion on history of VET; missionary contribution towards VET in Uganda from 1877 to 1925.	Group assignment Some members dodge the discussion but those who were present decided to combine in one group and discuss the topic under study. Members also decided by themselves to get back to three groups when two more persons reported. However, I still observed tendencies of group work being done as general class.	More time and effort needed to help the students appreciate and realize the significance of group learning.
7 & 8.10.10	Discussion about history of TVET in Uganda after 1925. Brief intervention meeting regarding the ineffectiveness of learning groups	Groups would identify key items regarding TVET which they later present and we liaise about them jointly. Regarding learning groups, we jointly decided to have some of the tasks discussed during class time. This in turn made it compulsory for each group to do its individual tasks.	This, though may appear to be autocratic, was reached by all class members as a way to make learning groups effective. However, I observed that it may only temporarily solve the problem. There is need to liaise for a more reliable solution of making learning groups more effective
14.10.10	Further discussion about the history of TVET in Uganda till independence in 1962.	The idea of having tasks discussed during the teaching session seemed to have worked but only for the tasks conducted during class time. I observed that tasks assigned to be done outside the scheduled time were not accomplished by all the groups, an indication that groups were not fully effective.	Need for further follow up on group learning
21.10.10	Formulation of continuous assessment questions together with the students	One of the students led the general group discussion in formulating the assessment questions. I observed that students liked the idea. Availing the learners with an opportunity to involve in their assessment motivates them to get committed to	Need to encourage the students try the idea out in their practice.

		the tasks	
22.10.10	Group evaluation meeting for the progress of the project work	Members were presenting the ideas they are documenting and thought appropriate for implementation in their respective institutions to tackle VET challenges. Some students had suggested broad ideas that are difficult to implement. Other participants advised and contributed to their fellow students' ideas which I believe will facilitate improvements.	I realize that there was need to do follow up of individuals and guide them with documentation of their ideas.
27.10.2010	Group evaluation meeting	More follow up of individual project proposal writing. I carried out one on one interaction with participants. I observed that some participants were promising while others still need more guidance with their work	Individual guidance to be continued.
28.10.10	Group discussion about competence based education and training (CBET)	Guiding question With guiding questions, students in their groups managed to raise appropriate solutions, despite the topic being new though they took much long time have it accomplished.	Need to provide reading material about the topic since it does not have readily available books in the library.
NOVEMBER 2010			
03.11.10	Group Evaluation meeting Guiding individual participants with the documentation of their ideas for overcoming challenges of VET in form of project proposals.	Some of the participants managed to organize their ideas in title and subtitles following the project proposal form we generated. This was an indication that they were conversant with the challenges and the ideas they intended to implement. I realized that some members still had challenges identify how to organize their ideas whereas two of them had not	There still need for more attention to individuals regarding the documentation of their ideas.

		documented anything.	
04.11.10	Further discussion on Competence Based Education and training (CBET)	Through guiding questions, participants were able to raise a number of views pertaining to the topic. I was impressed with the views the participants generated by critically reflecting on the questions posed. I learnt that questioning can excite learners to think deeply.	Trying a number of teaching methods enables a teacher to realize the practicability of the methods in various situations.
05.11.10	Film show about Hand in Hand	I staged a film show exhibiting a Ugandan craftsman to encourage participants develop interest in their trades. Participants seemed to have liked the idea.	
9.11.10	Guiding individual with their project work.	There was a great improvement in individual project for those who are committed to documenting their ideas. However, only six members are showing the commitment to their work whereas others are still reluctant and even others no long turn up. Adjourned the project activities in preparation for end of semester exams.	There is still need for follow up on those who are reluctant to further encourage them to accomplish documentation of their ideas.
27.11.10	Final Evaluation of all the project success and failure	Participants pointed out the strong points and weakness with the project activities. They also stated some recommendations. This enabled me to assess own efforts and thus provide a ground for validity of the data.	This was necessary part of the project and commend it in any project undertaking

Appendix 5:   Participants' Reflective Logs

Stephen

Date	Activity	Learning experience and how I have learned it	Suggestions for better learning
20th. 8.10	Challenge of VET institutions in Uganda and their possible solutions	Discussion and team teaching method was employed. Learned that VET institutions in Uganda are affected by similar challenges because students from different institutions in different parts of the country pointed out similar problems. Also learned that employing different methods in explaining things which helps students to understand. For example, using personal experiences makes me learn from the reality point of view.	Team teaching should be encouraged even at other levels of learning.
26th. 8.10	Further discussion about challenges facing VET institutions and possible solutions	He learned that some of the challenges facing VET in Uganda can be solved by teachers them selves	
	Watching of skills competition film using a projector. The film was about VET students in Japan competing in various trades such as carpentry, joinery and electrical etc	Learned that through competitions, quality items are produced because people in the film were producing items to the best of their ability so as to win. He also learned that tools are necessary in production of quality work in a short time.	Using a projector is a good method but we should also be taught its component parts and how to use it.
9.10.10	Forms of education; Formal, informal and non-formal.	Using group discussion. He learned that through class participation, it helps one to discover many things in terms of examples, since people share experiences from their tribes. Also learned that students have good ideas.	A student should be allowed to lead a discussion with his fellow students in the presence of the lecturers.
25.9.10	Class evaluation meeting to find way forward to challenges facing our VET institutions in	Learned that students given guidance and directions have good ideas they can combine together to solve VET challenges other than looking	During the course of the two years study, we should get a school around the university and we try some of the

	Uganda.	upon the government.	ideas raised to solve VET challenges.
21.10.10	Setting questions	Learned that students are able to set questions given a chance to participate. This helps the teacher also to identify which area is hard for the students as they may not set any question in that area.	The teacher should encourage the student to set from all parts of the work covered
27.10.10	Chairing a meeting for evaluation about the project	Learned how the meeting is organization, controlled and conducted in a given time	
5.11.10	Film show about hand in hand.	Discovered that some people have poor customer care in their trades and this makes their business not expand Learned that some people still have a belief that some VET trades such as metal work are not for women. Learned that he should do everything possible to achieve his career goal	
Richard			
26.08.10	Challenges facing TVET in Uganda.	He has acquired more knowledge through sharing in the discussion among the students which opened up his mind. He has learned that being active in a group makes him a good learner and contributes to achieving his learning goal	Discussion should be encouraged since learning is more convenient through sharing.
6.10.10	Documentation of own work	Through documentation that I did, I have developed my grammar, punctuation and writing skills	He recommend documentation as the best method for learning
13.10.10	Evaluation meeting of the project work- 2nd meeting	He was the secretary for the meeting. He developed the ability of always being active to record the minutes that were being communicated. He also developed his listening skills and ability to analyze the recording as the minutes of the meeting	Learners should be encouraged to be active participants in learning which makes them acquire or perceive something at the end of the meeting
	Teaching method	Have experienced what is called	Recommend that the

		employed in facilitating Introduction to Educational Studies and students writing own notes	true learning; it is not giving hand outs and singing the same notes time and again. True learning is all about making his own notes which has opened up his mind, understanding and has made him discover many things He has also developed interest in learning more than the other times when he was undertaking his advanced certificates. Appreciation goes to Dina and Joseph for the good work in facilitating him.	ongoing methods be continued because to him it is the best method of learning.
Ronald				
8.10.10	Lecture about what teaching is		He learned that when teaching, a teacher is not supposed to impart knowledge to the learners but rather plan and deliver by sharing views, ideas and develop attitude in the learners. Also when teaching, a teacher should aim at developing students understand so that they don't easily forget	This was the best way of one learning from his own explanation using his own words and should be encouraged.
15.10.10	Meeting and career guidance		He learned that he is acquiring skills not to look onto the government for employment but to use the skills to start up a workshop and produce items for sell and earning a living. This will enable him to teach as well as earn	Such a lecture is important as they provided guidance about both the field of work and school.
5.11.10	Film show about hand in hand		He observed that some people still have a belief that TVET is meant for males and yet even ladies are being encouraged to join such courses. Unlike years ago, women nowadays compete for same jobs and roles as men and contribute to the development of the country.	There is need for people to change their beliefs about women involvement in TVET so as to promote it.
Gloria				
19.08.10	Discussion about expectations from the course		She learned not to target at being just a teacher but also involve in other income generating activities. She learned this through sharing	Some classmates were quiet which made her miss their ideas. There is need for full participation for all

		ideas with her classmates and by questions from the lecturers.	members
	Discussion about vocational education	Through discussion, I learned definition of vocational education.	The method of teaching was good but she only managed to note down few points since lecturers gave them few.
20.08.10	Challenges of VET institutions in Uganda.	Learned not to always relay on the government to provide solutions to these challenges but build capacity as teachers and pave a way forward to these challenges. Learned through brainstorming.	Need of some points from the lecturers simply noted for them. This makes it easy to expand in future
	Group work by brainstorming	Through group work and discussion, she has learned things of a higher level. She understands faster with brainstorming than before	More ideas are needed to make us to brainstorm more
21.10.10	Formulating of questions	Students were involved in formulating of questions from what they have covered for the semester. She learned how to form questions.	Formulating questions for answering could be done after covering every topic so that we discuss them during our free time
	Team teaching; this involved obtaining ideas from the learners	Questioning was mostly employed and this kept her actively participating and opened her mind to reflect back on her past experiences. She learned that what was being taught was not new but existed longtime and is just modified	The method is good because it made her mind open and think wider than when a lecturer gives a handout at the end of the lecture. This should be encouraged.
22.10.10	Evaluation meeting for the projects to solve challenges facing VET institutions in Uganda.	Students were each asked to identify some ideas they would implement in their respective institutions in order to curb VET challenges. We managed to generate some ideas and each read out what he/she had prepared. She learned a skill of putting down her thought and ideas and presenting them to the public. Fellow students made some corrections and comments which opened her mind to think more. She was appointed secretary for	As a secretary for the meeting, if one after writing down minutes could be called and corrected on how she wrote the minutes. For the project work, she feels that time allocated for it was not enough as they started it late.

		the meeting which made her learn how to take minutes for the meeting. She is also learning how to write project proposal	
	Presentation of group work to the whole class	She was appointed to present her group work. This made her develop the confidence of standing and explaining to the public without fearing.	She recommends that such activity be practiced in every lesson at least for 30 minutes. This improves their skills of teaching
04.11.10	Teaching by employing guiding questions.	She learned that learners need more questions to open their minds while in the lesson and this enables them to easily understand for one another.	The method is good and makes learners involved fully in their learning as they share with their friends.
05.11.10	Watching a local movie about TVET in Uganda ; 'Hand in hand'	She learned how customers should be handled while at work.	

Senscious

26.08.10	Learning by group discussion about challenges facing TVET institutions in Uganda.	Each group held a discussion about challenges facing TVET in Uganda. In so doing students generated various ideas which brought out almost all the challenges (comprehensive). He learned that people reason differently and again two heads are better than one.	Suggest that lecturers should always take such generated ideas and document it in form of hand outs or pamphlets after modifying them. This will enable students be confident in what they present.
27.08.10	Team teaching; where two lecturers taught at the same time in the same lecture	This was a new system of teaching which involved all students' participation and one lecturer would supplement another's view. Learned that is not only lecturers who should bring out every view during teaching but should allow students a chance to make contributions first. Also learned that team teaching generates more knowledge in the process of teaching and learning.	The method is good and enables the students to participate in the learning process. He recommended that it should continue being used in the learning teaching process. However there is need for references of such contributions.
04.11.10	Teaching and learning about competence based	Questioning method The topic of the study was new to him but after it was	Suggests that teachers should always try this method of teaching and

	education and training (CBET)	introduced in form of questions by the lecturers, and we managed to generate answers. From this, he learned that teachers should not always come to class and teach like they are preaching; they should first get experiences of their learners and later modify them. This will make learners see that it is not only teachers who are knowledgeable.	learning as it generates more knowledge even which the teacher may not posses at times.
7.10.10	Chairing the group evaluation meeting	He chaired the meeting for DTTE 1 students regarding how they could overcome VET challenges. During the course of the meeting, he learned that some members are not always participating unless a question is directed to them. He also learned that chairing a meeting requires one who has a wide knowledge about what is being discussed. He also learned how to formulate the agenda for the meeting, organize and control the meeting.	He encourages such projects to be organized in the teacher training courses so that teachers engage in activities like organizing meetings which improve their communication skills that is essential for teaching.
Laudel			
26.08.10	Challenges facing VET institutions in Uganda.	He learned that most challenges facing VET institutions can be tackled by us the teachers. Teaching was inform of team work and sharing	Team teaching is good but it has limitations where some teachers may not be interested in it.
	Documentation of own learning experiences and notes	He learned that documentation is not as complicated as he had been thinking. He realized that the information to document is already within them just that they hadn't discovered it. The learning has been through documenting ideas and taking them for analysis.	
	Skill competition film show at faculty of education.	Technicians from developed countries do similar tasks as those done by technicians with in Africa especially in plumbing his field inspite the differences	

		in technology employed.	
	History of technical and vocational education and training in Uganda.	Through brainstorming, he learned that TVET in Uganda is as old as stone age where natives started making tools and discovering fire. He also learned that craftsmen of that time were very important people to the community and even today they are still important irrespective the bad attitude attributed to it with the coming of the missionaries.	Brainstorming is good because it generates many interesting ideas.

Justine

Date			
26.08.10	Group discussion about challenges facing TVET in Uganda and their solutions.	They discussed these challenges in three groups after which each group presented its work. The lecturers used a projector to show some information. In that discussion, she learned that it is the role of the teachers to solve some of the challenges that face TVET in Uganda.	It is better for the lecturers to teach them how to use the projector but not just seeing it
8.10.10	Description of teaching	Each student was given a chance write notes about teaching according to her/his own understanding. She learned that teaching involves sharing of ideas between learners and teachers.	It would be better for the lecturers to give out their clear definition about the topic under discussion after students have given their ideas. It could be better for lecturers to allow students to points from them in brief so that they act as guide for revising.
6.11.10	Video show	Learned that many technicians are not respecting their customers in their workplaces. Therefore, such people are likely to have poor production Also people don't want to change from traditional ways of making things to modern ones. Such people don't even seek advice from others	There is need for technicians to learn how to live with people because customers are their bosses, without which they cannot survive. Technicians need to be creative so as to attract customers.

Francis

Date			
6.10.10	Task about learning	He discovered that many	Group work should be

	in groups	definitions or explanations can be obtained through discussion as each member brings a view.	maintained.
22.10.10	Group evaluation meeting about how to overcome challenges of TVET in our institutions	Learned that when suggesting possible solutions to VET challenges, there is need to be realistic and state only ideas that are possible ie with in our means	
04.11.10	Group work about CBET	He learned that lecturers are guardians because a task was formulated from nowhere but they tried to reflect and share ideas until they came up with some points which lecturer based on to guide them	The method was good as it made him think very much.

Simon Peter

	Round table seating arrangement	He has learned that it is good to arrange seats in such a way that students face each other. This discourages some students hiding behind others. This encourages all learners to be active and contribute towards a discussion. Teachers seating along side students reduces a gap between them ad their teachers thus improving the student-teacher relationship.	It is a good system of sitting and should be encouraged
	Discussion method of teaching and students presentation of group work	Students would discuss in their groups and present their views. Each group would choose one person to represent the group. This method enables them to boldly stand before others which minimize tendencies of panic when presenting to public.

This method has also promoted active participation since each member of the group was required to participate thus dormancy reduced.

It also promoted sharing of ideas through contributing to discussions by students | Suggest that all members of the group be allowed a chance to present before other students. |

		The system has also widened his knowledge since he is able to borrow ideas from other students' views during presentations.	
Moses			
8.10.10	Description of teaching	Each person participated by defining the term teaching in the way s/he understood it. Such a method discourages cram work. He has discovered that sharing knowledge and skills makes learners understand quickly. Also through sharing, he has been able to make his own notes and has also learned that he learns better when in a learning group. He has also observed that lecturers are free and friendly to students; which is an encouragement to work hard in class.	He suggests that this method continues because it makes a learner understand faster.

Appendix 6: Group Evaluation Meeting Minutes

The group evaluation meetings were scheduled to discuss the participants' progress with the project work both individually and as groups. During the meetings, the focus was on the way forward of improving the four singled out challenges that are facing the teaching and learning in VET institutions in Uganda. These are:

1. Insufficient tools and materials for practical purposes

2. Lack of sensitization to the community and negative attitude towards VET

3. Insufficient learning materials such as text books to facilitate the teaching.

4. The methods adopted by teachers do not allow the learners to participate in the learning

Suggested possible solutions

1. Other stake holders such as parents should be sensitized to support VET institutions with scholastic tools and materials

2. Teachers should portray good image to the public through producing quality goods and services to the community which will motivate other members to get interest in VET works.

3. Teachers should try to generate and build their own knowledge and document their experiences in form of books so as to use them as references during the teaching.

4. Teacher trainees should try to learn better methods of involving learners in their learning through the period of study.

In the following text, is minutes from two of the group evaluation meeting held

THE FIRST GROUP EVALUATION MEETING OF THE PROJECT WITH DTTE YEAR 1
MINUTES
Venue: Faculty of education room 36
Date: 24th September, 2010
Time: 08:45am
Agenda
1. Prayer
2. Selecting the secretary and chair person of the meeting
3. Communication from the chairperson
4. Reaction and way forward
5. Closing remarks

1.0 **Prayer**
1.1 The opening prayer was by Gloria
2.0 **Selecting the secretary and chair person of the meeting**
2.1 Members suggested that since it was the first meeting, I (Dinavence) should chair the meeting so that others members observe what is done and can use similar experience to chair the next meetings.
I requested a willing member to participate as a secretary of the meeting so that he/she can document the minutes. Ronald accepted to be the secretary of the meeting.
3.0 **Communication from the chair**
3.1 The c/person started by reviewing the challenges facing VET institution as were put forward by the students at the start of the project. A number of challenges and possible solutions were put forward. Most possible solutions were directed towards the government but for the purposes of the project only those we could manage work with so as to obtain their solutions were considered.
The chairperson invited the participants to forward their views regarding challenge 1 about the insufficient tools for practical purposes and the suggested possible solution that is; other stake holders such as parents should be sensitized to support VET institutions with scholastic tools and materials
4.2 Suggestions from participants
Challenge 1: Insufficient tools, materials and equipment for practical purposes
- One of the participants commented that the suggested possible solution for challenge one that is to sensitize parents to support VET institutions with tools and materials would be difficult to put in action due to the fact that: There is still low attitude

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toward VET by parents and community; majority of the willing parents are mainly poor so they cannot afford to support their children with the necessary tools and materials; lack of government will. He suggested that as teachers in these training institutions, they can start up small income generating projects at the schools. He said that the harvest of these projects could be sold to obtain money for purchasing tools and materials.

As the chair person, I floated the ideas to the audience and sought their views about the matter.

Projects

- Gloria supported the idea of starting up small projects. She said that from her former technical institution they used to do farming of vegetables which they would sell to the institution and obtain funds to purchase the required tools.
- One of the participants (Geoffrey) expressed the concern that town institutions have difficulties in accessing land to execute such projects.

Challenge 2: Lack of sensitization to the community and negative attitude towards VET

- A participant (Stephen) suggested that parents can be sensitized about VET during school meetings held by institutions. Institutions need to be transparent to parents through briefing them about their children's progress, achievements and requirements. This would motivate them and thereby encourage other people to send their children to VET institutions.
- Another member suggested that career guidance to both parents and pupils should be introduced so as to encourage them to like VET. A participant (Senscious) indicated that at Rukore community polytechnic, they introduced a career guidance day where by teachers facilitate to the pupils and parents about the various opportunities in VET. In so doing some parents pick interest in encouraging their children to join VET institutions however there is a high dropout rates.
- Gloria indicated that if we are to capture attention of the youth towards VET, there is need to involve those who are still in primary and secondary schools. She said that this can be achieved through conducting of seminars in these schools and through encouraging VET learners and teacher who good performers in various trades to share their experiences with these pupils. She said that this will in away act as evidence that VET is not for failures.
- Laudel suggested that there is need to do practical items where by each course does a practical project. He gave his experience at his school (Gables vocational school in Rukungiri) where carpentry pupils make furniture such as bed for the school and chairs and tables, for hotel management and catering students; a hotel was established where by learners go and obtain practical hands experiences, and BCP learners construct structures for the school and every weekend and during the holidays they engage in community outreach work for example, learners engaged in digging a well. He indicated that the made items are exhibited during the visiting day which he argued that such acts prove to the community that these learners have acquired skills. This has attracted many pupils to this school thus sensitization to the community.

- VET teachers should coordinate and organize trades shows and encourage various schools to make items to exhibit which acts as sensitization to the community.
- Ogwal suggested that as VET teachers, they need to be exemplary to the community through starting up workshops, offering training and counseling to drop outs and other members at subsidized cost. Justine- one of the participants indicated that she has been involved in equipping the youth with basic skills through her own initiative and workshop of tailoring. She indicated that this act has attracted some community members to undertake such skills training.

Challenge 3: Insufficient learning materials such as text books to facilitate the teaching.

Suggested solution: Teachers should try to generate and build their own knowledge and document their experiences in form of books so as to use them as references during the teaching.

Since the participants had been working with this challenge and trying to implement its possible solution, the chair person requested them to comment on how they are progressing.

Participants' views
- One of the participants indicated that they are faced with a challenge of identifying items to be considered when documenting their experiences
- Gloria indicated that VET institutions lack computers to facilitate their documentation.
- It was further indicated that since English is not taught in VET institutions most teachers find it difficult to document due to not being conversant with it.
- Members also revealed that they were finding it difficult to work in their learning groups due to being few in each group. They said that we a member or two are absent it become hard for the remaining two to proceed with their work.

Reactions about these challenges and way forward
- The chairperson encouraged all participants to try and document their experiences as groups through discussing on items they feel are significant and note them in the simple English they are familiar with. This acts as a basis for making further improvements.
- Regarding the issue of computers, I encouraged them to first document their experiences by use of pen and paper and once they access computers, it becomes easy to type set such information.
- The participants also suggested that the third learning group be disintegrated and members redistributed to the two groups so as to increase on the members in each group. We therefore decided that group A which was comprising of 3 members be resolved. Two of its members joined group C and one joined group B.
- The chairperson requested each participant to reflect upon the meetings views regarding the suggestions put forward for challenges 1 and 2. Each participant was requested to note down view she/he finds applicable to be implemented in their situation and indicate briefly how they expect to implement them
- Members suggested that they will schedule their group discussions and inform the teacher about their meeting days for follow up.

- They also suggested that we meet every Wednesday of the week. One Wednesday for follow up of work progress and another for evaluation meeting of the entire two weeks work. Two meeting for either follow up or evaluation per month.

Meeting was concluded at 10:20am

Members present

Francis, Ronald, Justine, Richard, Gloria, Moses, Emmanuel, Stephen, Laudel, Geoffrey Senscious and Dinavence

THE SECOND GROUP EVALUATION MEETING OF THE PROJECT WITH DTTE YEAR 1

MINUTES

Date: 13.10.10

Venue: Faculty of Education, Room 36

Time 2:23pm

Agenda

1. Prayer
2. Communication from the chair
3. Reading of the previous minutes
4. Presentation of ideas regarding the project

Chair person: Senscious

Secretary: Richard

1.0 Prayer was conducted by Stephen

2.0 Communication from the chair person

The chair person indicated that the main concern for the meeting is to do follow up of our plans to solve the VET challenges we are facing in our training institutions in Uganda. He reminded the participants of what was required of them regarding obtaining ideas of strategies they can employ in their respective institutions so as to improve VET. He called upon those who had their ideas ready to present them to the audience and requested us to be attentive and contribute to their plans

3.0 Minutes were read by the secretary Richard and members approved them

4.0 Presentation of ideas regarding their projects

Gloria

Regarding the challenge of lack of funds to purchase tools for practical purposes, Gloria intends to do the following

Project title: Vegetable growing such as dodo, red pepper, tomatoes etc.

Method of implementation: She intends to write a project proposal to the principal and forward her ideas and thereby request him to assist her with a piece of land to enable her implement her project plans.

Target group: She will organize willing students but first counsel those with funds problems by encouraging them to participant in the project since it is profitable.

Funding: she intends to use her own money to procure the seeds and hopes to borrow school tools for use in digging up the land.

Working time schedule: working on the small farm will be in the evenings of some selected weekdays and weekends especially Saturday mornings.

Project 2: Rearing of chicken: both layers and broilers.

This is to be done where she stays since it does not need a lot of land. Money will be obtained from her salary

Challenge: lack of sensitization to the community toward VET

Project 3: Training the youth especially the drop outs with her 3 machines. She intends to do this at her trading centre

Members contributions to Gloria's project

Members advised her to seek support from NAADS in case of pest control

They also advised her to look out for the local methods of pest controls and spraying the tomatoes.

Stephen

Challenge: Negative attitude towards VET by community.

He intends to conduct seminars to the community where they will make items with his learners and display them to the community so that they purchase them at subsidized costs

He will also encourage students to produce items and carry them home so that they motivate their parents

Emmanuel

Negative attitude towards VET

Introduce skills in carpentry and joinery

Build interest in the learners to like what they are doing in their profession.

He intends to train his learners through engaging them in project work as a method of teaching.

Will request the principal to help him contact NGOs for assistance with training equipment

Contributions from participants.

He was advised that as a beginner teacher, it may be difficult to convince the NGO to grant him support therefore, there is need to seek for possible alternatives incase that fails.

He can also obtain contract and use part payment from his clients to purchase the necessary tools and materials.

One of the participants encouraged his to go ahead asserting that institutions are encouraging project work in the training.

Ogwal

Challenge: Negative attitude towards VET

His intention was to write a project proposal to NGO and requesting for machinery and tools to start up a workshop to train people.

Contributions from the participants.

He was advised not to look upon NGO for every support. There is need to make a foundation and improvise for some items to start on his own so that he has a basis to solicit for support.

Meeting was ended 04:30pm

Members Present: Emmanuel, Geoffrey, Francis, Senscious, Ronald, Dinavence, Richard, Gloria, Stephen, Laudel.

Appendix 7:   DTTE 115 Introduction to Educational Studies Course outline

Brief Description

Introduction to education in general and to TVET in particular, in Uganda

Objectives

- By the end of the course, students shall be able to:
- Explain the terms "Education" and "TVET"
- Give an outline of the history of education in Uganda
- Discuss the importance of TVET in Uganda
- Explain the term "multi-culturalism" as it relates to technical education
- Outline the challenges facing TVET in Uganda

Detailed Course Description

Introduction to Technical and Vocational Education and Training (TVET)

- Definition of education
- Forms of education
- Aims and objectives of TVET
- Indigenous education
- TVET and CBET

History of Education in Uganda

- Brief history of education in Uganda
- History of technical education

Philosophical aspects of education

- Sociology of technical education

Comparative perspectives of TVET

- Economics of TVET

Mode of delivery:

The course will be taught using lectures, assignments, project works/ tests and practical work, group activities, personal reflections

TITTLE: OKELLO RICHARD

GROWING OF VEGETABLE:

BACK GROUND TO THE STUDY

Vegetable growing this is the process of growing or planting short terms vegetable examples tomatoes, cabbages and eggs plants This is to improve on the food stuff of Kitgum Technical institutes students and the staff members Since the school will buy it from me and I will be their suppliers.

Vegetable are normally 1–3 months they would have got ready to be harvested for consumption

STATEMENT OF THE PROBLEM

One of the major problem facing Tvet institution is, Inadequatecy of tools for practical work. The problem above is even the major causes of failure to Tvet students. Most of the students fail their practical because they had no tools during their practical lesson and at the end of their year or course they end up re-taking. and since I have started the project, The vegetable will be sold to the school and the money obtained is used to buy or equip the students with the neccesary tools for their practical lesson.

SCOPE OF THE STUDY

This project will be carried out in Kitgum Technical institutes which is in Kitgum district in Northern part of uganda. There is enough land within the institutes which favours the establishment of the project. The fertility of the

place. It is also free of weeds which may affect the growth of the vegetable

OBJECTIVES OF THE STUDY

- The project will improve on the food stuff of the students and the staff members who are within the instutes.

- To increase on the small income generating activity so that the money can be used for buying basic needs.

- It also make students to develop interest in the project so that after they have finished their course they can also extend the project to their respective places.

- The project help to provide basic tools to the student who can not afford to buy tools at their own.

- It improve the standard of living of the students who have extended the project to their respective places through selling the products to the various market within their places. And the money being used for paying school fees, and buying basic needs.

JUSTIFICATION / SIGNIFICANCE

In so implementing the project, The neig- buring people around the school will take the chance to see the project and also employ the same method in their villages and near by instution hence I would have impro- ved on their food stuff

10/11/2010   PERSONAL BACKGROUND

I am   ARINGANYIRA LAUDEL 24 years
old.
I was born in Shooko village; Rubaya
sub county; Kabale district uganda.
After completing o'level, i joined
African international christian ministry
vocational training centre (AICMVTC)
in Kabale district. This was in 2007 and
2008 for craft part I.
In 2009, i was at Gables vocational
training centre in Rukungiri distric for
craft part II (Advanced)
Throught both stages, i was working
with private plumbers.
immediatelly after advanced final
exams, i startled teaching at
Gables vocational.institute training
centre until i joined Kyambogo
university for Deploma in technical
teacher education (DTTE) in August 2010.
    PROJECT:
TITLE: DOCUMENTATION OF PERSONAL
EXPERIENCE AND KNOWLEDGE ACQUIRED
IN PLUMBING AND MATHEMATICS WORK IN
FORM OF TEXT BOOKS.

INTRODUCTION
I have been observing and experiencing
Fundamental activities which have
been practiced indigenously within
our Kabale distric; but their rate of

development is very low. its
i identified one of the factors that
have led to the low rate of
development of such activities
as (pottery, iron smith mentioned but a few)
is that there is no documentation of
for what is being done.
i thought of starting documenting
but i never had any idea about
documentation.

Problem statement

Throught my studies i have been
and i am still studing mathematics.
I have observed that many students
have bad attitude towards it. which
i have identified to as due to
the failure to identify its
application in their daily life.
After identifying the problem, i
started finding out the application
of many calculations which they
have been thinking that they are
just for academic purpose; but still
i faced the challenge of documentation.

When i joined Technical institute,
i expected a variety of text books,
but unfortunately they were
very few, showing only experiences in
overseas countries and many of
a big percentage of them not in

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International Systems of unit (SI UNIT)

When I started teaching, a big number came complaining about such text books in which they failed to interprete the information. They also complained that the information was not promising for the development of skills. Some of the information was no longer applicable. "Like lead as a material for water supply" and everything (whether calculations, drawings or other parts of science and technology) was seen as just for academic. This greatly increased my desire to document, but still; documentation remained a tag-of-war until I joined kyambogo university.

I send my sincere gratitude to Mr.kikomoko Joseph and Madam Dinah for having introduced to me the ideas about documentation. This will play a big role in fulfilling my dream.

PURPOSE OF THE PROJECT.
To minimise the problem of inadequate text books. for TVET.

International Systems of unit (SI UNIT)

When i started teaching, a big number came to complaining about such text books in which they failed to interprete the information. They also complained that the information was not promising for the development of skills. Some of the information was no longer applicable. "Like lead as a material for water supply" and every thing (whether calculations, drawings or other parts of science and technology) was seen as just for academic. This greatly increased my desire to document, but still; document-ation remained a tag-of-war until i joined kyambogo university.

I send my sincere gratitude to Mr. kikomoko joseph and madam Dinah for having introduced to me the ideas about documentation. This will play a big role in fulfilling my dream.

PURPOSE OF THE PROJECT.
To minimise the problem of inadequate text books for TVET.

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OBJECTIVES OF THE PROJECT

- To promote the transfer of theories into practical.
- To improve the productivity of ugandans.
- To transform experiences into texts.
- To relate the priciples, theorems, laws, ideas, skills and attitudes with the developing technology.
- To make ugandans familiar with SI units.
- To promote local skills.

SIGNIFICANT

This project is expected to strengthen the:
- foundation of TVET
- Attitude towards TVET
- Productivity of citizens through advisory serices and documenting what they do.

This shall contribute much to the general economic development and economic growth.

KYAMBOGO UNIVERSITY P.O.Box Ikya
mBDGO KAMPALA - UGANDA.

DEPARTMENT: TECHNICAL TEACHER EDUCATION (TTE)

FACULTY: EDUCATION

TITLE: COURSEWORK

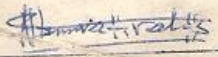COURSE UNIT: INTRODUCTION TO EDUCATIONAL STUDIES I (115)

DATE & SEMESTER 5th NOV. 2010 1st SEMESTER

YEAR I ONE

AWARD: DIPLOMA IN TECHNICAL TEACHER
EDUCATION (D.T.T.E).

LECTURER: Mr. KIKOMEKO JOSEPH AND MADAM
DINAH.

GROUP MEMBERS. (GROUP B)

NAME	REG. NO	SIGN.
OKELLO RICHARD	10|U|493|DTTE|GV	
NUWAGIRA SENSCIOUS	10|U|495|DTTE|GV	
AMANIYO GLORIA	10|U|1873|DTTE|PE	
MUNYOLE MOSES	10|U|1871|DTTE|PE	

QN.3 Identify the challenges of TVET Institutions in Uganda and suggest possible solutions.

Some of the challenges faced by tvet Institution in Uganda are as follows:-

① Insufficient tools and learning materials like text books, workshop tools, workshop materials, stationary, staff accomodation/poor working conditions etc. If all these above are not available/effected, It hinders the smooth running of day-to-day school activities at a school setting and It also affects the general academic performance of both teachers and students.

Solution Is to begin income generating projects under the school programmes like setting contracts and these will generate income to the school which can be diverted to purchase some of the above requirements.

Another solution would be engaging students in agriculture with an aim of mass production of goods like cabbages, Tomatoes, Irish potatoes, and other sorts of food such that if they are sold, the money be used to buy some of the above listed requirements.

Students can also be Involved in moulding of bricks with a purpose of selling some and retain some also for the students' practical use and construction of structures like staff accomodation, class rooms, health and sanitation structures like latrines, bathrooms, urinals etc. for the school this would be a very big contribution under the

Margin notes in red: Your work is good but you only listed three challenges with very many solutions, there is need to identify more challenges.

these are of income generating projects examples

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Students can also be guided by their teachers to atleast try hard and buy their personal tools which are abit cheap like a pair of scissors, Tape measure, Screw drivers, Try squares, needles, spanners. etc. This would solve a problem of lack of workshop tools and also ~~encourages~~ improves students participation in the workshop as well as outside the school in their home places.

(2) ___In adequate skilled staff for Tvet.___

Under this, tvet Institutions lack skilled man power to handle specific areas like in TC, Mwt & even plumbing up to now Tvet institutions do not have enough skilled & trained teachers to handle these courses, Instead they use untrained personal who have either completed craft part I or part II, which is a great hindrance in the progress of technical education because they don't posses training technics and methods which they should adopt in the process of teaching so as to cater for both advantaged and disadvantaged learners.

Solution: More technical teacher training Institutions should be established in order to increase on the number of technical teacher graduates that would take over the vacant posts in the existing Institutions.

The ministry should recruit and appoint more teachers from those who managed to complete their technical teacher training.

The salary scale structure for tvet teachers should be revised for Increment purposes, If this is done, It will persuade more teachers to Join the System because their welfare will have been improved.

Un fair
Postings: There should be fair and reasonable postings of Tvet teachers to their places of work because to some extent a tvet teacher is posted in any part of Uganda especially when there is no vacant post with in the near by Institution. This Situation embarasses some tvet teachers for their places of work where transport is too much, working & climatic conditions not favourable and being completely cut off from their families and home places. It creates stress and discontentedness with in tvet teachers on their work places and may finally end up absconding from their duties.

<u>Negative attitude towards Tvet by the Community</u>: This is a very big challenging factor faced by tvet Institutions in Uganda, people took Tvet education to be for academic failures and at the same time as Education that Involves much labour and dirty work, this originated from our colonial Master Britain which came with Such kind of attitude and It was inherited from then. The community therefore opted for literal education which

solution is to carry out sensitization to the entire community trying to erase this kind of attitude, this can be done by stakeholders of tvet like Tvet teachers, BoGs of Institution, Butvet implementers in the ministry etc this can be realised by Introducing/holding non-formal workshops/seminars, visiting congregations in churches and other public places showing the community about the benefits, upgrades and progress of Tvet education.

Government sponsorship to tvet students can also trigger the positive Interest of the community towards tvet education, this can be done by sponsoring the best tvet graduates to higher levels of Education even abroad, If this is ensured, the community will feel that there is also life in Tvet education.

Qn 4 a) With relevant examples, explain the factors that responsible for the Inadequacy of Tvet teachers in Uganda.

Some factors that contribute to Inadequacy of tvet teachers in Uganda are as follows:-

Under payment of tvet teachers is a major problem faced by tvet which affects them in their daily life, besides this, these teachers are also posted contry wide in case occasion demands. This situation prevents them from achieving their basic aspirations in life and

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Clothing and even fail to take care of their families at their home places. This put tvet teachers on tension and finally end up absconding from duties and those who have not joined the proffesion fear to Join so as not to meet the same challenges.

Solution for the above should be: The salary scale structure should be revised for Improvement. So as for the teachers to access atleast some of the above basic requirements. Postings should be particularly done basing on one's home place atleast not far away from the home district, and if conditions allows in future and more Institution established Tvet teachers should not be posted across a district in order to keep them in touch with their families and reduce on their transport costs.

In adequate t.vet teacher training Institutions.

This is a very challenging factor that is affecting most tvet graduates in Uganda. Students complete their advanced or diploma levels but cannot get access to train as tvet teacher since there is only one teacher training Institution which is Kyambogo University, however there are other training Institution like Kaliro situated at Luggo and Abilonino, they are still not fully Independant even not full wide

facilities to enrol many students for
training. Therefore the government should
plan and increase on the number of these
teacher training institutions since this cannot
effected by an Individual.

There is inadequate recruit of
TVET teachers by the ministry. The ministry
takes long to advertise and recruit new
staff and it is to be done, still
teachers are considered leaving some in
ons under staffed. Therefore there should
be adequate recruit of TVET teachers
order to equip TVET institution with a
ate staff.

by who

Unfavourable working condition
Besides TVET teachers being posted
distant places of work, there is also
a roaming problem of accomodation
their places of work. There fore, the
have to rent a bit far from their w
places and they are inconvinienced es
ally during rainy seasons where it may rain
the whole day when a teacher is s
at his or her place of residence. Th
affects the performance of teachers and
Students. It also involves walking 10
morning and evening

greener pastures (High paying jobs) in private organisations. The solution is that both the ministry and stake holders of these TVET institutions should make certain that these teachers' accomodation is provided and working conditions improved.

Head teachers misconduct on TVET Teachers. Some head teachers are so coersive in sense that they do no listen to some serious problems affecting their staff. Teachers under this kind of treatment makes them hate the profession and even can not encourage others to join the same profession. Therefore, the Ministry should always convene these head teachers inform of Seminars, work-shops and remind them about Administration skills and management and ageio professional ethics. If this is done, teachers will feel free and execute their duties to some extent.

Comment

for Qn 3.
You need to identify more challenges atleast
six and mention their respective solution.
You have still identified only three and
stated to many solutions. You need
only ~~one~~ a challenge with one solution