
# ADDIS ABABA UNIVERSITY
# SCHOOL OF GRADUATE STUDIES
# SCHOOL OF INFORMATION SCIENCE

## COLLABORATION FOR KNOWLEDGE SHARING AMONG A.A TVET COLLEGES

**BIRUK FANTAYE**

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A Thesis Submitted to the School of Graduate Studies of Addis Ababa University in Partial Fulfillment of the Requirements for the Degree of Master of Science in Information Science

By

BIRUK FANTAYE

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Name and signature of Members of the Examining Board

| Name | Title | Signature | Date |
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| _____ | Chair person | _____ | _____ |
| _____ | Adviser | _____ | _____ |
| _____ | Examiner | _____ | _____ |

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# Declaration

I declare that the thesis is my original work and has not been presented for a degree in any other university.

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This thesis has been submitted for examination with my approval as university advisor.

_____
Advisor

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First and for most I would like to thank the Almighty GOD for his unending helps and blessings.

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**Abbreviations**

| | |
|---|---|
| CMC | computer mediated communication |
| ISO | International Standard Organization |
| KM | Knowledge Management |
| KS | Knowledge Sharing |
| TQM | Total Quality Management |
| TVET | Technical, Vocational and Education Training |

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## Abstract

***Background***

*Ethiopian TVET strategy is developed with the involvement of a broad range of stakeholders from the private and public sectors. It defines the major principles of the intended TVET development in the coming years. The main thrust of the strategy is that TVET development relies on an outcome-based system and dedicated and trusting cooperation among stakeholders.*

***Objective***

*The overall objective of the study is to assess and evaluate the existing Knowledge sharing practice and identify opportunities that improve knowledge sharing practices among TVET colleges in Addis Ababa.*

***Methodology***

*The study has followed a quantitative and qualitative methodology. A sample of 203 Trainers and Academic deans are selected using Stratified random sampling from 3 public and 3 private TVET colleges. Questionnaire is applied to assess knowledge sharing according to respondent's opinions and perceptions regarding each of the cultural, organizational and technological factors and existing knowledge sharing practice.*

***Result***

*Academic staffs are aware of knowledge sharing. They also believe that knowledge is power and it can help their college to stay competitive in the TVET environment. Moreover, academic staffs agree that they should share their knowledge and best practices.*

***Recommendation***

*It is recommended that the TVET agency take initiative to put a system in place that facilitates knowledge sharing among TVET colleges. Further studies are also recommended to investigate more facts that facilitate knowledge sharing.*

# Chapter one: Introduction

## 1. Introduction

### 1.1 Knowledge and Knowledge sharing

Knowledge sharing is a fundamental knowledge management process. For large organizations, the ability to effectively share knowledge across the organization can lead to new competitive intelligence being created and best practices being achieved, organization wide. In our current economy, business competition is being driven by new emerging factors. In many developed countries today, competition is not based so much on cost alone, but more on the production and development of knowledge-based products and services. Knowledge is today regarded as a factor of production together with land, labor and capital. As the world moves towards a "knowledge-based economy", knowledge is being considered as the main driver of this new economy. The success of economies in the future is going to be based on how companies or organizations acquire, use and leverage knowledge effectively (Bircham-Connoly, Corner and Bowden, 2005).

However, understanding the concept of knowledge has become a dilemma due to the lack of theories on the subject (Willem, 2003). This is mainly due to its intangible nature, which makes it very difficult to quantify. As such, organizations may find it difficult to manage knowledge effectively. Therefore, more research is needed in this area so that a framework can be developed to guide future research. Within the overall knowledge management domain, a critical area that needs more attention is knowledge sharing. Knowledge sharing is embedded within the knowledge-processing scope where knowledge is generated and put to use (Shapira, Youtie, Yogeesvaran and Jaafar, 2005).

Effective knowledge management strategies must emphasize the role of knowledge sharing to achieve maximum results for organizations. Knowledge sharing, in general, involves transforming the tacit knowledge and explicit knowledge three ways. Marwick (2001) categorizes the ways in which knowledge transformation takes place in a business setting. Tacit knowledge transforms into explicit knowledge through a process called externalization. Socialization spreads tacit knowledge. Meetings, classes, and unplanned discussions all provide an opportunity for people to share their experiences. Before and after meetings are prime times to exchange information informally with peers. Internalization of explicit knowledge to tacit knowledge occurs during the critical reading of a document, and application of the explicit knowledge to unique situations in life. Reading and using the explicit knowledge creates more tacit knowledge, which is communicated yet again to others; to be documented and used to generate more tacit knowledge. In practice, knowledge sharing encompasses both technological tools and organizational routines in overlapping parts. Knowledge sharing has been widely used in Technical institutions to improve their knowledge assets in order to innovate and respond to a market demand.

### 1.2 Knowledge Management in Education

Educational institutions are under tremendous pressure for increased accountability from external and internal sources. External pressures raised by stakeholders like employers, government agencies, and parents for measurable improvements in educational institutions are mounting and demand for information about student learning outcomes is growing. Internally, educational institutions are asking themselves difficult questions about accountability: for example, how can we improve student learning outcomes? In this environment of external and internal demands for

accountability and improvements of student learning outcomes, schools, colleges, and universities as organizations committed to educational missions, must ensure students are learning by acquiring knowledge in the most efficient and effective way. Institutions must also have the ability to demonstrate enhancement of student learning and development. Thus, educational institutions may find it beneficial to adopt Knowledge Management programs to improve their performances and outcomes. Consider an individual educator who possesses knowledge on how to improve student learning outcomes. If the institution relies on only this expert individual to conduct ongoing exercises in improving student learning outcomes, it can hamper the flexibility and responsiveness of the organization. The challenge is to convert the knowledge that currently resides in this individual and make it widely and easily available to any educator. Thus, knowledge management can lead to improvements in sharing knowledge - both explicit and tacit - and subsequently benefit the organization as a whole. Knowledge management in education can be thought of as a framework or an approach that enables people within an organization to develop a set of practices systematically to collect information and share what they know (e.g. skills, experiences, beliefs, values, ideas, etc.), leading to action that improves services and outcomes (Petrides & Nodine, 2003).

(DeDiana & Aroyo, 1998, Kidwell, 2000). Kidwell et al. argued that knowledge management has several application areas in the curriculum development process. They are curriculum design and revision efforts, knowledge of teaching and learning (with technology), pedagogy and assessment techniques, student evaluations, etc. Some of the benefits identified are to enhance the quality of curriculum, improve responsiveness to student evaluations, leverage the best practices, improve teaching and learning, and monitor outcomes.

Furthermore, Petrides & Nodine (2003) stated several implementation areas where knowledge management practices are useful in educational institutions. One of the areas is enabling educators to create and represent quality knowledge for students to advance and improve their learning.

Learning is a process by which students take in information and translate it into knowledge or skills. It has been defined as the process of acquiring knowledge, attitudes, or skills from study, instruction, or experience (Miller & Findlay, 1996: 167). Learning outcomes are statements of what is expected that a student will be able to do as a result of a learning activity. According to Barr (2001), learning outcomes are statements of the knowledge, skills, and abilities the individual student possesses and can demonstrate upon completion of a learning experience or sequence of learning experiences (e.g., course, program, and degree).

The learning activity follows the educator's materials on the e-learning environment or students listening to a lecture based on them, but it could also be a laboratory class, even an entire study program. Learning outcomes help instructors to be more precise in telling students what is expected of them. A learning audit is necessary to measure the cognitive and behavioral changes as well as tangible improvements that results from the learning process of students (Garvin, 1993). The primary emphasis on knowledge for pedagogical purposes may be for increasing students' learning, which requires a feedback loop in which institutional performance is evaluated, corrective measures are taken, and improvements are made in the knowledge base and practices.

One of the tasks in this complex process of teaching and learning is to code knowledge and to disseminate this knowledge to students in classrooms or through e-learning systems.

However, to what extent do students learn by acquiring the requisite knowledge in this way? This question can be addressed by the knowledge management system where knowledge or information concerning student learning and outcomes can be collected and shared amongst the teaching staff. The knowledge gained by the teaching staff allows them to make appropriate decisions to ensure that their courses, topics, instructional materials, presentations, assignments, assessments, etc. are updated to improve the student learning outcomes. In order to enable educational institutions to use and share knowledge more effectively, a knowledge management system brings together three core organizational resources - people, processes, and technologies.

### 1.3 TVET Colleges

Ethiopian TVET Strategy replaces an older version adopted in 2002. It reflects an important paradigm shift of recent years which places quality and relevance of TVET as its priority. Global experience has shown that the expansion of TVET does not solve the problems of unemployment and low productivity of the economy. TVET has to respond to the competence needs of the labor market and create a competent, motivated and adaptable workforce capable of driving economic growth and development.

This strategy was developed with the involvement of a broad range of stakeholders from the private and public sectors. It defines the major principles of the intended TVET development in the coming years. The main thrust of the strategy is that TVET development relies on an outcome-based system and dedicated and trusting cooperation among stakeholders.

There have been massive changes to the global economy over the past two to three decades. Changes that are occurring in workplace of the modern world have profound effects on the TVET systems. Workplaces require competencies in their work force according to their changing needs. Rapid changes and resulting obsolescence of technologies have rendered existing knowledge and skills obsolete. Companies compete by innovation to remain competitive. So their products and services have become knowledge Intensive. For this they need to systematize and display knowledge in their output in order to sustain and create value. This has created enormous demand for high skilled technical workers having the potential to deploy their competencies for speedy innovation and value creation.

The new management philosophies i.e., TQM , ISO certification for global acceptance and Business Process Reengineering to remain flat, flexible and agile have not only resulted in thorough documentation and continuous improvement but have also necessitated to manage the most valuable organizational asset "Knowledge: that is most likely to be lost due to heavy layoff of the employees. As an organization TVET system is no exception to adapt these management philosophies. Also as a provider of the technical workforce, TVET Systems must produce smart knowledge workers to fit in the knowledge based workplace and these management philosophies are very useful in this connection.

All these trends in the environment have guided an era where knowledge has become a strategic resource and a basis for competition and survival. The effects of these changes in the workplace transcends down to TVET Systems. The modern workplace requires the knowledge workers and TVET system is obligated to produce knowledge workers.

Workers of the knowledge era will need new skills to learn, unlearn and relearn right throughout their lives. Their working lives will be in learning organizations, which are constantly renewing and reshaping themselves. The challenge to TVET Institutes will be to support teachers and learners to develop the skills and orientation needed to learn and function in knowledge based learning communities. This is what Harper and Elich (2001) sees as to how TVET Institutes in providing education and training can adequately prepare learners for working in the new economy.

Like knowledge workers, instructors need access to current knowledge and Information. The challenge will be to manage knowledge that is to create, capture, share, exchange and effectively use knowledge among Colleges. Providing access to information is not enough, what is required is access to knowledge. This necessitates measures to be taken in order to address the issue of knowledge sharing among TVET systems. Broadly speaking, TVET systems should concentrate on promoting cultural change, creating an environment of sharing, and developing a cohesive management strategy.

Instructors in TVET system work largely in classrooms to deliver the theory and in workshops for hands-on to demonstrate the related skills and attain competence. Also they supervise students' final year projects. The professional knowledge and experience they gain, remains locked in their heads and hence invalidated and unshared. According to the head of Hewlett-Packard: "If HP knew what it knows, we would have been three times as profitable". If our TVET Institutes know what all their Individual Instructors know, and if the Deans and Ministries know what all their Individual best Institutes know, how more effective would TVET system be?

Therefore successful TVET colleges, like successful businesses, have to share the intellectual capital trapped in the heads of their members or others colleges' member

and how to utilize that collective knowledge base for improvement of their Graduates and services.

### 1.4 Statement of the Problem

Knowledge sharing consists of collecting, organizing and conversing knowledge from one to another (Van den Hooff and De Ridder, 2004). As the sharing process involves more than just collecting data and information, generally, the value of knowledge expanded when it is shared. Therefore, if managed properly, knowledge sharing can greatly improve work-quality and decision- making skills, problem-solving efficiency as well as competency that will benefit the organization at large (Syed-Ikhsan and Rowland, 2004; Yang, 2007). A key reason for lack of knowledge management viability was the unwillingness of employees to share their knowledge effectively with their peers (Lee, & Ahn, 2005).

In a knowledge-based industry, such as TVET, there are large amounts of knowledge residing within individuals, teams and organizations as a whole. The knowledge may be in such diverse areas as technical and academic expertise and educational pedagogies. The challenge to TVET colleges lies in being able to effectively use the sharing and creation of Knowledge for the development of individuals and teams among the college and manage the use of it in the achievement of academic goals. For policy makers, it is very much essential to invent new ways to establish a proper knowledge sharing system. Collaboration among TVETs can play an important role in the field of knowledge sharing.

The knowledge contained in TVET need to be properly documented, stored and made easily retrievable for later use. This is particularly important reducing budgets

and increasing workloads, where working smarter has become a critical issue to beat the competition and survive.

The study of knowledge sharing is dominated by those focusing on knowledge sharing activity within the business organizations. Obviously, the ultimate goal of organizational knowledge sharing in these institutions is profit-motivated. However, the issue of knowledge sharing is equally important for a knowledge-based academic institution, such as a TVET, where knowledge production, distribution and application are ingrained in the institution. Though there is no direct way to measure the outcome of knowledge sharing in knowledge institutions, the impact of knowledge sharing could be larger than those created by the business organizations.

Relying on the institutional knowledge of unique individuals can enhance the flexibility and responsiveness of any organization. The challenge is to convert the information that currently resides in TVET individuals and make it widely and easily available to TVET academic community.

According to the preliminary investigation the existing KM implementation of TVET has been unplanned, without a coherent framework for knowledge sharing. Moreover, the existing culture, knowledge sharing techniques and ICT infrastructure does not provide sufficient support for knowledge sharing practices among TVETs. Based on the discussion presented above, we have the following main research questions, which will drive the research:

- What does the knowledge sharing culture look like among TVETs?
- What types of knowledge are shared among TVETs?

- What does the informal knowledge sharing practice look like among academic staffs of TVET colleges?
- Which techniques aid the sharing of knowledge among TVETs?
- What are the organizational reasons that employees of TVETs resist the sharing of knowledge?
- What strategies and initiatives should A.A TVET Agency take to create and develop a knowledge-sharing culture?

## 1.5 General Objective

The general objective of this research is to assess and evaluate the existing Knowledge sharing practice and identify opportunities that improve knowledge sharing practices among TVET colleges in Addis Ababa.

## 1.6 Specific Objectives

- To identify the current organizational culture that relates to knowledge sharing within A.A TVET Colleges.
- To identify types of knowledge that exists within A.A TVET colleges.
- To visualize the informal knowledge sharing behavior among trainers of TVET colleges.
- To suggest knowledge sharing techniques that would fit the requirements of the TVET.
- To point out organizational reasons that employees of TVETs resist the sharing of knowledge.
- To formulate recommendations to improve knowledge sharing culture among A.A TVET colleges.

## 1.7 Scope and limitation of the study

The scope of the study was limited to knowledge sharing practices of academic staffs of TVET colleges in Addis Ababa. This was enabled to assess the existing knowledge sharing practices in the colleges, identified the techniques used for knowledge sharing and also assessed the cultural and organizational barriers that affect knowledge sharing practices of the staff.

## 1.8 Methodology

This study was followed a quantitative and qualitative methodology to investigate different dimensions of culture, method communication and informal communication on knowledge sharing and investigate existing knowledge sharing practice of TVET colleges.

### 1.8.1 Target Population

The TVET's population, as recorded in Addis Ababa TVET agency up to the end of 2011, is 2342 The majority of the population is made up of public college trainers as they represent nearly two thirds of the population in TVET while private college trainers represent nearly a quarter. The target populations for this study are trainers, deans and vice deans in Addis Ababa TVET colleges. The data was collected from ten departments which are found in the six TVET colleges. The ten sectors that are used as a population for this research are  sector of Construction, Textile and Garment, ICT, Surveying and Drafting, Automotive, Hotel and Tourism, Metal and Wood work, Electronics, Health and Business. The other sectors that are found in the TVET are not included in the study.

### 1.8.2 Pre-Testing and Pilot Study

In the first stage, the questionnaire was distributed to five academic staffs at Misrak TVET College. Comments were received about the wording of some statements and the layout of the questionnaire. All the comments were considered and changes made. The second stage involved piloting the questionnaire to five academic staff from Mary Help College. The comments from the five participants concerned the instructions, information on the cover page, and the questionnaire's layout. All changes were made to produce the final version of the questionnaire that is presented in Appendix 1.

### 1.8.3 Sampling Technique

The sample technique, to select colleges and academic staffs that was used in this research is stratified random sampling. TVET was divided according to Private and public colleges; these were then further divided into departments.

### 1.8.4 Data Collection Procedure

A sample of 203 Trainers and Academic deans were selected using Stratified random sampling from 3 public and 3 private TVET colleges. Questionnaire was applied to assess knowledge sharing according to respondent's opinions and perceptions regarding each of the cultural, organizational and technological factors and existing knowledge sharing practice. There were 2% of participants from each sector was taken and a total of 203 questionnaires were distributed.

### 1.8.5 Questionnaire

According to the pilot study the questionnaire was designed to be easy, unambiguous and short for academic staff to complete. It was issued to academic

staff in order to obtain a descriptive and general picture of differences in the respondents' views over a large population.

The first part of questionnaire comprised questions eliciting demographic characteristics of respondents. The second part comprised 27 questions designed to determine the views of the academic staff of TVET colleges on the level of existing knowledge sharing practices, techniques used for knowledge sharing, knowledge sharing practices at organizational, cultural and technological aspects. The questionnaires were well designed, clear and applicable.

### 1.8.6 Interview

An interview instrument was developed for quality officer, IT department heads, deans and vice deans. Purposive sampling technique was adopted for the purpose of the study.

### 1.8.7 Data Analysis

Both quantitative and qualitative data were collected during the fieldwork at TVET colleges in Addis Ababa using the data collection methods described earlier (questionnaires, and interview). In addition, the background of the researcher and his familiarity with the study context and its environment played an important role in selecting the most appropriate methods to collect data so that the aims and objectives of this research could be achieved. The data that were gathered from the research methods were analyzed separately in different stages as the quantitative data were analyzed first, followed by an analysis of the qualitative data. The analysis of questionnaires will provide information regarding the informal knowledge sharing among TVET colleges, way of transfer knowledge, the most common problems they

deal with, their opinion about possible improvements and necessity for new knowledge in different fields of training. SPSS 20 statistical tool will also assist in categorizing and summarizing results.

# Chapter Two: Literature Review

## 2. Literature Review

### 2.1.1 Theories in Knowledge sharing

As knowledge, is what gives people the capacity to act; knowledge sharing logically following is the process where people develop in one another new capacities for action. (Senge, 1997) highlights that “sharing knowledge occurs when people are genuinely interested in helping one another to develop new capacities for action”.

Authors such as Serban and Luan (2002), Davenport and Prusak (1998), Huysman and De Wit (2002), and Awad and Ghaziri (2004) do not distinguish between knowledge transfer and knowledge sharing. The terms ‘transfer’ and ‘share’ are interconnected and are used interchangeably by some authors (Al-Alawi et al., 2007; Christensen 2007). However, (Boyd et al., 2007) distinguished between knowledge transfer and knowledge sharing as they defined both concepts differently.

(Boyd et al., 2007) described the knowledge transfer process as "applying existing knowledge from one context to another". Knowledge transfer has only one owner (the main source of the knowledge) but more than one recipient (Boyd, 2007 ; Major and Cordey-Hayes 2000). This implies that the flow of knowledge occurs in one direction: from the owner to the recipient(s). Knowledge transfer is a process that takes place every day in a working environment as people or employees transfer knowledge whether or not they mean to. For example, knowledge transfer occurs when an employee asks a colleague how to put together a budget request. In this case, he or she is requesting a transfer of knowledge (Davenport and Prusak, 1998).

In contrast, knowledge sharing is a two-way, mutual and voluntary process that generally occurs during social and informal interactions among an organization’s

employees. The process involves one or several owners and one or more recipients, and each party involved in the process can be a knowledge owner and a recipient simultaneously (Boyd et al., 2007); the knowledge flow in this process occurs in all directions. (Jacobson, 2006) defined knowledge sharing as: "an exchange of knowledge between two individuals: one who communicates knowledge and one who assimilates it. Knowledge sharing focuses on human capital and interaction of individuals". A similar definition was also offered by Awad and Ghaziri (2004). They explained the term as the sharing or exchange of knowledge between individuals or teams, or between individuals and knowledge bases. However, Boyd, (2007) argued that knowledge sharing is not the same as knowledge exchange as knowledge sharing is "the disclosure of existing knowledge to others". In other words, it is voluntary, whereas knowledge exchange is the "imparting of knowledge for something in return"; this is involuntary.

From an academic perspective, knowledge sharing can be defined as "being aware of knowledge needs and making knowledge available to others by constructing a technical and systematic infrastructure" (Kim and Ju, 2008). This means that knowledge can be shared through technology and through an organized strategy within an organization. Other authors, such as Huysman and De Wit (2002), offered a comprehensive definition of knowledge sharing based on a theoretical understanding that was derived from the knowledge sharing cycle. This identifies three basic types of knowledge sharing which are:

1. Knowledge acquisition: This comes as a result of internalization or learning from the organization; the process relates to individual learning.

2. Knowledge exchange: This is a result of internalization or learning from individuals in order to reuse knowledge; its processes relate to individual learning.
3. Knowledge development: This is a result of externalization or learning with individuals in order to develop knowledge. This process relates to group learning this implies that there are several ways of sharing knowledge in organizations.

Examples of knowledge sharing in organizations include interaction, cooperation, the distribution of texts on methods and practices that have been successful elsewhere, and solving problems through seeking assistance from other employees (Kalling and Styhre, 2003; Ford and Chan, 2003).

Reflecting on the definitions that are offered in the literature, a working definition has been developed for this research. Knowledge sharing is defined as the process of exchanging and acquiring knowledge that is needed through informal and formal channels and through technical facilities. This process occurs between individuals and group interactions in order to develop and create new knowledge that will benefit the institution; it can also be both voluntary and involuntary. The next section presents the issue of knowledge sharing and culture as this anticipates a discussion of different issues that have an impact on the behavior, practices and interactions of both individuals and groups in the workplace.

### 2.1.2 Knowledge Sharing and Culture

Today, knowledge-sharing is widely-held to be inherently necessary to the health of most enterprises. Research shows that a "Willingness to share" is positively related to profitability and productivity and negatively related to labor cost (Jarvenpaa & Staples, 2000) and these researchers believed that knowledge-sharing is positively

linked to growth and innovation bottom line savings increased customer satisfaction, increased shareholder value and learning.

Kidd (2002) defines culture as: "the way of life of a group of people". Haralambos et al., (2004) define culture as: "the whole way of life found in a particular society." Kidd's (2002) definition of culture, while relatively simple, is close to that of Haralambos, given above, since both use the words "way of life" in their definitions. However, culture in the context of knowledge sharing "is one where knowledge sharing is the norm, not the exception, where people are encouraged to work together, to collaborate and share" (Dalkir,2005).

The knowledge management (KM) literature illustrates that "culture" has been blamed for the failure of individuals and groups to adopt practices conducive to meeting KM goals. One particular area of interest is culture and knowledge sharing (Hall, 2001; Jashaparra 2004; Pillania 2006). However, some studies in the KM literature argued that it is inefficient to blame or reference culture directly. Rather, organizations should concentrate on the role of different actors in different power relationships that are involved in the creation of that culture (Ekbia and Kling, 2003,; Hall and Goody, 2007; Wilensky, 2008). These different power issues, such as organizational policies, should explain success or failure in attempts to encourage knowledge sharing in organizations (Hall and Goody, 2007). Kant and Singh (2008) also identified that top management commitment and support has a high driving power and low dependency for ICT enablement of knowledge sharing. This can be understood by recognizing the management political power within the organization when implementing knowledge sharing initiatives.

Furthermore, Currie et al., (2008) suggested in their research into the national health services in England regarding the successful implementation of knowledge sharing, that government policy should consider institutional power and policies together with other issues related to the nature of knowledge and professional cultures. This suggestion reflects the role and the influence of internal organization activities on knowledge sharing such as professional culture and institutional power.

On the other hand, it is also stated by Kelly (2007) that, when developing successful knowledge sharing initiatives and culture, it is important to frame the relationship between access to knowledge and access to power within an overall organizational context, in which all power resources are seen to be exercised in a legitimate manner. This could enhance an environment of trust that facilitates interactions between individuals and groups in organizations.

Several other studies on knowledge sharing in the corporate and business sector addressed various cultural aspects and issues related to the impact of interactions between groups and individuals in organizations (Handzic and Agahari, 2004; Lichtenstein and Brain, 2006; King et al., 2007; Issa and Hadad, 2008). For instance, the study of King et al., (2007), based in South Africa, found that cultural issues, such as language proficiency, age, work experience, gender bias, education and political power, have both a direct and indirect influence on the inclination of individuals to share knowledge in the organization.

From the research into knowledge sharing and culture noted above, it can be seen that several research studies have explored the issue of culture and knowledge sharing in the business, corporate and governmental sectors. However, research which has explored this issue in relation to higher education institutions is limited

(Dayson, 2004). The next section presents an outline of the nature of higher education institutions together with the characteristics of academic knowledge; this is followed by an examination of knowledge sharing and research studies that were conducted in higher education institutions. These issues were selected to clarify the logical foundation of this research.

### 2.1.3 Trust and Willingness

Trust, according to the psychological/behavior perspective, is a "willingness to be vulnerable" (Mayer et al., 1995). This means that an individual is ready to allow others to access his/her own resources (that is, his/her own intellectual, emotional and physical assets).

Trust among employees in various organizations has been identified in several research studies as an important factor in knowledge sharing initiatives, such as in energy supply companies (Lucas and Ogilvie, 2006); in IT service and consultant organizations in the USA (Han and Anantatmula, 2007); in large construction organizations in the USA (Issa and Hadad, 2008,). From the research studies presented above, it can be concluded that the issue of trust in an organizational context can be identified as one of the most important influencing factors that helps in creating more open access to different knowledge resources.

The individual's willingness to adopt the organization's norms can be viewed as an obstacle. Lopez et al., (2004) stated that: "individuals are the main subjects of the learning process; they must adopt a sharing position and must commit themselves to meeting the aims of the organization". This emphasizes that individuals who cannot adapt to the organization's values and norms represent an obstacle to the organization's culture. If the failure of individuals to adapt is on a large enough scale, this could have a significant impact on knowledge sharing and the work or

performance of teams. The importance of an individual's willingness to share his/her knowledge is described by Levin et al., (2002) as being "about creating an environment in which people are able to discern whether their colleagues are both knowledgeable and willing to extend their knowledge to benefit the others".

### 2.1.4 Informal knowledge sharing in conversations

A dynamic view of knowledge emphasizes that knowledge is created, shared, integrated, or Applied in social interactions (Nonaka & Takeuchi, 1995) and face-to-face conversations still represent the typical form of these interactions. If knowledge is viewed as an object (Alavi &Leidner, 2001), knowledge can be embedded and stored in individual members, in roles and Organizational structures, in procedures and practices, in the organization's culture, and in the Physical structure of the workplace (Walsh & Ungson, 1991). Accordingly, knowledge can be possessed (Cook & Brown, 1999) and transferred to new potential owners by moving the "knowledge reservoirs".

If we conceive knowledge and knowledge sharing as dynamic processes of knowing, the central role of face-to-face conversations for knowledge sharing becomes evident In conversations, it becomes apparent that the existing knowledge is not simply transferred, but is regenerated in a new context. Therefore, conversations represent a major means of how people interact and engage in knowing, sense making (Kurtz and Snowden, 2003) and knowledge sharing. According to Weick, it is through meetings, conversations, and other forms of communication that organizational members make sense of their daily actions (Weick, 1979). Conversations allow a co-construction of meaning. They are interactive and iterative and let participants ask clarifying questions, deepen certain aspects, and ask for the

larger context of a specific piece of information: all of which are activities that lead to the re-construction and regeneration of knowledge in a new context. Conversations also create a shared experience (Dixon, 1997); they build trust and strengthen the relationships between the participants (Harkins, 1999) a prerequisite for effective Knowledge sharing (Szulanski, 1996). All of these factors are fundamental conditions for the Sharing of knowledge. Von Krogh, Ijicho, and Nonaka (2000) believe that "good conversations are the cradle of social knowledge in any organization, they allow the first and most essential step of knowledge creation: sharing tacit knowledge within a micro community" (von Krogh et al., 2000, p.125). One could argue that the strength of conversations consists in the fact that they are highly flexible and can be easily adapted to the situation, to the topic, and the people who participate in a discussion.

### 2.1.5 Technological issue on Knowledge sharing

It is well established in the literature that technology and IT constitute one of the main elements of the organizational knowledge management system besides the employees and the organization's processes (Tiwana, 2002; Awad and Ghazi, 2004). There are now many different kinds of new technologies and communication or media channels that will allow knowledge to be captured, codified and retrieved. These include: knowledge repositories, groupware, the Internet, Intranets, video and telephone conferencing. These can facilitate communication and interaction between individuals within organizations as well as facilitating organizational learning and the sharing of knowledge (Connelly and Kelloway, 2003; Dalkir, 2005; Rehman, 2005; Han and Anantamula, 2007).

Devedzic (2001) listed the technologies thought to be knowledge sharing and knowledge management enablers. These included document retrieval software,

groupware, intranets, knowledge-based systems, pointers to people, decision support systems, data mining, and intelligent agents. However, Alavi, Kayworth and Leidner (2005) found that the values of organizational members influenced the ways in which technologies were used, implying that organizations cannot expect uniformity in the ways in which different groups will use knowledge management tools.

King, Marks and McCoy (2002) studied knowledge management practitioners and found that the success of knowledge management rested on an IT infrastructure. Such applications included: a) knowledge repositories, which are databases that allow the storage and retrieval of knowledge; b) best-practices and lessons-learned systems, which are knowledge repositories used specifically for the explication, storage and retrieval of business best practices and in making lessons learned available to others; c) expert networks, which are networks of individuals identified as experts and electronically accessible by others who have questions related to that expertise; d) communities of practice, which are electronically-enabled networks of self-organizing groups whose members share professional interests.

Lam and Chua (2005) studied the mismanagement of knowledge management and found the key factors to be technological ignorance, technical over-complexity, lack of technical infrastructure scalability (i.e., unable to support the required volume of users) and techno-bias (i.e., believing that technology solved all problems). Abdullah, et al. (2006) extensively evaluated the role of knowledge-based systems in knowledge management and asserted that they had fallen out of favor due to organizational and managerial issues. However, they recommended that it was time to reevaluate the contribution of these systems to knowledge management.

Few new technologies are used by employees who have not received training or support from management (Connelly, & Kelloway, 2003). The researchers cited a study in which employees had no incentives to use a new system; in fact, they were afraid of giving away their expertise to colleagues who might use this knowledge to get promoted instead of them.

There are a wide variety of information technologies that fit within the knowledge management. However, a variety of factors can lead to success or failure of such technology implementations, such as training, management support and culture of the employees.

The literature argues that developments and changes in technologies also require organizational changes to be made in order to ensure the effective use of technology to facilitate knowledge sharing. For example, Hall and Goody (2007) argued that it is not enough to install new technological hardware as the organizations must also address the social contexts of the implementation as well as the use of the technology. These contexts include cultural issues in terms of the implementation of technology and the adaptation of the organization's processes. Developments in communication technology have also helped to break down physical barriers and have facilitated communication between people from different cultural backgrounds. This was the conclusion from Craig and Douglas's (2005) work in analyzing literature from different perspectives of culture-related communication. In addition, developments in CMC (computer mediated communication) (Handzic and Lee, 2005), such as Web 2.0, have facilitated communication and knowledge sharing in organizations as it is much more dynamic internet computing where people in an organization can connect their ideas and can increase the content development (Levy, 2007).

The main barriers to the implementation and use of technology in knowledge-sharing processes in an organization may include an unwillingness on the part of employees to use these applications because of the following reasons: a mismatch between the technology and the needs or requirements of employees; unrealistic expectations of the technology; lack of technical support for immediate maintenance; a lack of training to ensure familiarity with new IT systems; difficulties in building, integrating and modifying technology-based systems; and poor design and usability (Riege, 2005; Smith and Mackeen, 2005). From a motivational point of view, technology is the last and least important motivator for knowledge sharing (Smith and McKeen, 2005). Instead, there is an emphasis on issues concerning organizational culture as the main motivators for knowledge sharing while technology is presented as a facilitating tool (Cross and Baird, 2000; Hall, 2006).

### 2.1.6 Techniques for Promoting Knowledge Sharing

(Cross, Parker, Prusak, & Borgatti , 2001) proposed mapping knowledge flows across the various boundaries in an organization to yield critical insights into where management should target efforts to promote collaboration. Four relational qualities were found to promote effective knowledge sharing. Knowing what someone else knows (knowledge) is a precursor to seeking out a specific person when faced with a problem for which a solution is needed. However, knowing to whom to turn is only useful if one can gain access to that person in a timely manner. Access is influenced by the closeness of one's relationship as well as physical proximity, organizational design and use of collaborative technology. Once access is made available, knowledge can only be shared if the expert understands the problem as experienced by the person seeking assistance (engagement). At this point, the expert can shape his or her knowledge to help solve the problem at hand. Finally, the safety of the

person seeking knowledge is of utmost concern. Being able to admit a lack of knowledge and seek out assistance results in creativity and learning.

Cross et al. (2001) found it particularly important to identify points of knowledge creation and sharing that held strategic relevance. Example domains that might yield this sort of benefit included: senior management networks, collaborative initiatives, and communities of practice. Communities of Practice are a common knowledge sharing or transfer technique. In a Community of Practice, groups of individuals share knowledge about a common work practice over a period of time, although they are not part of a formally constituted work team. Communities of Practice often cut across traditional organizational boundaries. The purpose of this organizational structure is to enable individuals to acquire new knowledge more quickly. Jakobson (2008) documented the use of Communities of Practice at the Des Moines-based Weitz Company. Weitz implemented Communities of Practice as a way of enabling its workforce, which exhibited a wide diversity in ages, to collaborate more effectively. Weitz invested in its employees through a variety of methods, including job rotation, shadowing programs, executive internships and mentoring.

However, older Weitz employees were suspicious that the mentoring program was designed to drain their experience before terminating them. To counter this negative feeling about mentoring, Weitz created Communities of Practice in which junior and senior employees came together to share best practices; thus, the senior employees were not just offloading knowledge.

Widen-Wulff and Suomi (2007) developed a framework for creating an organization-wide knowledge sharing information culture, which included sources, organizational learning and business process re-engineering. They stated that the organization

needed to provide basic resources like technology. Once the resources were made available, the organization must ensure that the basic resources were turned into a competence, i.e., employees knew how to exploit these resources. Most importantly, it was imperative to recognize that an organization's workforce was more than merely a collection of expert individuals. These experts had to sharpen their skills to adapt and distribute their expertise through official and unofficial networks. Thus, the authors suggested that effective knowledge sharing be rewarded.

### 2.1.7 Characteristics of Academic Knowledge in Higher Education

The academic staff could be said to be the most important representatives of their institution as they are responsible for the production, creation and distribution of knowledge (Maponya, 2005; Kim and Ju, 2008). There are a number of obligations required of academic staff in any academic institution, depending on the nature and work of their institute. However, the three main obligations are: to teach students, to conduct research and to provide services relating to their discipline ( Ratcliffe-Martin, 2000; Kim and Ju, 2008). Academic staffs produce a huge amount of instructional material that are reserved by the academic themselves or reserved in their institutional libraries and their repositories concerning their particular subject or discipline. Course materials and the professional experience of staff can also result in producing a relevant and meaningful curriculum and effective teaching skills (Petrides and Nodine, 2003; Kim and Ju, 2008).

Academic knowledge can be divided into two main types: tacit and explicit. Tacit knowledge is intangible and is embedded in the professional experiences of learning, teaching, in practical and technical academic skills. Explicit knowledge is the documented reports of the teaching outcomes or designs, research reports or theories, and teaching manuals and policies. These types of knowledge are

considered to be a special kind of knowledge and represent the professional intellect (Quinn et al., 1996).

The professional intellect, such as academic knowledge, can be considered a special form of knowledge as Quinn et al., (1996) stated. According to their theoretical reasoning concerning professional work, the professional intellect of an organization operates on four levels. These are presented below:

- Cognitive knowledge (know-what): the basic mastery of a discipline that professionals achieve though extensive training and certification.
- Advanced skills (know-how): related to the ability to apply the rules of a discipline to complex real-world problems. This is the most widespread,value-creating level of professional skills.
- System understanding (know-why): a deep knowledge of the web of cause and- effect relationships underlying a discipline, as expressed in a highly trained institution.
- Self-motivated creativity (care-why): the will, motivation and adaptability for success. The care-why enables cognitive knowledge to be renewed and offers an understanding of the advanced skills and systems needed to compete in the rapidly changing knowledge context.

These four levels are embedded in the professional mind. However, the last one may be more strongly emphasized in the culture of the organization (Quinn et al. 1996).
These levels and types of tacit and explicit knowledge are considered in this research as they are more applicable to the higher education context of professional intellects.

For organizations that are adopting any knowledge-based strategies, it is important to know how the growing collective knowledge that is embedded in organizations (i. e. of know what, know who, know why, know how, know when and where, and care why) is created, captured, codified, disseminated and shared among individuals and groups to ensure the success of any knowledge initiative. This is because successful knowledge-based strategies can benefit an organization by enabling employees to learn faster, thus saving the organization cost while allowing it to increase its competitive knowledge and ability (Whitehill, 1997). Furthermore, since academic knowledge can be transformed and shared in many ways and through many processes, both the level of knowledge of Quinn et al., (1996) and Nonaka and Tackeuchi's (1995) conversion mode of knowledge were adopted by the researcher to illustrate the academic type of knowledge. These are presented below:

- Socialization: the process of sharing direct (know-what) cognitive knowledge of the basic mastery of a discipline that professionals achieve through seminars, discussions, brainstorming, training and informal meetings between two or more professionals in the discipline or across disciplines.
- Externalization: the process of sharing advanced skills (know-how) that offers the ability to transform the cognitive knowledge of academics into a codifying mode so that their experiences and skills are on paper or in an electronic format. This can then be shared through technological channels to create knowledge for others.
- Combination: the process of understanding (know-why) the deep knowledge of a discipline. This involves combining explicit academic knowledge through a collection of telephone conversations, meetings and other forms of documentation relating to the discipline to create more complex knowledge

which is then codified and stored to create new knowledge; this can be shared with others using technology.

- Internalization: the process of self-motivated creativity (care-why). This can be seen as the will and motivation involved in acquiring relevant explicit knowledge from professionals in a discipline or from the organizational base. This may be by way of the academic libraries or through other relevant sources of knowledge in the organization and enables the creation of new tacit knowledge. If this valuable knowledge and information could be shared effectively among different disciplines or colleges, then staff could develop their academic knowledge and experience, thus offering high quality training courses by providing combined high standard materials and effective teaching outcomes.

### 2.1.8 Knowledge Sharing In Higher Education

Knowledge management and knowledge sharing in the business sector has been extensively discussed by many academics and researchers (Sayed Ikhsan, 2005). However, few studies can be found in the literature concerning higher education institutions, as Dayson (2004) and Yeh (2005) stated. New trends in knowledge management, such as the recent increased use and value of both tacit and explicit knowledge, the expanding use of knowledge management and sharing strategies to enhance innovation, and the convergence of knowledge management with business, have encouraged organizations to consider how to use their knowledge assets more efficiently and effectively (Davenport and Prusak, 1998). The new trends that were developed in many organizations, and the expansion and development of ICT, have helped in moving towards a knowledge age since knowledge can be available to everyone through technology (Drucker, 2002). Academic institutions have also

adopted knowledge management strategies to promote knowledge as the business of their institutions. Some projects have been implemented in many universities to make an effective use of their information assets such as the University of Leeds in the United Kingdom that developed its own knowledge management tool called the Virtual Science Park (Ratcliffe Martin et al., 2000), the Knowledge Bank at Ohio State University libraries in the United States of America (Branin, 2003), and Robert Gorden University which established a centre for knowledge management (McManus and Loughridge, 2002). The projects above were developed to manage their explicit knowledge to be shared with the academic community as they had more emphases on collaboration between librarians or knowledge managers and the academic staff. The other main goals of applying knowledge management and sharing strategies in higher education institutions is to increase the quality and efficiency of the learning processes, and of research and curriculum development (Kidwell et al., 2000; Petrides and Nodine, 2003; Biloslavo and Tmavcevic, 2007). In order to achieve such goals, the implementation of knowledge management initiatives has become vital (Biloslavo and Tmavcevic, 2007).

A knowledge based strategy offers sustainable development in the light of increased competition among higher education institutions everywhere, especially within developing countries (George, 2006). Therefore, both tacit and explicit knowledge has become an essential asset for all organizations and this has put pressure in recent years on higher education institutions to move forward with the new concept of knowledge management because such institutions are involved with knowledge creation, dissemination and learning. This was mentioned by both Rowley (2000) and Metaxiotis and Psarras (2003).

One of the most important characteristics of any higher education institution is its tacit assets, such as its best practices, teaching procedures and rules. Maponya (2005) stressed that there is a need for academic staff to value the collective knowledge of academics. She argued that: "there is a need to recognize and value the collective knowledge that exists within the parent institution in order to improve teaching and learning, research, and scholarship". Furthermore, higher education institutes need to improve their teaching and research in order to satisfy the sponsors of their activities, as well as to attract potentially high-level students (Ngulube, 2005). According to Rowley (2000), "a methodology for assigning values to knowledge assets will need to be developed as this process will have two valuable outcomes":

- An enhanced and shared understanding of the role of knowledge in the institution.
- The opportunity to monitor the increases and decreases in the knowledge assets embedded in the organization" (Rowley, 2000).

Maponya (2005) also offered suggestions concerning how higher education institutions could foster knowledge sharing. These were as follows: Knowledge sharing should be grounded in the existing social interactions of the activities of the higher education institutions. It is important to bring academics together through regular seminar sessions, which can provide an opportunity for academics to share their teaching and learning experiences. Inter-department and inter-disciplinary collaboration should be established and a knowledge-sharing platform is essential. The institutional base must be made available to all members of the academic institution (Maponya, 2005). The suggestions that were presented by Maponya (2005) can be more effective if the management encourages and supports

knowledge sharing in variety of ways, such as by adding knowledge sharing to the academic job description, and/or by creating incentives and rewards in every department for those who share their knowledge. Such initiatives would encourage academic staff to share by recognizing their inner motives.

### 2.2 Researches into Knowledge Sharing

There is a lack of in-depth research into investigating those cultural factors that can influence individuals in higher education to share their knowledge although some previous studies have examined different aspects of knowledge sharing. Most of these studies focus on the business sectors (banks), Hospital and industry. However, Higher Education Institutions in particular have not obtained much enough attention (Lee, 2009) and there are limited studies:

- Jaroslava Mikulecka and Peter Mikulecky (2000) in their thesis “University Knowledge Management – Issues and Prospects” concluded that a university environment seems to be by its nature especially suitable for the application of knowledge management principles and methods. In this paper they are trying to present a couple of arguments in favor of this opinion, as well as to present some recent activities leading to a decision support through knowledge management in various situations at a university.
- Peoria and Illinois (2003) in their research paper “Knowledge Sharing” suggested that a corporate university’s knowledge sharing mission was to provide efficient, reliable, and easy access to knowledge and to enable collaboration across the value chain for the purpose of improving performance. Bringing the existing, internally developed knowledge sharing tool into the corporate university was a strategic decision. Use of the tool quickly spread to other functional areas of the corporation, as well as through the value chain.

- Van den Hooff, B. and De Ridder, J. A. (2004) in their research paper “Knowledge Sharing in Context: The Influence of Organizational Commitment, Communication Climate and CMC (computer mediated communication) Use on Knowledge Sharing” concluded that individuals share what they have learned and transferred, what they knew to those who have the collective interest and who have found the knowledge useful. The sharing process consists of collecting, organizing and conversing knowledge from one to another.
- Muller, R.M., Spiliopoulou, M. and Lenz, Hans J. (2005) in their research paper “ The Influence of Incentives and Culture on Knowledge Sharing” suggested that there are two non-exclusive ways of knowledge sharing, i.e. closed-network sharing (person-to-person sharing) and open-network sharing (sharing through a central open repository). In the closed sharing model, individual has the freedom to decide the mode of sharing and choose partners to share his or her knowledge. This type of interaction allows more personal touch and more directed sharing is expected.
- Yang, J. (2007) in his research paper “The Impact of Knowledge Sharing on Organizational Learning and Effectiveness” suggested that the sharing process involves more than just collecting data and information, generally, the value of knowledge expanded when it is shared. Therefore, if managed properly, knowledge sharing can greatly improve work-quality and decision- making skills, problem solving efficiency as well as competency that will benefit the organization at large.

The literature reveals that so many studies have been so far conducted on knowledge sharing in different organizations. But no study has been so far conducted till date on knowledge sharing in Addis Ababa TVET colleges. Therefore to fill up the research gap I have chosen to take up the study on Knowledge sharing in TVET situated in Addis Ababa.

# Chapter Three: Findings and Discussions

## 3.1 Findings and Discussions

The quantitative and qualitative data that were gathered from the research methods were analysed separately in different stages as the quantitative data were analysed first, followed by an analysis of the qualitative data. The quantitative data were gathered through the questionnaires and these were analysed using SPSS software version 20. The quantitative data analysis that was used in this research included a range of descriptive analysis to describe respondents' characteristics; statistical techniques, such as cross-tabulation and the chi-square test, were also used to explore relationships among different variables. The questionnaire was designed to explore the perceptions of academic staff and identify any influences of organizational culture on their perceptions of knowledge sharing and their practices in TVET college. A considerable amount of qualitative data were collected from the interviews. In this study the researcher employed narrative or thematic data analysis method; because the researcher can interpret data that has been gathered and determine what will be a useful variable in this qualitative data analysis. The quantitative and qualitative analyses and discussions are presented below.

### 3.1.1 Respondants' profile

In this section, information is provided on the profile of the academic staff who participated in this study. The personal background of academic staff was sought in the first part of the questionnaire and included the following: gender, academic sector, years of employment, and type of the college (Public or private).

#### 3.1.1.1 Sectors of Academic Staff

The survey covered academic staff in TVET's six colleges. The majority, 37 out of 203 (18%), of the academic staff surveyed were from the sector of construction , the

largest Sector in TVET while the smallest group of academic staff, 8 out of 203 (%), were from the Sector of Business. See Figure 3.1. for details. Of the survey respondents, 27% were females and 73% males.

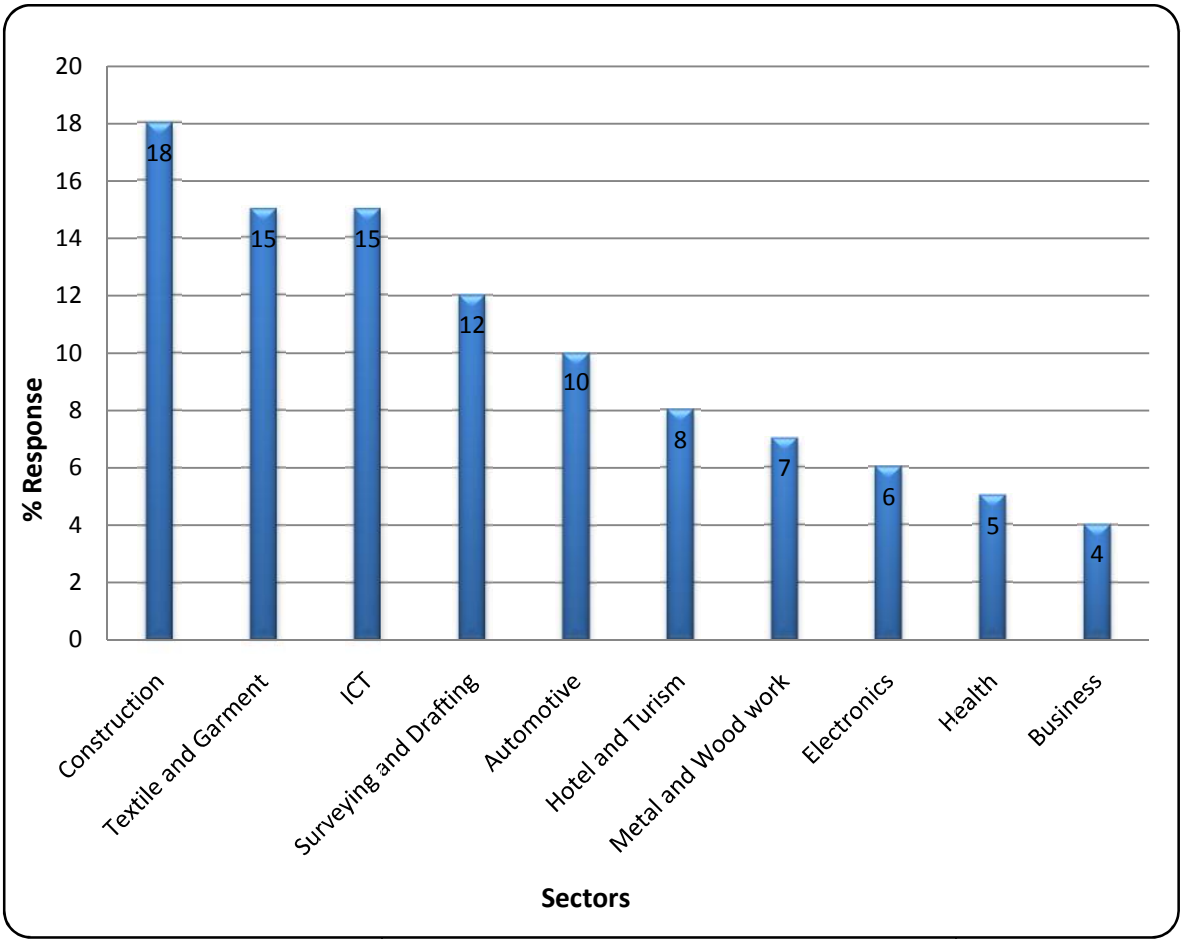


Figure 3.1: Sectors of Academic staff (N=203)

### 3.1.1.2 College types (Private/ public)

Table 3.1 shows the college type of the academic staff that took part in the survey and revealed that just over two third of the survey sample were public colleges, while almost a one third were private college academic staff.

| | | College type | | Total (N) |
|---|---|---|---|---|
| | | Public | Private | |
| **Sectors** | Construction | 29 (78%) | 8 (22%) | 37 |
| | Textile and Garment | 26 (84%) | 5 (16%) | 31 |
| | ICT | 16 (52%) | 15 (48%) | 31 |
| | Surveying and Drafting | 20(83%) | 4(17%) | 24 |
| | Automotive | 12 (60%) | 8(40%) | 20 |
| | Hotel and Turism | 10 (63%) | 6(38%) | 16 |
| | Metal and Wood work | 11 (79%) | 3(21%) | 14 |
| | Electronics | 8 (67%) | 4(33%) | 12 |
| | Health | 0 (0%) | 10(100%) | 10 |
| | Business | 0 (0%) | 8(100%) | 8 |
| **Total** | | **132 (65%)** | **71 (35%)** | **203 (100%)** |

Table 3.1: Surveyed Academic staff (N=203)

#### 3.1.1.3 Education

Academic staff were asked to indicate the highest level of qualification they had completed. The BSC qualification was both the mode and the median of the qualifications completed; this had been attained by 66.6% of the respondents.

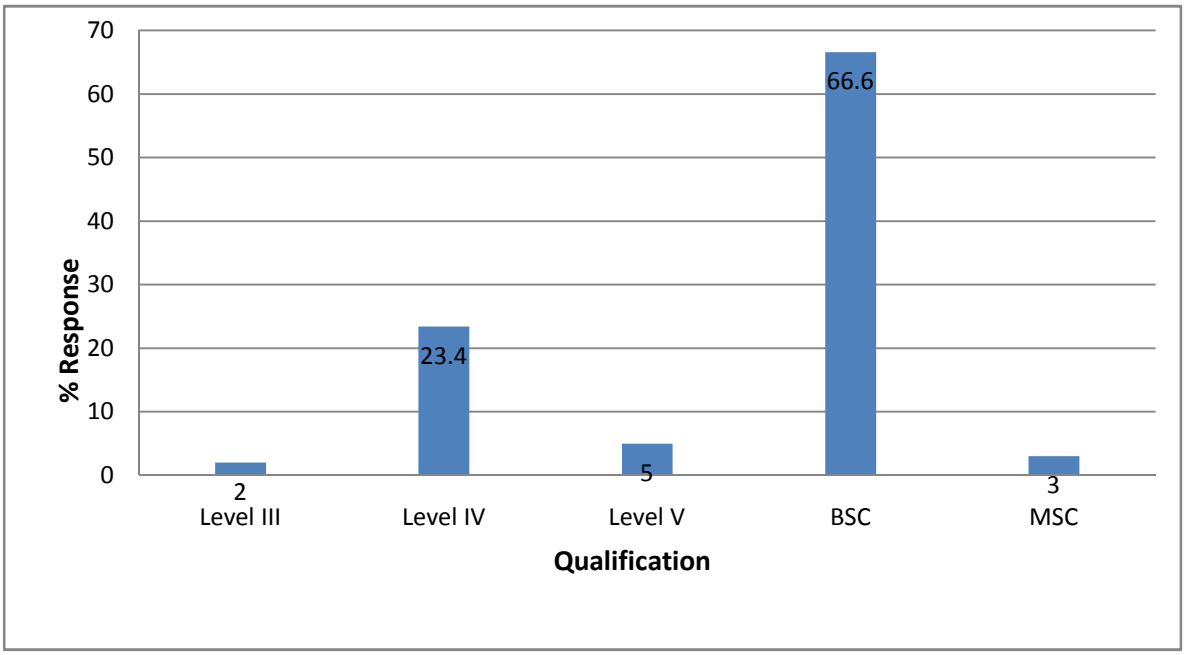


Figure 3.2: Educational Attainment of the Academic Staff (N= 203)

#### 3.1.1.4 Academic Experience

From the survey respondents 61 out of 203 (29.5%) of the sample had less than 3 years of experience, which was also the average length of experience. The lowest level of work experience was greater than 15 years, which accounted for 4 out of 203 (2%) responses.

### 3.2 Perception, Opinions and Attitudes towards Knowledge Sharing

The perceptions, opinions and attitudes of academic staff towards knowledge sharing practices were crucial to understand the current situation of knowledge sharing in A.A TVET. This information helped the researcher to develop a suitable strategy for a more efficient and effective knowledge sharing culture that suits A.A TVET colleges.

### 3.2.1 Importance of Knowledge Sharing

Academic staffs were asked to indicate whether they had ever heard of the concept of knowledge sharing. The vast majority of them, 143 out of 203 (70.8%), indicated that they had heard of it while only 21 (10.3%) indicated that they had never heard of knowledge sharing. Of the survey respondents 38 (18.8%) indicated that they were "not sure" whether they had heard about this concept

The majority of respondents showed strong opinions when asked to consider the idea that "knowledge is power". Majority of respondents, 195 out of 203 (96%), of the sample strongly agreed or agreed that knowledge sharing is power, while 5 out of 203 (2.4 %) had a negative attitude (strongly disagreed or disagreed) towards this concept, and 3 (1.6%) were neutral. No significant differences were indicated in terms of the responses from different college types and Sectors of training in that the p-value was more than 0.05 for those responses. (CollegeType: x2=3.213; df=4; p=0.523 and Sector: x2=2.423; df= 4; p=0.658).

The vast majority of the academic staff, 185 out of 203 (91.8%), strongly agreed or agreed with the idea that sharing their knowledge with other academic staff was important. Only 5 (2.6%) of the sample had negative attitudes towards the importance of knowledge sharing. No significant differences were found in the responses of the different college types and Sector of training in that the p-value was more than 0.05 for those responses (CollegeType: x2=2.898; df=4; p=0.575 and Sector: x2=1.577; df=4 ).

When the respondents were asked whether or not academic staff should share knowledge and best practices, the vast majority of the academic staff, 188 out of 203 (92.8%), strongly agreed or agreed that academic staff should share knowledge and

best practices; only 7 (2.8%) strongly disagreed or disagreed, and 9 (4.4%) were neutral. No significant differences were indicated in the responses of the different sectors or in terms of college type and gender in that the p-value was more than 0.05 for those responses (CollegeType: x2=3.305; df=4; p=0.508).

Academic staff also showed a strong positive attitude towards the idea that "knowledge sharing would help your college to be competitive with other TVET colleges in A.A". Majority of respondants,190 out of 203 (93.7%), agreed or strongly agreed with this while only 9 (4.4%) disagreed or strongly disagreed and 4 (1.9%) were neutral ( mean = 4.38, Std Deviation = .761). No significant differences were indicated in the responses of the different Sectors or in terms of college type and gender in that the p_value was more than 0.05 for those responses (sectors: x2=16.672; df=16; p=0.407; CollegeType: x2=3.133; df=4; p=0.536 ; gender: x2=3.688; df=4; p=0.450).

| Statement | Mean | Median | Std. Error of Mean | Std. Deviation |
|---|---|---|---|---|
| Have you ever heard about knowledge sharing? | 2.9= Yes | 3=Yes | 0.011 | 0.612 |
| Knowledge is power. | 4.19 = Agree | 4= Agree | 0.039 | 0.549 |
| It is important to share my knowledge with other academic staff | 4.07=Agree | 4=Agree | 0.67 | 0.954 |
| Academic staff should share their knowledge and best practices | 4.27= Agree | 4=Agree | 0.045 | 0.645 |
| Knowledge sharing helps the college to stay competitive with other colleges in A.A | 4.42= Agree | 4=Agree | 0.54 | 0.769 |

Table: 3.2 Descriptive Statistics in Importance of knowledge sharing

### 3.2.2 Trust

The role of trust in knowledge sharing is explored in several statements in the research questionnaire. When the respondents were asked whether or not they trust the people that they need to share knowledge with, the majority of academic staff,

158 out of 203 (78.1%), agreed or strongly agreed with this statement while only 23 (11.6%) of the academic staff disagreed or strongly disagreed with the statement. No significant differences were indicated in the responses in terms of gender as the alpha level was more than 0.05 (x2=32.506, df=20, p=0.714).

Analysis was carried out using cross-tabulations between endorsements of the statement on trust and knowledge sharing and the respondents' profile variable College type (Public /Private). The results showed that 88.2% of public college academic staff trusted the people that they need to share their knowledge with compared to 74.6% of private academic staff. The analysis also suggested that private academic staff were more likely to endorse the statement of not trusting the people that they need to share the knowledge with (12%), compared to public academic staff (10.5%). The chi-square test showed that there was a statistically significant difference between type of the college and not trusting the people to share knowledge with (x2=20.016, df=4, p=0.000).

The results of this study reveal that sector of health, which is the smallest sector in TVET, had the highest rates of approval of trusting the people that they need to share their knowledge (92.3%), compared to the sector of Information Technology (88.3%), the sector of construction (88%), the sector Surveying and Drafting (81.2%), Sector of metal and woodwork(79.6%), the sector of textile and Garment (76.3%), the sector of automotive (71.8%), the sector of Hotel and tourism (70.4%) , Sector of Electronics (68.1%) and the sector of Business(64%).

The chi-square test showed that there was a statistically significant relationship between the statement and the level of endorsement of the different sectors (x2=50.754, df=16, p=0.000).

When the respondents were asked if they trust their college members more than others in knowledge sharing, just over a half of the academic staff, 101 out of 203 (49.7%), agreed or strongly agreed with the statement: " Academic staff from the same department trust each other more than others." About a third, 67 (33.3%), of the academic staff who disagreed or strongly disagreed with this statement and 35 (17%) were neutral in their views concerning this issue. No significant differences were indicated in the responses of the different sectors that the p-value was more than 0.05 for those responses (sectors: x2=24.752; df=4; p=0.074).

| Statement | Mean | Median | Std. Error of Mean | Std.Deviation |
|---|---|---|---|---|
| I trust the people that I need to share my knowledge with. | 3.98= Agree | 4=Agree | 0.021 | 0.712 |
| Academic staffs from the same college trust each other more than others. | 4.19 = Agree | 4= Agree | 0.039 | 0.549 |

Table: 3.3 **Descriptive Statistics** in knowledge sharing trust of academic staff

### 3.2.3 Willingness

The individual's willingness to share knowledge is explored in this section. It was found that the vast majority of academic staff (190 out of 203 or 93.5%) agreed or strongly agreed that they were willing to share their knowledge with others, while only 7 (3.4%) who disagreed or strongly disagreed and 6 (3.1 %) remained neutral (Mean = 4.21, Std Deviation=.701). No significant differences were indicated in the responses in terms of college type since the p-value was more than 0.05 for those responses (CollegeType: $x^2$=4.926; df=4; p=0.295).

All 10 (100%) respondents from the sector of Health endorsed a willingness to share their knowledge with others compared to the respondents from the other nine sectors in TVET (Sector of construction 93.7%, sector of Surveying and Drafting 92.2%, sector of automotive 93.2%, Sector of Hotel and tourism 92%, Sector of Electronics

87.6%, Sector of textile and Garment 91.4%, Sector ICT 78%, Sector of metal and woodwork (87.9%) and sector of business 83.4%).

The chi-square test showed that this relationship was statistically significant as the alpha value was less than 0.05 (x2=40.994 df=16, p=0.001).

When the respondents were asked to express their opinions as to their willingness to share their knowledge with other academic staff from the same College, the vast majority of academic staff, 181 out of 203 (89.3%), agreed or strongly agreed that they were willing to share knowledge with academic staff of the same college compared with only 12 (6.0%) who disagreed or strongly disagreed. 9 (4.7%) were neutral (Mean = 4.20, Std Deviation=.851). No significant differences were indicated in the responses in terms of different sector since the p-value was more than 0.05 for those responses (sectors: x2=22.968; df=16; p=0.115).

When the respondents were asked about their willingness to ask a knowledge questions in informal social situations, 138 out of 203 (65.2%), of academic staff said they were willing to ask question in informal social activities, while 44 (21.7%) said they were unwilling to ask and 27 (13.2%) were neutral. No significant differences were indicated in the responses by sector and the statement as the alpha level was more than 0.05 (sectors: x2=4.482, df=4, p=0.345).

| Statement | Mean | Median | Std. Error of Mean | Std. Deviation |
|---|---|---|---|---|
| I am willing to share my knowledge with others | 4.28= Agree | 4=Agree | 0.011 | 0.811 |
| I am willing to share knowledge with other academic staff from the same College | 4.20 = Agree | 4= Agree | 0.036 | 0.851 |
| I am willing to ask questions in informal social activities | 4.11 | 4=Agree | 0.021 | 0.761 |

Table: 3.4 **Descriptive Statistics** in knowledge sharing willingness of academic staff

### 3.2.4 Solving Problems

Academic staff were asked whether they preferred to resolve work related problems by themselves without seeking help from others. Just over a quarter, 54 out of 203 (26.6%), supported this statement compared with 134 (65.9%) who strongly disagreed or disagreed.

A chi-square test was conducted for the statement 'I prefer to resolve work related problems by myself without seeking help from others' and other independent variables (CollegType, sector and gender). The chi-square analysis revealed that there was just one statistically significant difference between the college type of academic staff (CollegeType: x2=11.973, df=4, p=0.018) as the other independent variables were more than the alpha level (Sectors: x2=19.266; df=16; p=0.255- and gender: x2=7.042; df=4; p=0.134).

The public were more likely to prefer to resolve work related problems by themselves (38.1%), compared to private who were in agreement with the statement (23.3%).

| Statement | Mean | Median | Std. Error of Mean | Std. Deviation |
|---|---|---|---|---|
| I prefer to resolve work related problem by me without seeking help from others. | 2.18= Agree | 2=Disagree | 0.001 | 0.611 |

Table: 3.5 **Descriptive Statistics** in solving problems

### 3.2.5 Administrative issues

When the respondents were asked if the administration had an influence on knowledge sharing in their instructions, the vast majority of academic staff agreed or strongly agreed (76.5%) that the administer has an influence on knowledge sharing practices in their instructions and only (10.4%) of the academic staff disagreed or strongly disagreed, while (13.2%) were neutral (N=203).

When further analysis was conducted on responses to the statement above and the respondents' college type, it was found that private academic staff were more likely to agree or strongly agree with the statement (78.7%), compared to public academic staff (69.7%). However, the chi-square suggested that the results were not statistically significant as the alpha level was more than 0.05 ($x^2$=7.419; df=4; p=0.115).

Academic staff responses to "The A.A TVET Agency has an influence on organizational culture" showed that (73.4%) agreed or strongly agreed with that statement and 44 (13.8%) disagreed or strongly disagreed, while 41(12.9%) remained neutral. (N=203, mean= 3.81). In terms of respondents' college type, 77.5% of public academic staffs were more likely to endorse the idea that the agency influences their organizational culture by agreeing or strongly agreeing with the statement compared to 59.2% of private academic staff, while 30.3% of private academic staff disagreed or strongly disagreed with the statement compared to 8.7% of public academic staff. These differences were found to be statistically significant as the alpha level was less than 0.05 ($x^2$=31.008; df=4; p=0.001), (N=203).

An investigation of responses to the same statement by TVET sectors showed that respondents from sector of Business were the most likely to agree or strongly agree (91.9%) with the influence of the agency on their organizational culture compared to other colleges (sector of Information Technology (82%), sector of Surveying and Drafting (71%), Sector of metal and woodwork (69.4%), sector of textile and Garment (76.4%), sector of automotive (70.8%), sector of Hotel and tourism (86.5%), Sector of Electronics (77.1%) and the sector of construction (87.2%) ).

The chi-square analysis suggested that the alpha value was less than 0.05 which means that there was a statistically significant difference between the different

sectors and the endorsements of this statement (sectors: x2=32.839; df=16; p=0.008), (N=203).

| Statement | Mean | Median | Std. Error of Mean | Std. Deviation |
|---|---|---|---|---|
| The administration has an influence on knowledge sharing through their instructions | 4.11= Agree | 4=Agree | 0.031 | 0.611 |
| The A.A TVET Agency has an influence on knowledge sharing culture | 3.81 = Agree | 4= Agree | 0.026 | 0.761 |

Table: 3.6 Descriptive Statistics in administrative issues

### 3.3 Preferred Knowledge Sharing Communication Methods

Communication plays an important role in knowledge sharing whether through face to-face interaction or through technology. Therefore, academic staff were asked to rate their preferred methods of knowledge sharing to help set a suitable strategy or system that would enhance the knowledge sharing in A.A TVETs.

#### 3.3.1 E-mail Communications

Almost three quarters of academic staff (74%) preferred e-mail-communication. Just over one third (34.2%) rated it as the most preferred method of communication for knowledge sharing while only 3.1% of the academic staff rated e-mail communication as the least preferred method (mean=3.91, N=203).

With regard to respondents' college type (private/public), the results showed that 84.1% of Public academic staff rated e-mail communication as their most preferred method, compared to 70.8% private academic staff who rated it as their most preferred. The chi-square test suggested that the difference was statistically significant as the alpha level was less than 0.05 (collegeType: x2=25.284, df=6, p=0.000), (N=203).

Respondents from the sector of Construction had the lowest preference (61.6%) for email communication compared to other Sectors: the sector of Information Technology (91.9%), sector of Surveying and Drafting (71%), Sector of metal and woodwork (69.4%), sector of textile and Garment (76.4%), sector of automotive (70.8%), sector of Hotel and tourism (86.5%), Sector of Electronics (77.1%) and the sector of Business (87.2%).

### 3.3.2 Social network

When the respondents were asked to rate their preference for social network communication system (like face book or twitter) for sharing knowledge, the results showed that 62 (30.7%) of the respondents ranked this as their preferred system of communication for sharing knowledge while 30 (14.7%) rated it as their least preferred. It also showed that 130 (64.2%) of academic respondents rated (4 and 5) in favor of social network and 62 (30.7%) rated (1 and 2) less preferable (N=203).

When looking at the preference of social network and the respondents' college type, it was found that private college academic staff (68.7%) were more in favor of social network as communication tool than public college academic staff (51.4%). Analysis of these results suggested a statistically significant difference in preference for social network by Type of the college (Private/Public) at less than 0.05 level ($x^2$=18.604, df=6, p=0.005), (N=203).

In terms of respondents' preferences across the TVET Sectors, 84.6% of the respondents Sector of ICT rated social network as their most favored method of communication, compared to the sector of Surveying and Drafting (71%), Sector of metal and woodwork (69.4%), sector of textile and Garment (76.4%), sector of automotive (70.8%), sector of Hotel and tourism (86.5%), Sector of Electronics (77.1%) and the sector of Business (87.2%).

Analysis showed that there was a statistically significant difference in preference for social network communication across the sectors (x2=70.012, df=24, p=0.000), (N=203).

### 3.3.3 Telephone Communication

The majority, 129 out of 203 (63.7%), of the academic staff endorsed higher levels of Preference for phone communication (4 and 5) and 80 (25%) had lower preference (1 and 2), while 36 (11%) endorsed a mid range of preference (N=203).

Analysis by cross-tabulation revealed that public college academic staffs were more likely (67.1%) to prefer phone communication for knowledge sharing than Private College academic staff (52.7%). The analysis also showed that 36.8% of Private college staff rated this as their least preferred form of communication, compared to Public college academic staff (19.9%). The chi-square test suggested that these differences in preference were statistically significant (CollegeType: x2 =21.818, df=6, p=0.001), (N=203).

A significant difference in preference was found across the sectors of TVET, as the alpha value was less than 0.05 ($x^2$=44.272, df=24, p=0.007). Majority of respondents ,84.7%, from Sector of Health were the highest to rate phone communication as their most preferred method compared to the sector of Business (80.2%), the sector of Surveying and Drafting (75.7%), the Sector of metal and woodwork (68.1%), the sector of textile and Garment (61.8%), the sector of automotive (60.8.8%), sector of Hotel and tourism (60.5%), Sector of Electronics (58.1%), and the sector of ICT (56%).

### 3.3.4 Communication in Writing

Almost half of the respondents (101 out of 203, 49.9%) rated written communication as their least preferred method for knowledge sharing (1 and 2 rate) while over one

third of the respondents 72 (35.5%) rated it as their most preferred (4 and 5 rate) and only 29 (14.7%) rated it in the mid range of preference.

Female respondents were more in favor of communicating in writing (46.5%) compared to male academic staff (29.9%). 23.7% of male academic staff rated this method as their least preferred method of communication compared to only 7.3% female academic staff who rated it as their least preferred. The chi-square test suggested that those differences were statistically significant as the p-value was less than 0.05 ($x^2$=26.076, df=6, p=0.000). 31.6% of Private college respondents rated this method as their least preferred method, compared to 14.2% of public academic staff who rated it as their least preferred method. In general, the total most preferable (4,5 ) of both private and public academic staffs for this method were similar with 35.8% of private and 35.6% of public who rated this as their most preferred method of communication.

The least significant difference that was shown in terms of preference for communication in writing was across ten training sectors of TVET. The sector of Health (75.7%) was the most likely to favor communication in writing compared to other sectors: the sector of Surveying and Drafting (69.2%), the Sector of metal and woodwork (68.1%), the sector of textile and Garment (61.8%), the sector of automotive (60.8.8%), sector of Hotel and tourism (60.5%), Sector of Electronics (58.1%), and the sector of ICT (56%).

| Statement | Mean | Median | Std. Error of Mean | Std. Deviation |
|---|---|---|---|---|
| E-mail | 3.91= Agree | 4=Agree | 0.031 | 0.412 |
| Social network | 3.59 = Agree | 4= Agree | 0.059 | 0.349 |
| Telephone Communication | 3.87=Agree | 4=Agree | 0.067 | 0.754 |
| in Writing | 2.47= Disagree | 2= Disagree | 0.145 | 0.845 |

Table: 3.7 **Descriptive Statistics** in KS communication methods

### 3.4 Organizational factors

There are a number of factors related to organizational aspects that affect knowledge sharing with others. However, for this study office politics, Time (Heavy workload), IT support and competition were considered. The findings from the survey were summarized from Tables 3.8 below.

| Statement | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|---|---|---|---|---|---|
| Inter institute competition creates a barrier for knowledge sharing. | 12 (5.9%) | 22 (10.8%) | 8(3.9%) | 133(65.5%) | 28(13.7%) |
| Office politics creates a barrier for knowledge sharing. | 18(8.8%) | 16(7.8%) | 6(2.9%) | 139(68.4%) | 24(11.8%( |
| Heavy workload (time constraint) creates a barrier for knowledge sharing. | 32(15.7%) | 46(22.6%) | 8(3.9%) | 99(48.7%) | 18(8.8%) |
| Lack of IT support creates a barrier for knowledge sharing. | 8(3.9%( | 17(8.3%) | 2(0.9%) | 28(13.7%) | 148(72.9%) |

Table: 3.8 Organizational factors

When the respondents were asked whether or not inter institute competition creates a barrier for knowledge sharing, the vast majority of the academic staff, 188 out of 203 (92.8%), strongly agreed or agreed that inter institute competition creates a barrier for knowledge sharing; only 7 (2.8%) strongly disagreed or disagreed, and 9 (4.4%) were neutral. No significant differences were indicated in the responses of the different sectors and in terms of college type in that the p-value was more than 0.05

for those responses (CollegeType: x2=3.305; df=4; p=0.508 and sector: x2=6.186; df=4; p=0.186).

Academic staff also showed a strong positive attitude towards the idea that " office politics creates a barrier for knowledge sharing ". Mojority of respondents, 190 out of 203 (93.7%), agreed or strongly agreed with this while only 9 (4.4%) disagreed or strongly disagreed and 4 (1.9%) were neutral ( mean = 4.38, Std Deviation = . 761). No significant differences were indicated in the responses of the different Sectors and in terms of college type in that the p_value was more than 0.05 for those responses (CollegeType: x2=3.133; df=4; p=0.536 ; sectors: x2=3.688; df=4; p=0.450).

Academic staff responses to "heavy workload (time constraint) creates a barrier for knowledge sharing" showed that (73.4%) agreed or strongly agreed with that statement and 44 (13.8%) disagreed or strongly disagreed, while 41(12.9%) remained neutral. (N=203, mean= 3.81).

The vast majority of the academic staff, 185 out of 203 (91.8%), strongly agreed or agreed on the statement lack of IT support creates a barrier for knowledge sharing. Only 5 (2.6%) of the sample strongly disagree or disagree on the statement "lack of IT support creates a barrier for knowledge sharing". No significant differences were found in the responses of the different Sectors of training and college type in that the p-value was more than 0.05 for those responses (CollegeType: x2=2.898; df=4; p=0.575 and Sector: x2=1.577; df=4 ).

### 3.5 Informal Knowledge Sharing

This part contains the analysis of the questionnaire result focusing on informal knowledge sharing in TVET. There were eight questions which have been analyzed in this section. However, this section will be analyzed into two parts private college

and public college, what private most share and what most public share during informal discussion. The data has been analyzed merely based on the total respondents and demographic factors.

**Estimation of private college academic staffs with whom they Have break time discussion Most Frequently**

| Topic | Options | Frequency | Percentage |
|---|---|---|---|
| break time accompanying persons for private college staffs | Office Colleagues | 34 | 48% |
| | Friends | 29 | 41% |
| | Family | 5 | 7% |
| | Alone | 3 | 4% |

Table 3.9 break time accompanying persons for private college staffs

From the table 3.9 above shown, 48% of private colleges members prefer spent break time with office colleagues, while 41% with friends. However those who spent break time with their family are 7% and 4% of them spent alone. This shows that most of knowledge sharing is shared during break time with office colleagues and friends.

**Estimation of public college academic staffs with whom they Have break time discussion Most Frequently**

| Topic | Options | Frequency | Percentage |
|---|---|---|---|
| break time accompanying persons for public college staffs | Office Colleagues | 63 | 48% |
| | Friends | 63 | 48% |
| | Family | 3 | 2% |
| | Alone | 3 | 2% |

Table 3.10 break time accompanying persons for public college staffs

From the table 3.10 shown above, private college members prefer having informal discussion with office colleagues, and friends are 48%, while those who spent break time with their family are 2% and 2% of them have spent alone. However compared

to Private College staffs, public college staffs also have most of knowledge sharing during break time with office colleagues and friends. From the illustrations and the tables above, it can be concluded that the most significant result on both private and public colleges.

Based on college type overall result for both Public and private college participants spent break time with, 48% spent with office colleagues, 44% spent with friends and the smallest result comes from family and alone.

**How many people do you usually discuss in break time?**

| Topic | Options | Frequency | Percentage |
|---|---|---|---|
| No. of people having discussion with | One | 20 | 10% |
| | Two | 41 | 20% |
| | Three | 61 | 30% |
| | More than three | 81 | 40% |

Table 3.11 Number of people usually discuss in break time

The number of participants each participant has discussion with during knowledge sharing result is shown in Table 3.11 as above. The data shows that 40% of them have discussed with more than three people. However, the rest of the respondents' responses were within a group of three to two people. This shows that staff members prefer to discuss in a group of more than three people where more ideas can be shared with each other to learn new things and so on.

**How are break time conversations more beneficial than conversation with colleagues during office hours?**

| Topic | Options | Frequency | Percentage |
|---|---|---|---|
| break time conversation more beneficial than conversation with office colleagues | Free flow of information | 122 | 60% |
| | More insightful | 12 | 6% |
| | Freedom of thought | 69 | 34% |

Table 3.12 break time conversation benefits compared to office hours

As illustrated in Table 3.12, the benefits obtained during break time conversation for academic staffs during break time are: 60% of them find that having conversation outside office hours allows them to have more free flow of information. For example people feel free to express information's compared to office hours, however 34% of them feel it gives them freedom of thought to speak out more clearly and 6% of them feels it gives them more insightful and more understanding of what goes on inside the organization.

**Do you actively participate in conversation during break time?**

| Topic | Options | Frequency | Percentage |
|---|---|---|---|
| Do you actively participate in conversion during break time | Always | 138 | 68% |
| | Sometimes | 61 | 30% |
| | Rarely | 4 | 2% |

Table 3.13 actively participate in conversation during break time

Based on the topic on actively participate in conversation during break time, 68% of respondents mentioned that they always participate whenever they have break time with their friends or office colleagues. However 30% participates only times and 2% of them rarely participate. This shows that people share their knowledge with their friends or office colleagues where they exchange ideas and thoughts with people whom they have break time with always.

**How often do you gain useful knowledge from conversations during break time?**

| Topic | Options | Frequency | Percentage |
|---|---|---|---|
| How often do you gain useful knowledge from conversation during break time | Always | 46 | 35% |
| | Sometimes | 81 | 61% |
| | Rarely | 5 | 4% |

Table 3.14 Gain useful knowledge from conversation during break time (public college member estimation)

Based on Table 3.14 above, it can be illustrated that most respondents gain useful knowledge sometimes which is 61% of them. However 35% of them always gain useful knowledge when they interact with each other and only 4% shows that either rarely or never that they gain any knowledge.

| Topic | Options | Frequency | Percentage |
|---|---|---|---|
| How often do you gain useful knowledge from conversation during break time | Always | 45 | 63% |
| | Sometimes | 21 | 30% |
| | Rarely | 5 | 7% |

Table 3.15 Gain useful knowledge from conversation during break time (private college member estimation)

Based on Table 3.15 above, it can be illustrated that most Private college respondents gain useful information always are 63% of them. However 30% of them sometimes gain useful information when they interact with each other and only 7% shows that it's rarely that they don't gain any information/knowledge.

This can be concluded by saying compared to public college's respondents; Private respondents gain more useful information while having conversation with their friends or office colleagues. As it shows private college staffs 63% shares every time, while public college staffs are 35%.

**Do you think having break time knowledge sharing strengthens relationships among colleagues in the college?**

| Topic | Options | Frequency | Percentage |
|---|---|---|---|
| Strengthens relationship with colleagues | Always | 49 | 69% |
| | Sometimes | 17 | 24% |
| | Rarely | 5 | 7% |

**Table 3.16 Strengthens relationship among colleagues during break time knowledge sharing (Private College analysis)**

Table 3.16 above shows the views of people, about when break time conversation with office colleagues whether it strengthens relationships. The public college results were comparatively different from private college. It shows that 69% of the Private college members said yes, that it always helps them to build their relationship when they share with office colleagues. Meanwhile 24% says sometimes it helps them and 7% of them says that its rarely that it doesn't help them to strengthen relationships.

| Topic | Options | Frequency | Percentage |
|---|---|---|---|
| Strengthens relationship with colleagues | Always | 98 | 74% |
| | Sometimes | 34 | 26% |
| | Rarely | 0 | 0% |

**Table 3.17 Strengthens relationship among colleagues during break time knowledge sharing (Public College analysis)**

Public college respondents had different views compared to private college. However 74% of Public College members thought that it always help them to strengthen relationship among colleagues during break time conversation compared to Private colleges are 69% of them. Meanwhile, the rest 26% thinks sometimes it helps them and zero percent of them thinks it's rarely.

**Which of the following factors motivates you to share your knowledge during break time?**

| Topic | Options | Frequency | Percentage |
|---|---|---|---|
| Factors motivates to have knowledg sharing during break time | The idea of receiving information | 13 | 19% |
| | The relationship with others | 55 | 78% |
| | Wanting to share information with others | 21 | 30% |
| | Development of new knowledge | 15 | 22% |
| | Increase Knowledge level | 10 | 15% |

**Table 3.18 Factors motivates to have knowledge sharing during break time (Private college members analysis)**

From the Table 3.18 above, it shows that most of the factors which motivate them to have conversation during break time is: 78% thinks the relationship with others is important factor for them, however 30% of them wants to share information with others. Moreover 22% of public college members think it helps to develop new knowledge when sharing with others, 19% of them think the idea of receiving information when their friends or office colleagues talk about different topic as mentioned earlier about office matters, entertainment , politics and so on. While the least 15% of them thinks that having conversation increases their knowledge level.

| Topic | Options | Frequency | Percentage |
|---|---|---|---|
| Factors motivates to have knowledg sharing during break time | The idea of receiving information | 46 | 35% |
| | The relationship with others | 81 | 61% |
| | Wanting to share information with others | 68 | 52% |
| | Development of new knowledge | 57 | 43% |
| | Increase Knowledge level | 17 | 13% |

**Table 3.19 Factors motivates to have knowledge sharing during break time (Public college members analysis)**

From Table 3.19 above, it shows that most of the factors for public college analysis which motivates them to have conversation during break time is 61% who think that the relationship with others is important factor for them, however 52% of them want to share information with others. Moreover 43% of public college members think it helps to develop new knowledge when sharing with others, while 35% of them think the idea of receiving information when their friends or office colleagues talk about different topics. The least 13% of them thinks that having conversation increases their knowledge level.

It can be concluded by saying that more private college members think that relationship is an important factor for them compared to public's percentage. While in

Public college members 52% of them think that sharing information with others is more important to them rather than considering the relationship factor.

### 3.2 Main Findings of the Quantitative Data Analysis

The main outcomes of the analysis are summarized in Tables 3.7 and the main independent variables that were taken in consideration for this study were the Sectors and college type. Age and experience were also analyzed to see if there were any interesting results that could be used in this study. (NS: not statistically significant, Sig.: statistically significant.)

| | | Independent Variables | | | | |
|---|---|---|---|---|---|---|
| **Themes** | **Statement** | **Sector** | **College type** | **Gender** | **Age** | **Experience** |
| Importance of Knowledge Sharing | knowledge sharing is power | NS | NS | NS | Sig. 0.001 40+ | Sig. 0.003 11-15 years |
| | It is important to share my knowledge with other academic staff. | NS | NS | NS | Sig. 0.016 40+ | NS |
| | Academic staff should share their knowledge and best practices. | NS | NS | NS | Sig. 0.000 40+ | Sig. 0.019 3-10 years |
| | knowledge sharing would help your college to be competitive with other TVET colleges in A.A. | NS | NS | NS | NS | NS |
| | | | | | | |
| Trust | I trust the people that I need to share my knowledge with. | Sig. 0.000 Health | Sig. 0.000 public | NS | Sig. 0.038 40+ | Sig. 0.001 0-1 years |
| | Academic staffs from the same college trust each other more than others. | NS | NS | NS | NS | NS |
| | | | | | | |
| Willingness | I am willing to share my knowledge with others | Sig. 0.001 Health | NS | NS | NS | NS |
| | I am willing to share knowledge with other academic staff from the same College | NS | NS | NS | Sig. 0.004 40+ | NS |
| | I am willing to ask questions in informal social activities | Sig. 0.001 Health | Sig. 0.000 Public | Sig. 0.004 Less than 40 | NS | Sig. 0.001 Health 1-5 years |

| | | Independent Variables | | | | |
|---|---|---|---|---|---|---|
| **Themes** | **Statement** | **Sector** | **College Type** | **Gender** | **Age** | **Experience** |
| Solving Problems | I prefer to resolve work related problem by me without seeking help from others. | NS | Sig. 0.018 Public | NS | NS | Sig. 0.034 0-1,1-5 years |
| | | | | | | |
| Administrative issues | The administration has an influence on knowledge sharing through their instructions | NS | NS | NS | NS | NS |
| | The A.A TVET Agency has an influence on knowledge sharing culture | Sig. 0.008 Business | Sig. 0.001 Private | NS | NS | NS |
| Methods of Communication | E-mail | Sig 0.000 ICT | Sig. 0.001 Private | NS | Sig. 0.004 Less than 40 | NS |
| | Social network | Sig 0.000 ICT | Sig 0.003 private | NS | Sig. 0.002 Less than 40 | NS |
| | Telephone Communication | Sig. 0.007 Health | Sig. 0.001 Public | NS | NS | NS |
| | in Writing | Sig. 0.000 Health | Sig. 0.003 Public | NS | NS | NS |
| Organizational factors | Inter institute competition creates a barrier for knowledge sharing. | NS | Sig. 0.003 Public | NS | NS | NS |
| | Office politics creates a barrier for knowledge sharing. | NS | Sig. 0.001 Public | NS | Sig. 0.004 50+ | NS |
| | Heavy workload (time constraint) creates a barrier for knowledge sharing. | NS | NS | NS | NS | NS |
| | Lack of IT support creates a barrier for knowledge sharing. | NS | NS | NS | NS | NS |

Table 3.20: The chi-square test table for the themes

### 3.3. Findings from qualitative data analysis

**What types of knowledge that is shared and can be shared (within academic staff)?**

With regards to the types of knowledge that are shared and can be shared, the opinions of TVET colleges deans, vice deans (interviews), revealed that several different types of knowledge can be shared, with the most common type being available in written documents.

One of the common views from academic deans who had responsibilities for the regulations and policies of organizational information that are distributed to all sectors in his college, suggested that documented information is the most common type of knowledge that is shared in managerial section in his college. However, they also noted that brain-storming sessions were conducted among the senior academics to codify tacit knowledge to promote better decision making, which eventually leads to the production of written regulations and policies for all academics in the colleges. One common view of the top management is stated below:

*"Documentary knowledge is used in its three forms: readable, listenable and viewable forms. These documents and the documentary knowledge relate to the trainee and the trainer. These include curricula and occupational standard, departments of administration and quality control offices" (quality assurance head, 1).*

In terms of non-documented knowledge, it was noted that tacit knowledge, such as subject-specific knowledge, was one type that was shared by academic staff through seminars and lectures. Four out of the five senior academic vice deans expressed the view that they value both tacit and explicit knowledge in their colleges as these

are academic institutes and they have to use all types of knowledge for the learning process and activities; as a result, they use both in their daily activities, as expressed in the following:

*"We use both types of knowledge in our college and this mostly starts with tacit knowledge from staff from their own practical experience. It is then documented and used for the development of our curriculum and training materials" (vice dean, 3).*

It seems clear that, when developing teaching and academic knowledge, both tacit and explicit knowledge come together in the sharing of experience and practice. This then leads to the growth of documented knowledge which is used to inform decision making and improve performance.

Many interviewed also expressed the idea that both tacit and explicit knowledge can be shared in TVET. Both Privates and public colleges indicated that it was desirable to share both written documents and the tacit knowledge of academic staff.

*"TVET College has a massive amount of knowledge that can be shared by the academic staff. There are a large number of training materials prepared by academic staff, handouts developed by academic staff "(Dean, 2).*

# Chapter Four: Conclusions and Recommendations

This chapter gives a concluding points and recommendations based on the analysis conducted and discussions made on the previous chapter.

## 4.1 Conclusions

- Academic staffs of A.A TVET College are aware of knowledge sharing. They also believed that knowledge is power and that knowledge sharing could help their college to stay competitive in the TVET environment.

- A.A TVET Academic staffs are less enthusiastic concerning solving work-related problems by themselves without seeking help from others.

- Private college academic staffs are more reluctant to solve work-related problems by themselves than public colleges.

- Public academic staffs are more likely to trust others compared to public academic staffs.

- From the point of view of academic sectors, sector of health are found the highest level of trust as compared to other sectors.

- A.A TVET Academic staffs have found to be willing to share knowledge with different sectors and colleges. And results also showed that respondents from the sector of health are the most willing compared to respondents from other sectors.

- Private academic staffs have shown less inclination to interact with the public academic staff in informal social activities.

- The study has shown clearly that TVET academic staffs do not prefer writing communication as compared to phone communication, e-mail and social network systems for knowledge sharing. In contrast, Health sector academic staffs are more likely than other sectors to employ phone communication.

- The study concluded that there are a variety of organizational factors that inhibit the effective sharing of knowledge within TVET. These include: Inter-institute competition, office politics, Heavy workload and Lack of IT support.

- Results have shown positively that knowledge sharing do takes place during break time, and it happened through informal communication.

## 4.2 Recommendations

- Factors relating to the age of staff and their educational profile, which were identified but not considered in this study, should be incorporated into future research.

- There should be supportive managers to encourage knowledge sharing practices in both individual and organizational levels.

- TVET colleges should prepare knowledge sharing practices like formal training and workshops and seminar to the academic staffs.

- There should be a mechanism for knowledge sharing like preparing knowledge sharing opportunity as training, seminar, panel discussion and workshops at the department and college level.

- Further research is needed to investigate the most appropriate technological system to promote knowledge sharing and to break down physical barriers in TVET.
- Further research within colleges of a similar nature exists in some of the other States of Ethiopia in order to expand the findings of this study by conducting an additional set of case studies.

# Reference


- Abdullah, M. S., Kimble, C., Benest, I., & Paige, R. (2006). Knowledge-based systems: A re-evaluation. Journal of Knowledge Management, 10(3), 127- 142.
- Alavi, M, Kayworth, T. R., & Leidner, D. E. (2005). An empirical examination of the influence of organizational culture on knowledge management practices. Journal of Management Information Systems, 22(3), 191-224
- Alavi, M., & Leidner, D. E. (2001). Review: Knowledge management and knowledge management systems: Conceptual foundations and research issues. MIS Quarterly, 25(1), 107-136.
- Biloslavo, R. & Trnavcevic, A., 2007. Knowledge management audit in a higher educational institution: a case study, Knowledge and Process Management, 14(4), 275-286.
- Branin, J., 2003. Knowledge management in academic libraries: building the knowledge bank at Ohio State University.
- Connelly, C. & Kelloway, E., 2003. Predictors of employees' perceptions of knowledge sharing cultures. Leadership & Organisation Development Journal, 24(5), 294-301.
- Cook, S. D. N., & Brown, J. S. (1999). Bridging epistemologies: The general dance between organizational knowledge and organizational knowing. Organization Science, 10(4), 381-400.
- Craig, C. & Douglas, S., 2005. Beyond national culture: implications of cultural dynamics for consumer research. International Marketing Review, 23 (3), 322-342.
- Cross, R. & Baird, L., 2000. Technology is not enough: improving performance by building organizational memory. Sloan Management Review, 41(3), 69-78.

- Cross, R., Parker, A., Prusak, L., & Borgatti, S. P. (2001). Knowing what we know: Supporting knowledge creation and sharing in social networks. Organizational Dynamics, 30(2), 100-120
- Currie, G., Waring, J., & Finn, R, 2008. The limits of knowledge management for UK public services modernization: The case of patient safety and service quality.
- Dalkir, K., 2005. Knowledge Management in theory and practice. Amsterdam:Elsevier.
- Davenport, T. H. & Prusak, L., 1998. Working knowledge: how organizations manage what they know. Boston: Harvard Business School Press.
- Dayson, L., E., 2004. Barriers to sharing and creating knowledge in higher education. Innovations Through Information Technology, 33-36.
- Devedzic, V. (2001). Knowledge modeling – state of the art. Integrated Computer-Aided Engineering, 8(3), 257-281.
- Dixon, N. (2002, March/April). The neglected receiver of knowledge sharing. Ivey Business Journal, 66(4), 35-40.
- Drucker, P. F., 2002. Managing in the next society. Amsterdam: Elsevier.
- Ekbia, H. & Kling, R., 2003. Power issues in knowledge management. <http:/ /www. rkcsi.i ndiana.e du/archive/CSYWP03-02B,html>, [accessed1 12.6.13].
- George, E., 2006. Positioning higher education for the knowledge based economy. Higher Education, 52,589-610.
- Hall, H. & Goody, M., 2007. KM, culture and compromise: interventions to promote knowledge sharing supported by technology in corporate environments. Journal of Information Science, 33(2) 181-188.
- Han, B. & Anantatmula, V., 2007. Knowledge sharing in large IT organizations: a case study. The Journal of Information and Knowledge Management Systems, 37(4), 421-439.

- Handzic, M. & Lee, A., 2005. Knowledge sharing via technology. Proceeding of the 6‘h European Conference on Knowledge Management. Ireland: University of Limerick.
- Harper G and Elich J, 2001. Preparing TAFE for the Knowledge Economy. Australia, New Zealand and Asia Pacific Industry Training Conference.
- Issa, Raja, R. A. & Haddad, Josef, 2008, Perceptions of the impacts of organizational culture and information technology of knowledge sharing in construction. Construction Innovation, 8 (3), 182-201.
- Jakobson, L. (2008, February). Save the knowledge. Incentive, 182(2), 42 43.
- Kant, R. & Singh, D., 2008. ICT enablement of knowledge sharing: Modeling the enablers. IEEE International Conference on Management of Innovation and Technology.
- Kelly, C., 2007. Managing the relationship between knowledge and power in organisations.
- Kidd, W., 2002. Culture and identity. New York: Palgrave.
- Kidwell, J., Linde, V. & Johnson, S., 2000. Applying corporate knowledge management practices in higher education: colleges and universities have significant opportunities to apply knowledge management practices to support every part of their mission. Educause Quarterly, 4,28-33.
- Kim, S., & Ju, B., 2008. An analysis of faculty perceptions: attitudes towards knowledge sharing and collaboration in an academic institution. Library & Information Science Research, 30,282-290.
- King, N., Kruger, N. & Pretorius, J., 2007. Knowledge management in a multicultural environment: A South African perspective.
- King, W. R., Marks, P. V., & McCoy, S. (2002). The most important issues in knowledge management. Communications of the ACM, 45(9), 92-97.

- Lam, W., & Chua, A. (2005). The mismanagement of knowledge management. Aslib Proceedings, 57(5), 424-433
- Levin, D., Cross, R, Abrams, L. & Lesser, E., 2002. Trust and knowledge sharing: a critical combination. IBM Institute for Knowledge-based Organization., 1-9.
- Lopez, S., Peon, J. & Ordas, C., 2004. Managing knowledge: the link between culture and organizational learning. Journal of Knowledge Management, 8 (6), 93- 104.
- Lucas, L. & Ogilvie, D., 2006. Things are not always what they seem: how reputations, culture and incentives influence knowledge transfer. The Learning Organisation, 13 (1), 7-24.
- Maponya, 0., 2005. Fostering the culture of knowledge sharing in higher education. SAME, 19 (5), 900-911.
- Mayer, R., Davis, J. & Schooman, F., 1995. An integrative model of organizational trust. Academy of Management Review, 20 (3), 709-734.
- McManus, D. & Loughridge, B., 2002. Corporate information, institutional culture and knowledge management: a UK university library perspective. New Library World, 103 (1180), 320-327.
- Metaxiotis, K. & Psarras, J., 2003. Applying knowledge management in higher education: the creation of learning organisation. Journal of Information& Knowledge Management, 2(4), 353-359.
- Ngulube, P., 2005. Improving the quality of research outputs in higher education through knowledge sharing and collaboration: a case study. Mousaion, 23(1), 39-61.
- Nonaka, I. & Takeuchi, H., 1995. The knowledge-creating company: How Japanese companies create the dynamics of innovation. New York: Oxford University Press.
- Petrides, L. & Nodine, T., 2003. Knowledge management in education: defining the landscape. The institute for the study of knowledge management in education.

- Quinn, J. B., Anderson, P. & Finkelstein, S., 1996. Managing professional intellect: making the most of the best. Harvard Business Review, 76,71-80.
- Ratcliffe-Martin, V., Coakes, E. & Surgden, G., 2000. Knowledge management in universities. VINE, 30(4), 14-18.
- Reference: Marwick, Alan D. "Knowledge Management Technology." IBM Systems Journal 40, no. 4 (2001).
- Rehman, Sajjad ur, 2005. Effectiveness of communication channels for knowledge sharing: a study of Kuwaiti companies. Journal of Information & Knowledge Management, 4 (4),. 213-227.
- Riege, A., 2005. Three-dozen knowledge-sharing barriers managers must consider. Journal of Knowledge Management, 9 (3), 18-35.
- Rowley, J., 2000. Is higher education ready for knowledge management? The International Journal of Educational Management, 14 (7), 325-333.
- Sayed Ikhsan, S. 0., 2005. Knowledge management in a public organisation: a study on the performance of knowledge transfer in the ministry of entrepreneur development of Malaysia. PhD Thesis. Loughborough University.
- Shapira, P, Youtie, J, Yogeesvaran, K and Jaafar, Z. (2005), 'Knowledge Economy Measurement: Methods, Results and Insights from the Malaysian Knowledge Content Study', Proceedings of the Triple Helix 5 Conference on New Indicators for the Knowledge Economy, Turin, Italy.
- Smith, H. & McKeen, J., 2003. Instilling a knowledge-sharing culture. Queens University School of Business, Canada.
- Tiwana, A., 2002. The knowledge management toolkit: orchestrating IT, and knowledge platforms. 2nd ed. United States of America: Pearson Education, Inc.

- Walsh, J. P., & Ungson, G. R. (1991). Organizational Memory. Academy of management review, 16(1), 57-91.
- Weick, K. E. (1979). The social psychology of organizing (2nd ed.). Reading, MA: McGraw Hill.
- Whitehill, M., 1997. Knowledge-based strategy to deliver sustained competitive advantageL. ong RangeP lanning, 30(4), 621-726.
- Widen-Wulff, G., & Suomi, R. (2007, January-March). Utilization of information resources for business success: The knowledge sharing model. Information Resources Management Journal, 20(1), 46-67.
- Yeh, Yay Marry Chou, 2005. The implementation of knowledge management system in Taiwan's higher education. Journal of College Teaching & Learning.

# ANNEX I Research Questionnaire

## ADDIS ABABA UNIVERSITY

## DEPARTMENT OF INFORMATION SCIENCE

Dear respondents

This questionnaire is a survey instrument of a thesis written on “Collaboration for knowledge sharing among A.A TVET colleges" in partial fulfillment of the requirement for the degree of master in Information Science at Addis Ababa University. Please remember that your answers are very important and also I would like to thank you for your collaboration.

Your replay will remain confidential. Your answers will be combined with the others and will not be identified as yours. Moreover, your participation in this would be of voluntary.

If you have any question regarding the questionnaire you can contact the researcher through the following address: **birukfantaye@yahoo.com and +251-923481548**

The researcher would like to thank you for taking your invaluable time in order to fill this questionnaire.

## A. Personal Details:

Please tick the appropriate box with (√)

Q1. Gender

1. Male ☐
2. Female ☐

Q2. Your Academic Profession

1. Level III Trainer ☐
2. Level IV Trainer ☐
3. Level V Trainer ☐
4. First Degree Trainer ☐
5. Second Degree Trainer (MSC) ☐

Q3. You work in

1. Government College ☐
2. Non-government College/Private ☐

Q4. In which sector you work?(ICT, Textile and Garment, Construction...)

Please specify _____

Q5. Your experience in an academic institution

1. Less than 3 Years ☐
2. 3 -10 Years ☐
3. 11-15 Years ☐
4. Greater than 15 Years ☐

Q.6 Age

Please state your age;_____

## B. Knowledge sharing perceptions, attitudes and effects

Q7. Have you ever heard about knowledge sharing?

1. Yes ☐
2. No ☐
3. Not sure ☐

| Strongly Disagree (1) | Disagree (2) | Neutral (3) | Agree (4) | Strongly Agree (5) |
|---|---|---|---|---|

Please tick on the ranking scale that reflects your real opinion.

| | | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| Q8. | Knowledge is power. | | | | | |
| Q9. | Academic staff should share their knowledge and best practices. | | | | | |
| Q10. | It is important to share my knowledge with other academic staff | | | | | |
| Q11. | Knowledge sharing helps the college to stay competitive with other Colleges in A.A. | | | | | |
| Q12. | I prefer to resolve work related problems by myself, without seeking help from others | | | | | |
| Q13. | I am willing to share my knowledge with others. | | | | | |
| Q14. | I am willing to share my knowledge with other academic staff from the same College | | | | | |
| Q15. | I am willing to ask a knowledge questions in informal social situations | | | | | |
| Q16. | Academic staffs from the same college trust each other more than others. | | | | | |
| Q17. | I trust the people that I need to share my knowledge with | | | | | |
| Q18. | The administration has an influence on knowledge sharing through their instructions | | | | | |
| Q19. | The A.A TVET Agency has an influence on organizational culture | | | | | |
| **C. Organizational factors of knowledge sharing** | | | | | | |
| Q20. | Inter institute competition creates a barrier for knowledge sharing. | | | | | |
| Q21. | Office politics creates a barrier for knowledge sharing. | | | | | |
| Q22. | Heavy workload (time constraint) creates a barrier for knowledge sharing. | | | | | |
| Q23. | Lack of IT support creates a barrier for knowledge sharing. | | | | | |

**D. Preferred Methods of communication**

| Least Preferred (1) | (2) | (3) | (4) | Most Preferred (5) |
|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| Q24. | E-mail | | | | | |
| Q25. | Phone communication | | | | | |
| Q26. | Social Network systems (facebook, twitter...) | | | | | |
| Q27. | In writing | | | | | |

Others, please specify.....

## E. Informal Knowledge Sharing

28. With whom you Have break time discussion Most Frequently

1. Office Colleagues ☐
2. Friends ☐
3. Family ☐
4. Alone ☐

29. How many people do you usually discuss in break time?

1. One ☐
2. Two ☐
3. Three ☐
4. More than three ☐

30. How are break time conversations more beneficial than conversation with colleagues during office hours?

1. Free flow of information ☐
2. More insightful ☐
3. Freedom of thought ☐
4. Specify other_____

31. Do you actively participate in conversation during break time?

1. Always ☐
2. Sometimes ☐
3. Rarely ☐

32. How often do you gain useful knowledge from conversations during break time?

1. Always ☐
2. Sometimes ☐
3. Rarely ☐

33. Do you think having break time knowledge sharing strengthens relationships among colleagues in the college?

1. Always ☐
2. Sometimes ☐
3. Rarely ☐

34. Which factors motivate you to share your knowledge during break time?

1. The idea of receiving information ☐
2. The relationship with others ☐
3. Wanting to share information with others ☐
4. Development of new knowledge ☐
5. Increase Knowledge level ☐
6. Specify other_____

**Interview with Vice deans, quality officers and Deans**

- What types of knowledge that is shared and can be shared (within academic staff). Specify your position _____