

UNIVERSITY OF CAPE COAST

THE PROSPECTS AND CHALLENGES OF INFORMATION AND  
COMMUNICATION TECHNOLOGY TRAINING IN SOCIAL SECURITY  
AND NATIONAL INSURANCE TRUST, PENSION HOUSE, ACCRA

BY

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DISSERTATION SUBMITTED TO THE INSTITUTE FOR  
DEVELOPMENT STUDIES OF THE FACULTY OF SOCIAL SCIENCES,  
UNIVERSITY OF CAPE COAST IN PARTIAL FULFILMENT OF THE  
REQUIREMENTS FOR AWARD OF MASTER OF ARTS DEGREE IN  
HUMAN RESOURCE DEVELOPMENT

JUNE 2010

## **DECLARATION**

### **Candidate's Declaration**

I hereby declare that this dissertation is the result of my own original work and that no part of it has been presented for another degree in this university or elsewhere.

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### **Supervisor's Declaration**

I hereby declare that the preparation and presentation of this dissertation were supervised in accordance with the guidelines on supervision of dissertation laid down by the University of Cape Coast.

Supervisor's Signature: ..... Date: .....

Name: Dr. Francis Enu-Kwesi

## **ABSTRACT**

This dissertation explored the extent to which information and communication technology (ICT) is used in Social Security and National Insurance Trust (SSNIT) and how staff are trained to use ICT in the performance of their functions. It further examined how staff's ICT training needs are assessed as well as the prospects and challenges of ICT training in SSNIT and how these could be turned round for the benefit of SSNIT.

The research was conducted at the head office of SSNIT (Pension House) with a sample size of one hundred respondents. Stratified random and convenience sampling procedures were utilised to select the respondents for the study. Data for the study were collected from SSNIT documents as well as questionnaires administered to selected respondents. Data analysis was done using Statistical Product and Service Solutions (SPSS) version 10.0 software.

The research found that SSNIT makes a high use of ICT. However, not all staff are properly trained to utilise ICT in the discharge of their duties. During staff's training needs assessment, SSNIT did not involve staff and so ICT training conducted did not benefit some of the staff. SSNIT did not have an ICT training policy or adequate training facilities for ICT training in-house. The study clearly indicated that staff need continuous ICT education to update their knowledge and acquire new technical know-how because of the fast changing and evolving ICT world. This can be achieved with a clearly defined ICT training policy aimed at improving the overall performance of the organisation.

## **ACKNOWLEDGEMENTS**

I would like to acknowledge the immense contributions made by some individuals towards the success of my post graduate course. First of all, I am most grateful to my entire family for their unflinching support. I would like to express my profound gratitude to my supervisor, Dr. Francis Enu-Kwesi, for his guidance, ideas and constructive criticisms during the preparation of this work.

I cannot forget the invaluable contribution and support of Dr. D.H.A.K. Ameworwor of the Botany Department of University of Cape Coast, and of Messrs Stephen A. Yeboah and N.W. Morton, all of the Social Security and National Insurance Trust. Lastly to that special someone, thank you very much.

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## **CHAPTER ONE**

### **INTRODUCTION**

#### **Background to the study**

The importance of Information and Communications Technology (ICT) or Information Technology (IT) in the 21<sup>st</sup> century cannot be over-emphasised. Indeed the century has come to be known as the Information Age because ICT is being actively used in all spheres of human life such that now it is almost impossible to perform any kind of business activity without ICT (Laudon & Laudon, 2006). The banks have networked their branches such that bank accounts can be accessed from any other branch of the bank or any other bank in the network, at any location. Students use computers to retrieve data and information from other parts of the world at the libraries.

The introduction, growth and use of computers have been very phenomenal. ICT started with the introduction of early mainframe computers to respond to the needs of scientific research and statistical data gathering and processing. The technology helped to speed up results and forecasting and thus eliminate the drudgery involved in adding up or doing any of the statistical operations necessary for the analyses of data collected. These techniques were later applied to the business environment where computers were used to automate business processes (Laudon & Laudon, 2006).

From automation of business processes, ICT was then applied to higher value-adding functions such as designing, resource planning and

sophisticated manufacturing operations. Developments and applications of ICT have since stretched beyond imagination. According to Fales, Kuetemeyer and Brusic (1998), IT provides access to vast amounts of information (data, images, sounds). Computers make it possible to find information quickly. This quick access to information means faster decision-making and action on issues.

In recent times, most businesses have adopted computers so readily. Quick and easy production of accurate information has become a reality to business people resulting in operational excellence and productivity. For instance, Verizon Corporation, one of the largest regional Bell operating companies in the United States, uses a Web-based digital dashboard to provide managers with precise real-time information on customer complaints, network performance for each locality served, and line outages or storm-damaged lines. In 2005, Wal-Mart, the world's largest retailer, attained more than \$285 billion in sales in large part because of its RetailLink system which digitally links its suppliers to every one of Wal-Mart's 5,289 stores worldwide (Laudon & Laudon, 2006).

The two examples cited above show how ICT is used effectively and efficiently to achieve results and to maximise returns. ICT can thus go a long way to improve an organisation's operations.

Some companies in Ghana have also computerised their operations in order to be competitive in this information age. The banks, like the Ghana Commercial Bank, Barclays and Standard Chartered Bank have also networked their branches such that bank accounts can be accessed from any branch at any location. ICT has also enabled the use of automatic teller

machines (ATM) to access bank accounts anywhere in and outside Ghana. Students use computers to retrieve data at the libraries. Computers are being used in stores like Melcom, Max Mart and Koala to check out items.

With the wide use of ICT in various aspects of life to achieve various results, it is imperative for the users to be able to use ICT effectively and efficiently. It is necessary for the bank teller to be trained in order to effectively use ICT to serve customers. The cashiers at a supermarket need ICT training in order to run up sales of customers. As and when new or improved ICT is introduced, users must be given ICT training before they can use them. It therefore means that users must be given training in ICT on a continuous basis as improved versions are introduced. The ability to use ICT effectively is essential to the successful operation of most organisations and Social Security and National Insurance Trust (SSNIT, also called the Trust), is no exception.

SSNIT is a statutory public Trust charged with the administration of Ghana's national pension scheme. The Trust was established in 1972 under NRCDC 127 to administer the national social security scheme. Prior to 1972, the Scheme was administered jointly by the then Department of Pensions and the State Insurance Corporation as a provident fund. The social security law (PNDC Law 247, 1991) under which the current social security scheme operates was passed in 1991. The Pension scheme administered by SSNIT has a registered membership of approximately eight hundred thousand (800,000) with over seventy-six thousand (76,000) pensioners (SSNIT, 2005). The head office of the Trust consists of forty (40) departmental offices which provide both advisory and support services. The core business of SSNIT is

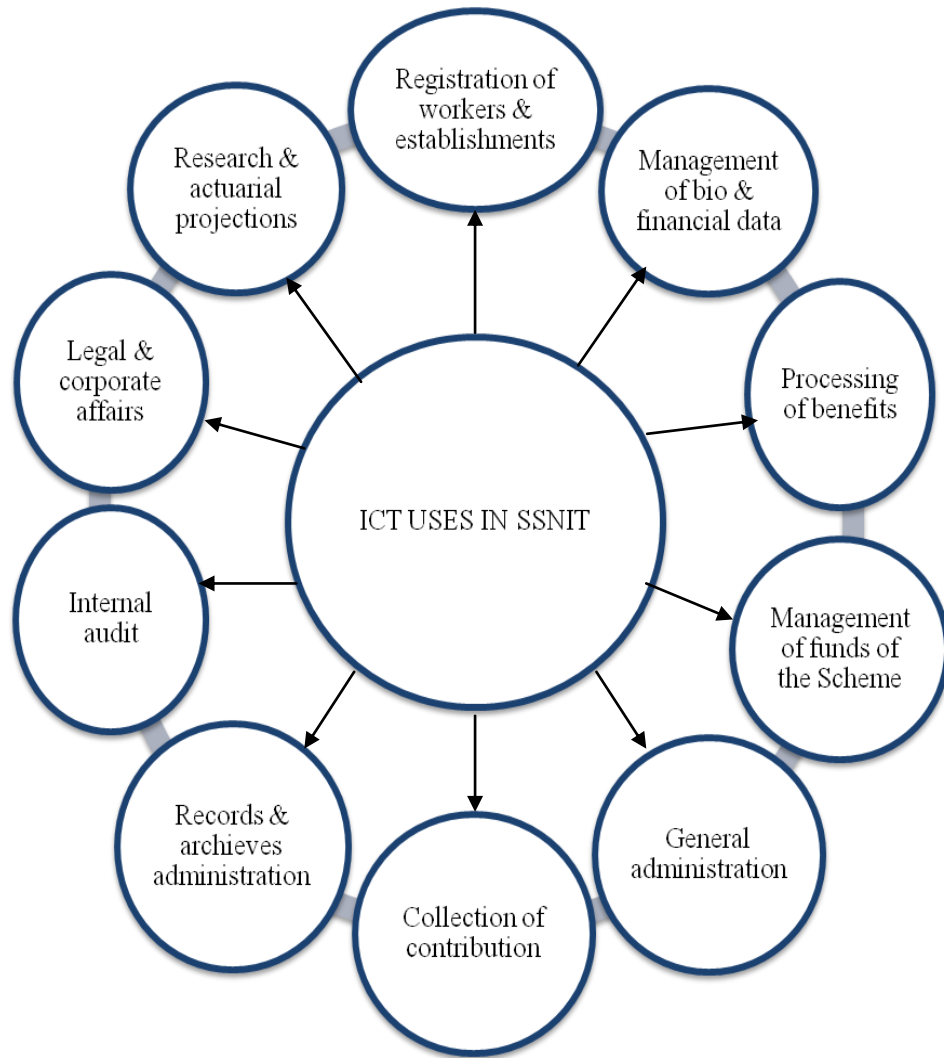
performed by seven (7) area offices, forty-eight (48) branch and day offices, making a total of fifty-five (55) offices spread across the country. All of these offices are linked together by the use of both the Local Area Network (LAN) and Wide Area Network (WAN). The Trust operates both a centralised and decentralised system and has therefore equipped all of its fifty-five (55) offices nationwide with computers to ensure that current information can be accessed with the click of a button.

In SSNIT, ICT is used to perform the five core functions of the Trust namely to:

- register employers and workers;
- manage biometric and financial records of members;
- collect contributions on behalf of members;
- manage funds of the Scheme; and
- process and pay benefits to eligible members as they fall due and to nominated dependants of deceased members.

After the manual registration of employers and workers, computers are used to generate employer numbers for employers and social security numbers for workers. Computers are used to capture, store, retrieve and amend personal and financial data on all members of the scheme. When employers make contribution payments, computers are used to credit the accounts of each member of the scheme on whose behalf the contributions were paid. In addition, ICT is used as a vehicle for managing the funds of the scheme as well as for processing and paying benefits to eligible members as they fall due and to nominated dependants of deceased members.

Apart from the core activities stated above, ICT is put to use in other areas of the Trust. ICT is used in record management, administration, audit, legal, research and actuarial. Figure 1 is a graphic presentation of the uses to which ICT is put in SSNIT.



**Figure 1: ICT uses in SSNIT**

Source: Author's construct, 2009

It is evident from the foregoing that ICT plays a pivotal role in the daily schedule of staff of the Trust, therefore they need to always be up-to-date

in this technological age. This means constant training and refresher courses for staff so that ICT can be properly utilised to discharge their duties.

### **Statement of the problem**

As stated above, the use of ICT is a pre-requisite for the operation of the Trust and also to make a positive impact in the global economy. The Management of SSNIT spends considerable sums of money on the acquisition of ICT paraphernalia to enhance the Trust's service delivery, efficiency and effectiveness. However, the provision of computers and its accessories alone would not ensure its effective usage if the staff are not well trained to appreciate and efficiently use them. Giving staff ICT training therefore has become very essential in this technological age where ICT is used for most operational activities.

SSNIT as an institution trains its staff in various operational activities including ICT. However, records at the human resource development department of SSNIT showed that for a four year period between 2004 and 2007, only 663 members of staff out of a total of 2,800 SSNIT staff members nationwide received training in ICT-related courses. In addition, some staff members have complained that they use ICT to discharge their duties yet they are not given any training and/or refresher courses. Findings from documents also revealed that SSNIT did not have an ICT training policy that states who, how, when, and where staff should be ICT trained.

Any ICT training/refresher course must consider the training needs of the participants as well as the amount and type of training necessary to achieve the desired objectives of the training. The problem that this study seeks to

address therefore is to identify the various prospects and challenges of ICT training that SSNIT is contending with and to suggest the way forward.

### **Objectives of the study**

The main objective of this research was to examine the prospects and challenges associated with ICT training in SSNIT. The specific issues addressed were to:-

- a) assess the type, quality and quantity of ICT training given to SSNIT staff;
- b) examine the ICT training needs/development of SSNIT staff;
- c) examine the prospects for ICT training in SSNIT;
- d) examine the challenges associated with ICT training in SSNIT;
- e) make recommendations for the improvement of ICT training in SSNIT.

### **Research questions**

The research sought answers to the following questions:-

- a) What are the type, quality, and quantity of ICT training being given to SSNIT staff?
- b) How are the ICT training needs/development of staff of SSNIT assessed?
- c) What are the prospects for ICT training in SSNIT?
- d) What are the challenges of ICT training in SSNIT?



### **Scope of the study**

This research examined ICT training in SSNIT with emphasis on the prospects and challenges associated with ICT training. The issues examined on assessing the type, quality and quantity of ICT training given staff in SSNIT were whether staff had attended any ICT course organised by SSNIT, how selection for the courses were conducted, whether the duration of the course was adequate and if the training was beneficial to staff. Issues covered on assessing the ICT training needs/development of staff were how staff's ICT training needs were assessed, if staff were involved in their own training needs assessment and how they gained the ICT knowledge being used in the discharge of their duties. ICT training needs of respondents were also sought.

### **Significance of the study**

It is hoped that the outcome of this study would serve as a guide for the management of SSNIT in taking decisions on providing staff ICT training. It will bring to light some of the prospects of ICT training in SSNIT which can be utilised to ensure efficiency in the Trust's operations as well as how to address challenges associated with ICT training. Finally, the findings will contribute to knowledge in general regarding provision of ICT training to staff in organisations.

### **Organisation of the study**

The study is divided into five chapters. Chapter one discusses the background to the study, statement of the problem, objectives of the study, research questions, scope, significance and organisation of the study. Chapter

two contains a review of some relevant and related literature on training in general and ICT training in particular. It also explores some prospects and challenges to ICT training in organisations. Chapter three deals with the research methodology which focuses on the study organisation, study design, population and sample size, data collection, data analysis techniques utilised and challenges encountered in the field while collecting data. Chapter four contains the analysis and discussion of data while chapter five presents a summary of findings, conclusions and recommendations.

## **CHAPTER TWO**

### **REVIEW OF LITERATURE**

#### **Introduction**

The chapter begins with an exposé on human capital theory and its contribution to development and nation building. It then goes on to review training and development in general as well as the methods of training. The chapter continues with an examination of ICT in general and ICT training specifically, in order to bring the subject matter under study into perspective. The chapter then ends with the prospects and challenges of ICT training.

#### **Human capital theory**

The human capital theory attempts to prove that formal education is highly instrumental in improving the production capacity of the population of a country. Schultz (1961) defines human capital as an investment made in the human resources in order to improve their productivity and earnings. Costs, according to Schultz, are incurred in human capital formation because of expected benefits. Therefore, investment in human capital must focus on supporting individuals to acquire an education as these capabilities will lead to an increase in human productivity, which in turn will lead to a positive rate of return for the investor.

Human beings form the basis for productive activities. Without human beings, nothing would be manufactured or developed. Indeed, there would be

nobody to undertake the enterprise of production. Land and physical capital are factors of production but these are passive agents; human beings form the active agent (Harbinson, 1973). It is the human beings who accumulate the physical capital. It is the human being who exploits these natural resources, processes and manufactures them into useful goods and services. Without the efforts of the human being who is the active agent, production would not be possible.

Human capital theory covers a combination of factors like education, training, experience, work habits, intelligence, energy and initiative that affect the value of a worker's marginal product. In general, a decision to invest in human capital, like decisions to invest in other assets, requires comparing costs to be incurred in the present with benefits to be received in the future. Acheampong (2006) supports the human capital theory that training and development entails investment in workers which enhances productivity, growth and development at both the organisational level and the economy as a whole. The human being therefore needs to be trained with the necessary skills to achieve productivity.

### **Training and development**

The major asset of every organisation is its human resource and as important resources are protected and revitalised for efficient performance, so is the human resource of an organisation also revitalised through training and development. Training and development are vital in adding value to an organisation's key resource – the human resource. They are also important in ensuring the availability of competent employees to fulfil the duties which are

expected of them. According to Strauss and Sayles (1972), the efficiency and effectiveness of an organisation depend directly on how well its members are trained.

Training and development have been used interchangeably to mean the same thing and that is to educate. Cascio (1992) says that lower-level employees are trained and higher-level employees are developed. Wright (1995) opines that development refers to the organisation's efforts to help employees acquire knowledge, skills and behaviours that improve their ability to meet changes in job requirements and customer needs. Griffin (1999) states that in human resource management, "training" refers to teaching operational or technical employees how to do the job for which they were hired while "development" refers to teaching managers and professionals the skills needed for both present and future jobs.

Training and development are now viewed by employees as a very important component in their working life. There is therefore, a widespread expectation in the twenty-first century where an increasing number of employees want their employers to invest in them – that is to provide them with training so that they in turn can cope with the rapidly changing working environment (Martin & Wyborn, 2004). Boachie-Mensah (2006) also re-emphasises the view that training and development aim to increase employees' ability to contribute to organisational effectiveness.

Training has been identified as the planned effort by an organisation to facilitate learning which is job-related with the intention to improve knowledge and skills of its employees and to change attitude. Training is an on-going activity designed to increase the level of competence and expertise

of staff of an organisation. So whatever training an employee is given at the start of his or her working life, it will almost certainly become redundant or obsolete during the same working lifetime. Therefore, training is not supposed to be a one-time activity, but should rather be ongoing for as long as the employees are performing activities in the workplace. This is because training allows employees to improve methods and procedures, learn to operate new equipment and prepare for promotion (Armstrong, 2003).

This re-enforces the view that training plays a critical role in an organisation and so must be viewed seriously. Acheampong (2006) captures this by stating that training and development are essential for the survival of every organisation and the attainment of the organisation's mission and goals. There is the need to upgrade the knowledge and skills of an organisation's employees. Training and developing employees of an organisation therefore are key elements for improved organisational performance as well as improving and increasing the level of individual and organisational competence.

Training in an organisation is generally provided to satisfy organisational goals and expectations. According to Tyson and York (1989), cost effective training must meet actual, rather than imagined needs of work. Training needs analysis is therefore an essential pre-requisite for the design and provision of effective training. According to them, training needs analysis should be conducted at three levels, the organisational level, the sub-group or task level and the individual level. This is a holistic approach that will ensure that the right or appropriate training is given.

DeSimone and Harris (1998) also agree that to achieve effective training, training needs analysis should be conducted at three levels – the organisation, the job and the individual. Harris (2000) buttresses the point that training involves a three-step process: training needs analysis, organisational/task competency and person analysis. As emphasised by Armstrong (2003), training and development should not be done in a vacuum but with the right understanding of the type of training to be done. This is to establish the foundation for the training programme. It can be inferred from the foregoing discussions that for training to be effective, training needs should be carefully conducted at the three levels – organisation, task and individual – which are all interconnected.

The analysis of corporate needs will lead to the identification of learning needs in different departments which will in turn lead to which individual employee needs to be trained. This holistic training needs analysis will prevent the organisation from falling into the trap of adopting the ‘deficiency model’ approach which sees training as only putting things right that have gone wrong (Armstrong, 2003). Training needs analysis would ensure that the training and development undertaken yields results by:

- equipping employees to take on extra responsibilities;
- increasing all-round competences in employees;
- equipping employees to deal with new work demands; and
- preparing employees to take on higher levels of responsibility in the future.

Boachie-Mensah (2006) adds that in addition to training needs analysis, the organisation must conduct performance appraisal, analysis of job

requirement, organisational analysis and survey of the human resource of the organisation. According to him, it is when this all-round assessment is done that the appropriate training can be undertaken and the benefits reaped.

### **Benefits of training and development**

Training and development, when conducted properly, have several benefits for both the individual and the organisation. Proper training and development build better communications skills, develop hidden talent, ensure consistent quality, provide greater focus, and produce more effective/productive efforts.

Armstrong (2001) states that training has the following benefits for both the individual and the organisation:

- i. it increases the confidence, motivation and commitment of staff;
- ii. it provides recognition, enhanced responsibility and the possibility of increased pay and promotion;
- iii. it gives a feeling of personal satisfaction and achievement and broadens opportunities for career progression; and
- iv. it helps to improve the availability and quality of staff.

According to Acheampong (2006), the six benefits of training or development are that it:

- i. helps the employees to increase both quantity and quality of output in their work;
- ii. enhances job motivation and satisfaction;



- iii. reduces the problems which are associated with the supervision of employees as it enhances the employees' ability to learn new work methods/techniques and equipment and also helps them to adjust to changes in the context of their jobs;
- iv. increases the employees' value to the organisation and prepares them for promotion;
- v. increases the stability of an organisation since it creates a reservoir of qualified employees who easily replace those who either transfer, retire or exit from the organisation; and
- vi. reduces work-related accidents as it enhances employees' ability to handle work-related equipments carefully.

It can be realised from the above that training and development are of immense benefit not only to the employees but also to the organisation. In fact the organisation benefits more as the employees return to the organisation to utilise or implement whatever they learnt at the training sessions. This translates into increased productivity for the organisation in the long-term.

Training and development must be conducted well for the full benefits to be realised by both the organisation and the individual. This entails the application of a set of laid-down procedures that would ensure that the training programme will improve both the individual and organisational effectiveness. In order to do this, DeSimone and Harris (1998) say that the training and development programme for staff of an organisation should follow a process which can be grouped into three main phases – the needs assessment phase, the design/implementation phase and the evaluation phase.

The needs assessment phase involves examining the whole organisation, its environment, jobs/tasks and employee performance to identify a need which can be either a current deficiency such as poor employee performance or a new challenge that demands a change in the way the organisation operates. The second phase is design/implementation and it involves selecting the trainers/facilitators, developing the programme content, scheduling the programme and implementing or delivering the programme. The last phase, which is evaluation is where the effectiveness of the HRD programme is measured using information on participants' reaction to the entire programme and whether the programme improved the individual's and the organisation's effectiveness.

As stated above, training has immense benefits for the individual as well as the organisation's effectiveness. However, before management approves any training programme, it must first be assured that it would yield outputs to correspond with the inputs.

Boachie-Mensah (2006) states that organisations must state objectives before embarking on any kind of training programme. The training objectives must be concise, accurate, meaningful and challenging. He says that the:

- i. training to be embarked upon should be based on both organisational and individual needs;
- ii. training objectives should spell out what problems will be solved by training; and
- iii. training should be based on sound theories of learning for optimum benefits.

## **Methods of training**

There are several methods that organisations use in the course of training their employees. These are classified into two broad areas, on-the-job training and off-the-job training. The method of training chosen, whether on-the-job or off-the-job depends largely on the type of attitude, skills and knowledge level or type of change required to take place. A review of the basic principles of how individuals learn would also inform the organisation on the method of training to be adopted (Boachie-Mensah, 2006).

On-the-job training is where the employee works, learns and develops expertise at the same time by observing and practising what an experienced colleague or superior does, emulating behaviour and actions. This method of training is considered cost-effective as it does not require much in terms of training resources. Armstrong (2003) lists the various on-the-job training methods as demonstration, coaching, mentoring and job rotation/planned experience. According to him, demonstration is where the superior or colleague tells, shows or demonstrates to the employees how to do a job and then allows them to proceed with it on their own. Coaching is a person-to-person method designed to develop individual skills, knowledge and attitude by creating understanding, direction and action. Mentoring is the process where the mentor who is usually a superior, teaches as well as inducts the trainee into the organisation by offering advice, guidance and support to develop the career of the protégé. Job rotation or planned experience method of training involves moving the employee from one job to another, and it is aimed at broadening the experience of the employee as well as offering the

employee the opportunity to acquire knowledge and skills in different departments.

Off-the-job training on the other hand, according to Acheampong (2006), is where the worker is taken off his or her job schedule to undertake the training programme at a different location. The employee broadens his or her knowledge base and acquires new ideas from the expertise of professional trainers, training materials and facilities as well as from other trainees. Off-the-job training methods include lecture, simulation, and conference or seminar. Classroom lecture method of training is where the trainer transfers information to the trainees with controlled content and timing. Communication is usually one-way, from lecturer to trainee and it is usually associated with college and secondary education.

Simulation is where a real life work-related problem with all the constraints and resources of the everyday work environment is created and the trainees try to solve the problem (Nsarko, 1975). Simulation is usually applied to middle-level management where trainees learn problem-solving skills. It is a useful technique for skills development as it combines both role-playing and case studies to obtain maximum amount of realism. Conference or seminar training method is a problem-solving approach where a group considers a specific problem or issue and they work together to find solutions to the problem. This involves a lot of trainee participation as the participants hold discussions and exchange views, ideas and experiences on particular topics. The discussion affords the participants and facilitators the opportunity to exchange ideas and opinions freely on a given subject. It also teaches

analytical skills and affords participants a good opportunity for change of attitude.

Both on-the-job and off-the-job training could be done internally or externally. The internal training programme is the kind undertaken within the organisation while the external training is the kind undertaken outside the premises of the organisation. Several factors account for the type of training that the organisation adopts. This includes the need for the employee to be working while still being trained, the need for the employee to be closely monitored, the type or content of training and the time and total cost of the training to be undertaken (Schuler & Jackson, 1996).

### **Information and communication technology (ICT)**

Information communication and technology (ICT) or information technology (IT) is a general expression covering computers, telecommunications and electronics. Lucey (1997) gives the definition of IT as the acquisition, processing, storage and dissemination of vocals, pictorials, textual and numeric information by a micro-electronics based combination of computing and telecommunications. Williams and Sawyer (2001) refer to ICT as the combination of computers and communication technology. ICT can therefore be said to be the convergence of communication technology and computers in the world today, converting data into information with high speed and efficiency.

Since its inception in the 1930s, ICT has gone through several stages of evolution. Schultheis and Sumner (1995) traced the evolution of the IT infrastructure which begun with the super computers which were very large

and specialised computer systems. This was then followed by mainframe computer systems, minicomputer systems, microcomputer systems, professional workstations, laptop computer, notebook computer and palmtop systems.

Whichever type of computer one is using, they all have similar features. All computers have central processing units (CPU), a random access memory (RAM) (also called the main memory), the input and output devices and a storage device. The input device is used to transfer data or information into the memory unit of the computer. Examples of the input devices are keyboard, mouse, scanner, touch screen and light pen. The CPU which consists of the memory unit, control unit and arithmetic logic unit receives the data and carries out calculations and does comparisons based on instructions and interprets the results. The output device is the medium through which the computer displays the results of the functions it has carried out. Examples of the output devices are monitor, liquid crystal display (LCD), printer, speaker and plotter. The storage devices include memory sticks, pen drives, floppy disk, hard disk, compact disc (CD) and digital versatile disc (DVD) (Saxena, 2003).

The business world in today's era is very technologically advanced, falling within the enterprise internet computing era. Companies began to connect computers with cables, using network software to help the machines send and receive information across the lines (Schellenberg, 1996). Essentially, it was for the company to be more effective. Computer networking has seen an increase in the speed of communication via e-mail for instance and document sharing. Laudon and Laudon (2006) state that

businesses are now heavily dependent on intranets and extranets, e-business, e-commerce and e-government. These technological infrastructures have become a matter of course for the more advanced countries like the United States of America, United Kingdom, Canada and Germany.

African countries too are rushing to catch up with the global ICT trend as they have identified that ICT is a key to the development of a country. More and more African countries are also now producing and launching ICT policies to assist in their development efforts. According to the United Nations Economic Commission for Africa (UNECA), Ethiopia prepared a draft national ICT policy and strategies document in December 1999. Nigeria launched her national policy for IT in May 2001 and in April 2004 The Gambia also launched her ICT policy. Ghana also recognised the importance of ICT. The country thus began a process to formulate a national ICT policy in March 2001 and in 2003, the country adopted an ICT policy dubbed “Ghana ICT for accelerated development (ICT4AD)”. This policy represents the country’s vision in the information age.

The overall objective of the Ghana ICT policy is to engineer an ICT-led socio-economic development process with the potential to transform Ghana into a middle income, information-rich knowledge-based and technology driven economy and society. To this end, the Government of Ghana established the Ghana-India Kofi Annan Centre of Excellence in ICT, also known as the Advanced Information Technology Institute (AITI) in 2003. This centre is a partnership between the Government of Ghana and the Government of India. It works to stimulate the growth of the ICT Sector in

the ECOWAS sub-region (<http://www.aiti-kace.com.gh>). The Centre, which houses West Africa's first supercomputer offers the following services:

- an enabling environment for innovation, teaching and learning as well as practical research on the application of ICT4D in Africa;
- specialised training courses to decision-makers and important social groups such as parliamentarians;
- Corporate training programmes geared to improving productivity and profits towards overall competitiveness; and
- offering consulting services designed to assist individuals, institutions and businesses to keep pace with the rapid developments in ICT.

Since the early 1990s, ICT has been influencing human lives and the way business is done. According to O'Brien (1990), information systems are used to support functions of businesses. Lucey (1997) also stresses that there is little doubt that IT is having a profound influence on all aspects of life including organisations and management information systems. Laudon and Laudon (2006) opine that businesses continuously seek to improve the efficiency of their operations in order to achieve higher profitability. Information systems and technologies are some of the most important tools available to managers for achieving higher levels of efficiency and productivity in business operations, especially when coupled with changes in business practices and management behaviour.

In most organisations today, information systems are used in production/operations, in marketing, finance, accounts and human resource management. Entire industries too are not left out. The influence of ICT can be felt in manufacturing, banking and finance, insurance, healthcare, transport



and utilities. ICT has made several strides in the world and introduced changes into the business world. Changes affecting organisations include more competition, faster pace of work and increased globalisation (Lucey, 1997).

Today, with access to the right ICT infrastructure, people can talk to one another no matter where they are on the planet. Video conferencing and email have reduced the need for business travel, allowing business people more time to undertake core business activities. In some societies, home working or teleworking, is becoming more common as workers no longer have to be physically present in their offices but to just access the company network from anywhere using ICT and work (Armstrong, 2003). Video conferencing and remote control of another computer has allowed teachers and trainers to run lessons from their respective locations which could be far removed from where the students or trainees are. The 24-hour news networks telecast events from around the world as they happen such that people have access to on-the-spot information of events taking place in any part of the world.

ICT can be put to several uses. According to O'Brien (1990), there is the application software for end-users which consists of programmes that direct computers to perform specific information processing activities for the end-user. Another category is the general application programmes which are also known as productivity packages because they significantly increase the productivity of end-users. They perform common information processing jobs for end-users like word processing, spreadsheet, database management, integrated package and graphics programmes. The last category is the application specific programmes and these are business application

programmes, scientific application programmes and other application programmes.

Williams and Sawyer (2001) identify several uses to which ICT is put in the world today. One use of ICT is education. This is through distance learning or on-line educational programmes where people can pursue higher education which they might not be able to do through the usual way of being physically present in a classroom. Another is health where people can use the internet for self education or get general advice on health matters. ICT is also used for relationships (on-line matchmaking), entertainment (games, hobbies, jokes) and transacting business like banking, shopping and paying bills.

Fingar, Read and Stikeleather (1996) state that forward-thinking companies are redesigning core business processes to gain competitive advantage called business process re-engineering (BPR) and ICT plays a major role in the BPR. The technology of businesses exerts a major influence on how work is organised, managed and carried out. Armstrong (2003) opines that the introduction of new technology may result in considerable changes to system and processes where new skills are required and new methods of working are developed. This new technology can therefore present considerable threat to employees. Employees would therefore need to be exposed to and trained in appreciating and using ICT.

### **Information and communication technology (ICT) training**

ICT is a concept that is new to a lot of people. There are those who see technology as a threat to their job security, those who do not trust anything to do with technology and those who embrace it. As stated by Lucey (1997),

technology simplifies and reduces tasks needing manual skills and strength. When properly applied, technology can increase productivity. An example is the combination of a computer, printer and photocopier that would produce several copies of a document which formerly had to be typed over and over again by a copy-typist to get the required number of copies. Some staff will resist ICT training because they do not like change, especially one to do with technology. Employees therefore have to be assisted to get over their morbid fear of computers and have a better appreciation for technology as a whole. They need to be supported and convinced that ICT training will make their lives generally easier in the long run.

People acquire ICT training through three main mediums - ICT training specialists, co-workers and self-training using manuals, on-line or trial and error experimentation. Whichever method of training is used, ICT training should be practical for better conceptualisation. While training is generally seen to be a 'good thing', organisations should not just send staff on an expensive IT training course without being sure that the course is worthwhile, or even that it is the right course for the staff. An ICT training needs analysis should be done first to identify the specific training need that is required by the staff and the staff's current level of ICT knowledge (<http://www.ictknowledgebase.org.uk/gettingyourselftrained>).

In ICT training, there are three fundamental learning actions and these are to inform, educate and train. According to Fingar et al. (1996), to inform is where people working with technology are kept abreast of both the fast changing technology and the company's plans and projects that involve the technology. Regular briefings, seminars, telecasts, newsletters and other

means of company communication can provide employees with working knowledge of technology and how it is being deployed in the business. Concepts and theories are pre-requisites to training. Education is where learners are presented with non-threatening non-pressured opportunity to learn new concepts, where the educational activities are learner-friendly. Finally, training provides the “how to” of doing things. ICT training should therefore be centred in “doing”.

The most effective means of learning a task is to perform the task. According to Kalicharan (1996), users must be taught exactly how to use the programmes that have been installed, any special procedures to be used in unusual cases and procedures for inputting, correcting and generating reports. A comprehensive user procedures manual should be developed, describing in details the procedures to be followed when working with both the software and hardware. This is how to undertake ICT training for full acceptance by the employees who perceive technology as a threat.

ICT training can be grouped into two broad areas. There is the hardware training and software training. The computer hardware is made up of an interrelated combination system of components that performs the basic systems functions of input, processing, output, storage and control (O’Brien, 1990). The hardware components are computers and the communication gadgets.

The peripheral hardware covers both input and output equipment that depend on direct connections or telecommunication links to the CPU which is the most important hardware component of a computer system. Telecommunication or data communication is the use of such network of

interconnected computers and peripheral devices like modems, servers and network components to process and exchange data and information. Physical links to the devices include twisted-pair wire, coaxial cables, and fibre optic cables. Microwave systems, communication satellite systems and cellular radio use microwave and other radio waves to transmit and receive data. The hardware of computers is the domain of IT specialists who are mainly concerned with the integratability, connectability, shareability, phaseability, availability, and reliability and security of the computer. The hardware therefore is very essential and as stressed by Arnold (1991), without hardware there is no computer.

The IT specialists in organisations need to be trained to be efficient in provision of the hardware requirements above. It is only through ICT training that they can keep up with the technology that keeps on changing. Gone are the days when ICT depended solely on telephone lines. Now, ICT is using microwaves and satellite. Without proper training, the IT specialist would not be abreast with current technological changes.

The computer software is what is used by the end-user. Just like the hardware, a computer without software is like a VCR without a videotape (Arnold, 1991). End-user computer skills training are necessary to upgrade the technical and behavioural skills of ICT end-users. End-user computing is a direct hands-on approach to computing by users who include managers, office staff, sales people and production workers. As stated by O'Brien (1990), jobs created by computers within a computer-using organisation may require different types of skills and education for them to be able to effectively

use the computers. Therefore, training and retraining is necessary for the individuals within the organisations.

Software training is required for end-users every time software is improved and/or new ones are introduced. End-user software applications include general purpose productivity packages for word processing, electronic spreadsheet, database and information management, integrated packages, graphics and data communication packages. Other software resources include packages for office automation application such as desktop publishing, electronic mail, internet access and office support systems. Some of the end-user applications listed by Lucey (1997) are decision support system, expert system, executive information systems, end-user programming, computer based training, search and retrieval of information and text handling and publishing. An example of current electronic spreadsheet is the MS Excel which has all sorts of features that enable users to do arithmetic calculations and analysis, statistical analysis, draw graphs and charts to accompany reports. MS Word enables users to use mail-merge features to produce thousands of letters by the click of a button. According to O'Brien (1990), ICT software training will:

- increase productivity of secretarial personnel and reduce the cost of creating, reviewing, revising and distributing office documents and messages;
- shorten the turnaround time between the preparation and receipt of messages and documents by moving information quickly and efficiently to the people who need it;

- reduce the frustration, expense and errors involved in revising text and images for attractive and effective document and presentation;
- store, retrieve and transmit electronic documents, images and messages quickly and efficiently; and
- increase general productivity of staff who use ICT.

As stated above, training in ICT results in higher levels of ICT use by staff of the organisation. Staff would be able to apply ICT use to more work tasks and there is greater sense of mastery over, and accomplishment with work. As stated by O’Leary and O’Leary (1997), end-users can gain computer competency through ICT training and use computers to improve their productivity and their overall value to the organisation. According to them, ICT competency allows an employee to take advantage of increasingly productive software, hardware and the connectivity revolution that are expanding the computer’s capabilities.

### **Prospects for ICT training**

Armstrong (2001) states that the fundamental aim of training is to help an organisation to achieve its purpose by investing in its employees to enhance their performance and to bring about the best use of their natural abilities. According to Noe (2003), the goal of training is for employees to master the knowledge, skill and behaviour emphasised in training programmes and to apply them to their day-to-day activities for optimum results.

There are several prospects for training in general and ICT training in particular. Notable among the prospects for ICT training are: (i) philosophy of management towards ICT training; (ii) globalisation; (iii) the need to adapt to

change; (iv) organisations placing emphasis on customer service and quality; and (v) introduction of new technology.

The training philosophy of management of an organisation shows the degree of importance it attaches to training. The training philosophy of an organisation is linked to its policies which often indicate or express the amount of training to be given. Milkovich and Boudreau (1994) believe that this philosophy is often linked to the fundamental purpose or objectives of the organisation because it is a reflection of the basic beliefs, values, aspirations and the philosophical priorities to which the organisation is committed. The training philosophy therefore provides the framework for facilitating training generally and ICT training in particular. So where the philosophy of management towards ICT training is to train and develop staff to acquire the knowledge, skills and attributes necessary to achieve the corporate objectives of the organisation, the chances of Management providing ICT training to staff will be favourable.

Globalisation is another prospect for ICT training. Globalisation is the process by which people of the world are unified into a single society and function together. This process is a combination of economic, technological, socio-cultural and political forces (<http://en.wikipedia.org/wiki/Globalization>). The driving force behind globalisation is the use of technology (the internet) which allows data and information to be accessed instantly by people living at greater distances apart. According to Noe (2003), global business expansion has been made possible by technology. An offshoot of globalisation is the desire by organisations to be competitive. Competitiveness refers to an organisation's ability to maintain and gain market share. An organisation



which has competitive advantage in the market is one that adopts a vigorous ICT training which would grow the business and improve customer service by the provision of skills and knowledge that the employees would need to be successful. The organisation will have to continuously prepare the employees through training to use ICT technology to communicate and cooperate with customers from different countries and different backgrounds.

Another prospect for ICT training is the need for an organisation to adapt to change. Organisational transformation using systems like total quality management, business process re-engineering and performance management brings about changes that organisations need to adapt to (Armstrong, 2003). Several factors such as changes in the workforce, government regulations and technological advances affect the requirements of companies to change. The internet has facilitated the conduct of business transactions and relationships electronically. As a result of its changing environment, employees must embrace the idea of continuous learning and sharing knowledge. ICT training would increase the sharing of knowledge with colleagues and other work groups within the organisation using e-mail, inter- and intranet facilities and employees must necessarily keep abreast with these trends through training.

Placing emphasis on customer service and quality is another prospect for ICT training. Customers demand quality services from employees of organisations. The non-adherence to quality would restrict the ability of an organisation to sell its products or services (Noe, 2003). Customer-driven excellence includes meeting of schedules and the constant production and provision of timely and accurate information to customers. Employees who

interact with customers face a challenge in the way they interact with them as it affects the organisation's reputation. The combination of emphasis on customer service and quality enhances the prospects for ICT training in the sense that the knowledgeable use of computers would result in the provision of prompt and quality information and services to customers.

The introduction of new technology engenders changes in skills requirements in staff, thereby providing prospects for ICT training. Technology is advancing and becoming more sophisticated at a very fast pace and as opined by Armstrong (2003), the introduction of new technology usually results in some changes to systems and processes. New advances in technology and their usage encourage maximum interaction between employees. Computer-integrated systems enable employees to take more responsibility for the way they satisfy customers, share information with other workers and be able to understand the relationship between themselves and how all the systems work. Consequently, staff have to receive continuous ICT training in the usage of the facilities which would enable them perform successfully.

### **Challenges of ICT training**

Armstrong (2001) states that if training is effective, it minimises learning costs and offers trainees the opportunity to increase their levels of competence and enhance their skills to facilitate the attainment of more job satisfaction and improve their performance. Despite the numerous benefits derived from training, ICT training in particular is beset with some challenges. Some of the challenges of ICT training are (i) training time; (ii) allocation of

resources to ICT training; (iii) motivation to learn and to use the learning; (iv) course objectives, content and methods of training. Other challenges include badly trained instructors and trainers; employee diversity and resistance to change; and inadequate ICT training facility and availability of adequate computers in the workplace.

Time for training is a major challenge to ICT training that organisations contend with. Time constraint here refers to the specific time of the working day the training is scheduled to take place and the duration of the actual training. Employees need to spend enough time to learn and practise during ICT training for better comprehension. Organisations also need a balance between the employees being behind their desk working to achieve the organisational goals and the length of time they can be away from their work to attend a training programme.

Allocation of resources to ICT training is another challenge that organisations face in relation to ICT training. Resources are usually allocated for running the various divisions/departments of an organisation. The training departments of some organisations are not allocated enough resources to carry out their tasks effectively. The benefits of training cannot be quantified in monetary terms. Therefore, employee training may not be allocated enough resources since the allocation of resources is done on cost-benefit basis in monetary terms. As stated earlier, the benefits of ICT training include higher levels of ICT use by staff which results in higher productivity. However, when faced with financial difficulties, human resource development programmes are an organisation's major target for cost-cutting efforts (Desimone & Harris, 1998), thereby leaving the human resource

development's programmes with limited financial resources to be really effective.

Motivation to learn and to use the learning is another challenge to ICT training in an organisation. Despite the benefits that accrue to both the staff and the organisation from training, some staff lack the motivation that is necessary to undertake the ICT training and to use the knowledge they have acquired back on the job. Trainees must not only be motivated to learn, but they must also be motivated to use their learning when they go back to their jobs. This was re-emphasised by Armstrong (2003), who stated that a learner's motivation to learn is one of the most critical factors that affects learning effectiveness therefore individuals must be motivated to learn.

In the view of Mumford (1976), training affects esteem and self-actualisation and allows an individual to achieve and grow in confidence. Therefore training should not be an end in itself. It must be a process by which an individual is enabled to be what he/she wants to become. Employers and trainers must recognise that people have different levels of needs which must be considered before training is undertaken. Some staff who do not need the training become disinterested in the course and this also affects their motivation to learn. Since most learning takes place in the work environment and people have the need for achievement and recognition then effective training could only be achieved whenever these needs are satisfied on a continuous basis.

A further challenge to ICT training is the course objectives, content and methods of training. Morton (1991) argues that often the objectives and content of a course may be inconsistent with the aspirations of the organisation

and the knowledge gained would be unrelated to the job performed by the individual. ICT training is usually outsourced to trainers who may not tailor the content to the needs of the organisation. Very often, employers also purchase pre-packaged ICT training programmes from vendors without assessing their suitability for the organisation's needs. This may be due in part to a previous experience with the outside vendor or geographical proximity.

As Acheampong (2006) opines, the content of the training programme should be suitable to the needs of the trainees and the requirements of the organisation for the training to be beneficial. The method of training also affects the learners because certain methods of training may not be appropriate for the trainees and the job they will perform later on in their jobs (Morton, 1991). The method must provide real information and prompt trainees to engage in the amount of practice for the skills being learnt. A most important criterion is that the method must be consistent with the training type and content. It will be highly inappropriate for a computer software-based training programme to be conducted in a classroom without computers which will not afford the trainees the opportunity to fully practice and/or conceptualise what is being taught.

Badly trained instructors and trainers are the bane of ICT training. The organisation for Economic Cooperation and Development (OECD) (2006) observes that generally large public higher education institutions in Africa lack quality ICT instructors to provide most staff or students with adequate access. Sometimes, when outside vendors are employed, the trainers/instructors provided may not be effective in communicating their knowledge clearly. They may also lack very good interpersonal skills and the ability to motivate

staff to learn although such individuals may possess subject-matter expertise. Even where the trainers possess subject-matter expertise, they may not be effective trainers. The problem is worsened if the trainer lacks subject-matter expertise. According to DeSimone and Harris (1998), the trainers may rely too heavily on text-books and not be able to effectively explain important concepts and/or how these are applied to the job.

Employee diversity and resistance to change can pose a further challenge to ICT training. A contributory factor to the diversity is the ageing of the work force. Older workers mostly, as well as other personnel, are likely to build up inertia that propels them to resist change, even if that change might be beneficial (Robbins & Decenzo, 1998). Robbins and Decenzo (1998) offer three reasons why older workers are likely to resist change as: (i) uncertainty; (ii) concern over personal loss, and (iii) belief that the change is not in the best interest of the organisation. Employees may not know what the future holds with regard to their continued employment because the introduction of new technology would simplify work processes and may engender a reduction of the work force ultimately. Secondly, since the employees have already made investments in the work in view of their long stay in the job, the fear would be that with the introduction of the new technology they may lose their positions of authority, friendship, personal convenience or other valued benefits. The older employees would therefore resist the change since they have invested more into the system and have more to lose by adapting to the change.

Inadequate ICT training facility and availability of adequate computers in the workplace is another challenge of ICT training. This is a real challenge faced by most organisations in third world countries especially. Insufficient

network infrastructure and computer laboratories are a hindrance to facilitate ICT training in Africa (OECD, 2006). Organisations sometimes contract ICT providers to provide its employees with ICT training but the facilities on which the training is conducted may either be more or less sophisticated than that which the employees would use in the actual job situation. Training is thus impaired because of the incompatibility of equipment used for the training and that being used on the job. Insufficient computers means trainees may have to share the little computers available. This may not afford them enough practice opportunities.

### **Conclusion**

It was established that human beings form the basis of productive activities, notwithstanding the existence of the other factors of production like land and capital. Consequently, organisations must make efforts to facilitate job-related learning constantly with the view of improving the knowledge, skills and change in the attitudes of its very important human capital through constant training. This training must be cost effective and should meet actual rather than imagined needs of work. Therefore a total training needs analysis must be conducted to establish the foundation for the training programme.

ICT training results in higher levels of ICT use by staff of the organisation. However, organisations should not send staff on expensive ICT training courses without being sure that the course is the right one for the staff taking into consideration the staff's job schedule and the objectives of the organisation.

The prospects of ICT training include the philosophy of management, globalisation, the need to adapt to change, organisations' emphasis on customer service and quality as well as the introduction of new technology. The challenges cover time allocated for training, (ii) allocation of resources for training (iii) motivation to learn and to use the learning and (iv) course objective, content and method of training. Other challenges include badly trained instructors and trainers, employee diversity and resistance to change, inadequate ICT training facility and availability of adequate computers in the workplace.



## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **Introduction**

According to DeSimone and Harris (1998), any human resource development programme can be examined from a number of perspectives. Consequently, it is important to specify which perspectives will be considered in this study. In this chapter, the research methodology used to elicit the information to be analysed is discussed. The chapter contains discussion on the study organisation, study design, population and sampling, data collection, field challenges and data analysis of collected data.

#### **Study organisation**

This study was conducted at the head office of SSNIT, which is known as the Pension House. The Pension House contains the offices of the Director General, Deputy Director General, six (6) General Managers and twenty-nine (29) departments and offices. The general managers head each of the six divisions of the Trust namely:

1. General Counsel
2. Finance
3. Administration and Human Resource (Admin & HR)
4. Investment and Development (IDD)
5. Management Information Systems (MIS)

## 6. Operations

The general managers of the six Divisions report to the Director General while the departments report to the various general managers through the departmental heads. In addition, there are six other departments and offices which form part of the office of the Director-General (DG). They are Actuarial, Research, Strategic Planning, Internal Audit, Public Affairs and office of the Company Secretary. They form the directorate and are referred to in this study as the seventh Division. The organogram of the SSNIT Pension House is attached as Appendix 1.

### **Study design**

The study design used was non-interventional, descriptive and exploratory. The non-interventional approach was used because no attempt was made to intervene in the situation (Rugg & Petre, 2007). The descriptive method was used to describe the type, quality and quantity of ICT training given to SSNIT staff and to give a clear picture of the ICT training situation in SSNIT. Exploratory research which provides insights into and comprehension of an issue or situation was used because little was known about the ICT training situation in SSNIT. Therefore, there was not enough information available on the subject. The research therefore relied on reviewing available literature and/or data as well as informal discussion with staff, questionnaire and observation (Trochim, 2006).

These research methodologies were considered an appropriate design to help to achieve the purpose of the study and to draw meaningful conclusions.

## Population and sampling

For the purposes of this study, the study population was the SSNIT head office staff, which was eight hundred and four (804) in number. The entire SSNIT head office staff, which constituted the study population, could have been used for the study. However, due to the limited time frame, limited financial resources available and accessibility, a sample was used.

Sampling is the process of selecting a sub-group from the target population which are to be included in the study. The sample size selected enabled the researcher to study a relatively small number of units in place of the target population to obtain data that were representative of the whole target population (Sarantakos, 1997). The right sample size was arrived at by using both statistical and non-statistical methods.

According to Ary, Jacobs and Razavieh (2002), a sample size can be calculated using the following formula:

$$N = \left[ \frac{1}{\Delta} \right]^2 (z\alpha + z\beta)^2$$

Where: N = the number needed in the sample

$\Delta$  = the specified effect size

$z\alpha$  = the z-score for the level of significance

$z\beta$  = the z-score for the desired probability of rejecting the null hypothesis.

In order to determine the sample size, Somekh and Lewin (2005) state that the larger the sample size, the smaller the error will be in estimating characteristics of the whole population, but the more it would cost to

administer a survey and analyse the data. The research therefore needed to have a large sample size in order to draw valid conclusions.

For a population size of 804, the sample size should be 260 respondents (Sarantakos, 1997). However, taking into consideration the population size and the limitations stated above, the research was conducted on a sample size of 100 respondents who have all the characteristics of the population.

A number of sampling procedures were used. Stratified random sampling procedure was used to select twenty-one (21) offices to form the strata from which the respondents were selected. The offices selected were Actuarial, Benefits, Director General's office, Equities, Financial Accounts, Fixed Income, General Manager General Counsel's office, General Manager Operation's office, General Services and Government Operations. The others were Human Resource Development, Human Resource Management, IT Applications, IT Systems & Operations, Management Accounts, MIS Programmes, Network & Communications, Operations Coordinator's office, Quality Management, Research and Students' Loan. These offices were selected because together, they performed all the functions of the Trust and the staff used ICT in their daily work schedule. The offices selected also fall under the seven divisions of the Trust.

Convenience/accidental sampling is a situation where any staff member present in the target office at the time of visit was selected to complete a questionnaire. This non-probability sampling procedure was used for the study because it was convenient in selecting the respondents from each stratum. The sample used for the study was thus representative of the

population as they had the same range of characteristics or attributes in similar proportions to the target population (Somekh & Lewin, 2005). Table 1 presents a breakdown of the respondents according to the departments/offices they were drawn from.

**Table 1: Division of respondents**

Divisions	Frequency	Percent
Admin & HR	10	12.2
Finance	10	12.2
General Counsel	1	1.2
IDD	8	9.8
MIS	17	20.7
Operations	26	31.7
Directorate	10	12.2
Total	82	100

Source: Field data, 2009

The results showed that the respondents were drawn from 21 departments/offices of SSNIT. The office that had the most respondents was the Operations Coordinator's office with 10 respondents. For the purposes of analysis, the respondents have been grouped under the seven divisions of the Trust as follows – twenty-six (31.7%) respondents, forming the majority were from Operations Division, seventeen (20.7%) from MIS Division, ten (12.2%) each from Administration and HR, Finance and Directorate Divisions, eight (9.8%) from IDD and one (1.2%) from General Counsel Division. According

to the results, the respondents were drawn from all the seven divisions of the Trust as contained in the organogram for the study.

### **Data collection**

In order for the research to address the objectives and answer the research questions, there was the need to get adequate data from various sources, both primary and secondary. Primary data were collected using questionnaires, observation and interview of some staff whilst secondary data were collected from SSNIT documents and periodicals.

The questionnaires were administered by hand to the various respondents. Questionnaires were used because all the respondents were literate and so could read, understand and answer the questions posed. The questionnaires were administered between 13<sup>th</sup> and 17<sup>th</sup> April 2009 and were retrieved between 20<sup>th</sup> and 30<sup>th</sup> April 2009. The total number of questionnaires distributed was 100.

Thirty-one (31) close-ended questions were asked to collect data about the respondents and also to solicit answers to general questions. Twelve (12) open-ended questions were asked to solicit in-depth answers to some questions. Some Likert-type questions were also used to evaluate and measure responses using weights about the extent of respondents' knowledge and views on training in general and ICT training specifically.

The questionnaire was designed in sections. Each section dealt with each of the main objectives of the study. Section A questions sought the demographic details so that the respondents could be well classified. Questions in section B assessed the type, quality and quantity of ICT training

given to staff in SSNIT. Section C questions assessed the ICT training needs/development of staff. Questions in sections D and E respectively addressed the prospects and challenges of ICT training at SSNIT. A sample of the questionnaire is attached as Appendix 2.

### **Field work challenges and ethics**

The researcher faced a couple of challenges when gathering data for this study. First was the unwillingness on the part of staff to complete the questionnaires that were administered to them. They considered it a waste of their valuable work time since they had to take time off their jobs to write out their responses, while others too were not ready to give detailed responses for fear of victimisation. Second, was the lukewarm attitude of staff towards the whole exercise. They were of the view that this research was not going to have any impact on any training they might or might not get in SSNIT.

The question of what information to divulge and what fell under the data protection Act was also a source of difficulty both for the researcher and the respondents. This was because certain categories of staff that were sampled regularly dealt with “confidential material” or personal details of clients and so were either reluctant to “compromise” their positions, did not know how far they could go in genuinely answering questions or hid behind the confidentiality clause within their contracts to frustrate the research efforts. While the researcher sympathises with some genuine cases of possible conflict with employment contracts, it is unbelievable that people in public organisations could still use such tactics to obscure free-flow of information. Other challenges encountered were the limited time available for the

researcher to follow-up on and retrieve administered questionnaires and the needed stationery necessary for the dissertation.

### **Data analysis**

Data for this study were analysed using the Statistical Product and Service Solutions (SPSS) version 10.0 software. After the questionnaires were retrieved, time was spent to read through all of them and checked for completeness and consistency.

All the open-ended questions were coded and a coding manual was created. Data were then entered using the SPSS. Statistical tools like frequency distribution, percentages and cross tabulation were used to describe the variables.



## **CHAPTER FOUR**

### **RESULTS AND DISCUSSION**

#### **Introduction**

This chapter presents an analysis and discussion of the findings from the questionnaire administered to staff of SSNIT. One hundred questionnaires were administered to staff of the Trust. Out of this, eighty-two (82%) were retrieved and these were analysed. The results of the questionnaires are presented under five main headings. The first focuses on the demographic details of the respondents using both frequencies and percentages. The four other headings deal with each of the substantive objectives of the study which are to:

- assess the type, quality and quantity of ICT training given to staff in SSNIT;
- assess the ICT training needs/development of staff;
- examine the prospects for ICT training in SSNIT; and
- examine the challenges of ICT training in SSNIT.

#### **Demographic details of respondents**

Initially, the demographic details relating to respondents' gender, age, highest educational qualification, division and department were sought. These data were necessary so that the respondents could be properly described.

Fifty-five (67.1%) of the respondents were males and twenty-seven (32.9%) were females, making the males more than the females.

The ages of the respondents varied. Ages of respondents were grouped into ranges of ten years each between 21 years and 60 years which is the compulsory retiring age in Ghana. Fourteen (17.1%) of the respondents were aged between 21 and 30 years and twenty-four (29.3%) fell within the 31 and 40 year age group. Twenty-nine (35.4%) respondents were aged between 41 and 50 years and fifteen (18.3%) were aged between 51 and 60 years.

Table 2 presents the groupings of respondents by age and clearly shows that a lot more of the employees were aged above 40 years. SSNIT thus seems to have an aging workforce and this can have repercussions on their training capabilities. According to DeSimone and Harris (1998), older workers require a different approach to training than younger workers, therefore the ages of workers need to be factored into whatever training programme is being designed for workers of an organisation.

**Table 2: Age group of respondents**

Age range in years	Frequency	Percent
21-30	14	17.1
31-40	24	29.3
41-50	29	35.4
51-60	15	18.3
Total	82	100

Source: Field data, 2009

The highest educational qualification of respondents was also sought and the results are presented in Table 3. From the results, the majority of the respondents, consisting of forty-seven (57.3%) respondents had acquired first degrees. Twenty (24.4%) had Masters/PhD degrees, six (7.3%) each possessed Higher National Diploma (HND) and Professional Qualification whilst two (2.4%) possessed SSS/A level. This shows that most of the staff of SSNIT were highly educated and as opined by Acheampong (2006), the amount of an employee's schooling determines his/her level of trainability. It is easier to train highly educated people than those who have received less schooling.

**Table 3: Highest educational qualification of respondents**

Educational Qualification	Frequency	Percent
SSS/'A' Level	2	2.4
HND	6	7.3
First Degree	47	57.3
Masters / Phd Degree	20	24.4
Professional Qualification	6	7.3
Diploma	1	1.2
Total	82	100

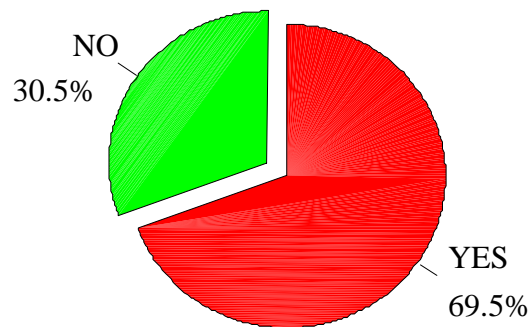
Source: Field data, 2009

### **Assessing the type, quality and quantity of ICT training given to staff**

ICT was extensively used in SSNIT. ICT was used to perform the five core functions of the Trust as well as being used by other departments like actuarial, research, accounts and general administration. The human capital

which has the knowledge, skills and abilities creates value for an organisation so it is considered the most important asset of an organisation. This human capital therefore needs to be developed in order to continue creating value for the organisation. This therefore led to the assessment of the type, quality and quantity of ICT training given to staff of SSNIT before they perform their job schedules which involved the use of ICT. The respondents were requested to answer questions on whether they had attended any ICT course organised by SSNIT, how they were selected for the course, how they received the ICT training, adequacy of the duration of the course and to assess the beneficial value of the training.

Fifty-seven (69.5%) of the respondents stated that they had attended an ICT course organised by SSNIT while twenty-five (30.5%) stated that they had never attended any ICT training in SSNIT. This is presented in Figure 2 and shows that the majority of the respondents had attended an ICT course organised by SSNIT. This shows that SSNIT had taken a cue from O'Brien (1990), who stated that ICT training would increase the general productivity of staff who use ICT.



**Figure 2: Attendance of ICT course organised by SSNIT**

Source: Field data, 2009

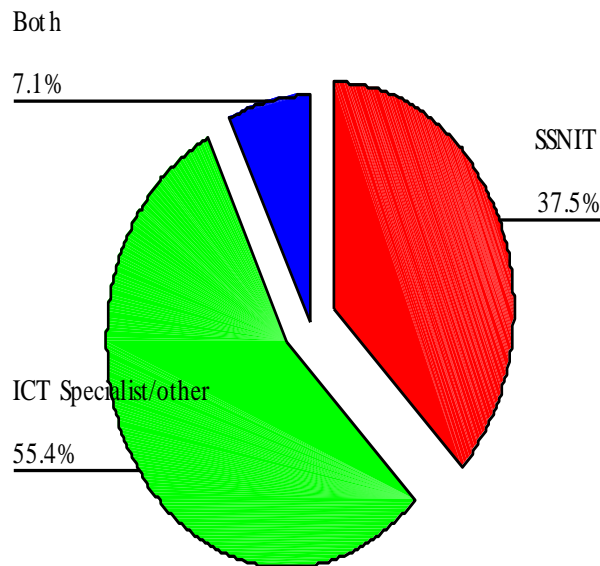
Table 4 shows the responses to the question of how staff were selected to attend ICT courses organised by SSNIT. Out of the fifty-six responses received of respondents who had attended an ICT course organised by SSNIT, twenty-one (36.8%) were nominated by their supervisors, thirty-two (56.1%) were invited by the Human Resource Development (HRD) department and three (5.3%) requested for the ICT training themselves. The majority of the respondents being invited for training to improve upon their skills and competencies by the HRD department therefore supported Mullins' (2007) view that training is necessary to ensure an adequate supply of employees with the right competencies to meet current and future job demands.

**Table 4: Selection for ICT course**

Selection Criteria	Frequency	Percent
Supervisor's nomination	21	37.5
Invitation by HRD Dept	32	57.0
You requested for it	3	5.5
Total	56	100

Source: Field data, 2009

Respondents were asked to state how they received the ICT training and the responses are presented in Figure 3. The results showed that SSNIT relied more on external specialists than in-house professionals for ICT training of its staff.

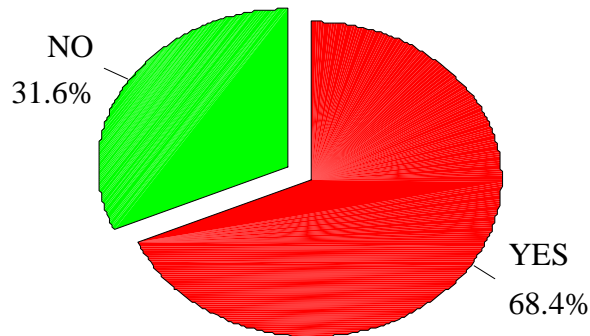


**Figure 3: Mode of ICT training**

Source: Field data, 2009

From Figure 3, thirty-one (55.4%) of those who had attended the ICT courses received their training from external ICT specialists/other institutions. Twenty-one (37.5%) received theirs from SSNIT specialists and four (7.1%) received theirs from the joint efforts of both SSNIT and external ICT specialists/institutions. This is an indication that SSNIT makes more use of external ICT specialists/institutions than internal specialists. It goes to confirm the investigation of the researcher that SSNIT did not have enough well-trained in-house ICT professionals capable of providing ICT training to staff therefore external specialists were used more often.

The duration of the ICT training was also examined. Thirty-nine (68.4%) of the respondents found the duration of the course adequate whilst eighteen (31.6%) found the duration inadequate. This is presented in Figure 4.



**Figure 4: Adequacy of ICT course duration**

Source: Field data, 2009

Respondents who found the duration of the ICT training inadequate were requested to explain. Out of the eighteen respondents who found the duration of the course inadequate, thirteen (72.2%) stated that it accounted for the facilitators not being able to exhaustively treat all the topics within the time allotted for the course. This indicates that individual learning differences were not factored into drawing up the training programme which resulted in some topics not being treated within the allotted time. According to DeSimone and Harris (1998), people learn at different rates and this must be considered when scheduling training programmes so that the programme can run at the pace that all participants will be comfortable with as well as treating all the contents on the programme.

The beneficial value of the ICT courses attended was assessed. Fifty-four (94.7%) of the respondents found the ICT courses they had attended beneficial. Three (5.3%) of the respondents however, did not find the training beneficial. The responses are presented in Table 5.

**Table 5: Positive impact of training**

Impact of training	Frequency	Percent
Can now use computer	2	4.0
Better use of ICT tools	16	31.0
Improved work efficiency	33	65.0
Total	51	100

Source: Field data, 2009

Out of the fifty-four respondents who found the training beneficial, thirty-three (65.0%) stated that the training had improved their work efficiency. Sixteen (31.0%) of them could now make better use of ICT and two (4.0%) were introduced to how to use computers. The high number of respondents who found the course beneficial is a confirmation of what O'Brien (1990) said, that ICT training will increase the general productivity of staff who use ICT.

Out of the three respondents who did not find the training beneficial, one respondent did not find it beneficial because the course instructor was not able to properly treat all the topics stated in the course outline within the course period while two said they did not find the training beneficial because the course content was beneath their knowledge level. As opined by DeSimone and Harris (1998), for the full benefits of ICT training to be realised, an ICT training needs analysis should be conducted first to identify the specific training that is required as well as a staff's current level of ICT knowledge so that the appropriate training can be provided.



**Table 6: How training could be made beneficial**

How training could be made beneficial	Frequency	Percent
Increase duration of ICT programme	10	53.0
Use external venues to prevent interruptions	1	5.0
More refresher courses	1	5.0
Run relevant/requested courses	6	32.0
Match course to the level of participants' ICT knowledge	1	5.0
Total	19	100

Source: Field data, 2009

Table 6 presents the responses of what could have been done to make the training beneficial. There were nineteen respondents for this question. Ten (53.0%) respondents stated that the duration of the course should be increased. Six (32.0%) stated that the course should be relevant to their job schedule or courses requested by a staff. The duration of the course has been mentioned several times, pointing to the fact that not all the course contents are treated before the end of the programme thereby depriving the trainees of the full benefits of training. According to Armstrong (2003), learning requires enough time for the learners to assimilate, test and accept. This time should therefore be provided in the learning programme for the full benefits of the programme to be realised.

### **Assessing the ICT training needs/development of staff**

A series of questions were asked to assess the ICT training needs/development of staff of SSNIT. As stated earlier, a thorough needs assessment of the organisation, the task and the person needs to be conducted to identify what needs to be done and why it needs to be done. Without determining the need for training, there's no guarantee that the right training will be provided for the right employees (Schuler & Jackson, 1996). The issues raised to address this objective included how the training needs of staff were assessed, whether the staff were involved in their training needs assessment and how they gained the ICT knowledge they use on their present job schedule. Respondents were also asked to list any ICT training they needed and how often ICT training in general should be given to staff.

The question for respondents to indicate which methods were used to assess their ICT training needs/development elicited multiple answers. From Table 7, respondents indicated that a combination of methods was used to assess their ICT training needs. Fourteen of the responses each related that the training needs assessment were from the annual assessment forms and from the supervisor's assessment. There were twenty responses indicating a change in job process that necessitated the training. Fifteen of the responses indicated a change in the technology in use. Thirty-two of the responses however, indicated no knowledge of how the ICT training needs assessment was carried out. This is an indication that some of the respondents were not involved in the training needs assessment. This is contrary to what ICOSA (2004) says, that identification of employees' training needs must be a joint effort between the

employer and employee and not the employer alone as was the case from the findings.

**Table 7: Method of training needs assessment**

Method of Assessment	Number of responses
Annual assessment form	14
Supervisor's assessment	14
Technology in use changed	15
Change in job process	20
Do not know	32
<b>Total</b>	<b>95*</b>

Source: Field data, 2009

\* Multiple responses exist

DeSimone and Harris (1998) stated that employees must be involved in their own training needs assessment. Therefore respondents were specifically asked to state whether they were involved in the assessment of their ICT training needs. Twenty-six (31.7%) of the respondents stated that they were involved in their training needs assessment while fifty-three (64.6%) indicated that they were not involved in the assessment. This is a confirmation that employees were not part of the assessment of their own training needs.

Respondents were to indicate how they gained the ICT knowledge that they were using in their present job schedule. Multiple responses were indicated and these are presented in Table 8.

**Table 8: Source of ICT knowledge being used for present job**

Source of ICT knowledge	Number of responses	Percent
Course organised by SSNIT	27	22.0
Course you attended on your own outside SSNIT	17	13.8
On-the-job training/from colleagues	22	17.9
Self-tuition	18	14.6
Prior knowledge before joining SSNIT	39	31.7
Total	123*	100

Source: Field data, 2009

\* Multiple responses exist

The survey results in Table 8 showed that the respondents gained the ICT knowledge they were using in their current job schedule from a variety of sources, including a combination of some of the above methods. The most cited response, thirty-nine (31.7%) showed that the respondents had prior knowledge of ICT before joining SSNIT. This was followed by twenty-seven (22.0%) responses by those who cited their knowledge of ICT through courses organised by SSNIT. There were twenty-two (17.9%) responses by those who gained their ICT knowledge through on-the-job training or from colleagues. Eighteen (14.6%) responses represented those who gained their knowledge through self tuition from books, the internet and trial and error. Seventeen (13.8%) also gained their knowledge from courses they had attended on their own outside SSNIT. The staff have thus used all the three mediums of the internet, self-tuition and trial and error to acquire their ICT knowledge.

The current ICT training needs of respondents were also sought. The responses are presented in Table 9.

**Table 9: ICT training needs of respondents**

Type of ICT training needed	Frequency	Percent
Microsoft Office	24	29.3
SSNIT Applications	11	13.4
Database Administration	3	3.7
System Security	1	1.2
Software for data analysis	8	9.8
Programming, Design & Analysis	5	6.1
IT Audit	1	1.2
Project Management	1	1.2
None	28	34.1
Total	82	100

Source: Field data, 2009

Respondents listed various ICT programmes that they needed training in. Those in the majority, twenty-four (29.3%) wanted to receive training in Microsoft office suite. Eleven (13.4%) respondents needed training in using specialised/customised SSNIT applications such as the Branch Operating System (BOS), Pension System, Benefits System, Records System and Students' Loan System. Eight (9.8%) respondents indicated that they needed training in the various data analysis software. These responses are an indication that staff know the immense benefits of ICT hence their request for

the training in these applications in order to put ICT to better use (Laudon & Laudon, 2006).

A cross-tabulation analysis was done between the ages of respondents and the type of training needs indicated and is presented in Table 10. The results shows that out of the twenty-four respondents who indicated Microsoft office application as their ICT training needs, eleven (46.0%) of the respondents fell within the 51 and 60 year group. Ten (42.0%) were aged between 41 and 50 years and 3 (12.0%) of the respondents were aged between 31 and 40 years. Of the eleven respondents who indicated SSNIT applications as their ICT training needs, 2 (18.0%) each belonged to the 21 and 30 and 51 and 60 year group. Four (37.0%) belonged to the 31 and 40 year group whilst 3 (27.0%) of the respondents belonged to the 41 and 50 year group.

The statistics indicated that eleven out of the total number of fifteen respondents within the 51 and 60 year group requested for training in Microsoft office. These respondents belong to the aged group that was sceptical about technology. It is an indication that they realise the importance of ICT hence their ICT training need in this end-user software which is a fundamental tool for getting their work done efficiently (Alter, 1999).

Respondents aged between 31 and 40 years stated most of the ICT training needs. They belong to the age group that embraces technology. They listed diverse applications software as well that they needed training in – Microsoft office, SSNIT applications, database administration, system security, software for analysis and project management. This group was considered the active work group so their desire was to improve upon their ICT training so that they could use ICT better to be more efficient in the jobs.

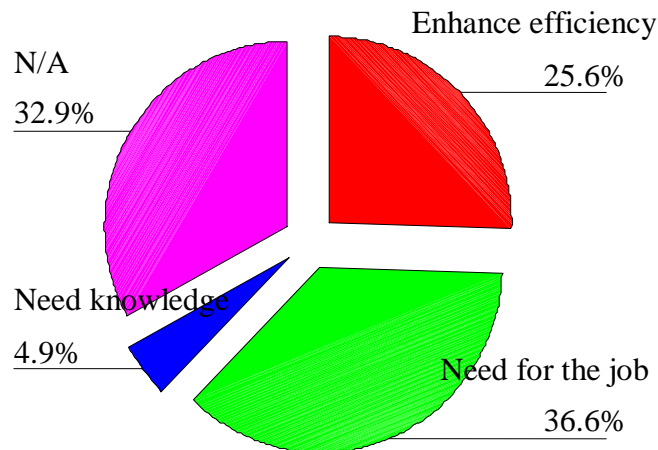
**Table 10: Requested ICT training needs vis-à-vis age of respondents**

Requested ICT training need	Age range of respondents				Total
	21-30	31-40	41-50	51-60	
Microsoft Office	0	3	10	11	24
SSNIT Applications	2	4	3	2	11
Database Administration	2	1	0	0	3
System Security	0	1	0	0	1
Software for analysis	0	3	5	0	8
Programming, Design & Analysis	2	0	3	0	5
IT Audit	0	0	1	0	1
Project Management	0	1	0	0	1
None	8	11	7	2	28
<b>Total</b>	<b>14</b>	<b>24</b>	<b>29</b>	<b>15</b>	<b>82</b>

Source: Field data, 2009

Respondents assigned various reasons for the above-stated ICT training needs and the responses are presented in Figure 5. From Figure 5, thirty (36.6%) of the respondents indicated that they needed the ICT training because the stated ICT knowledge was necessary for their current job schedules. Twenty-one (25.6%) stated that the ICT knowledge would enhance their work efficiency. Four (4.9%) of the respondents however indicated that they just needed the ICT knowledge and not necessarily for their current job schedules. The various training needs indicated by the respondents engender prospects for ICT training in SSNIT as end-user computer skills training are

necessary to upgrade the technical and behavioural skills of ICT end-users (Lucey, 1997).



**Figure 5: Reasons for ICT training**

Source: Field data, 2009

Respondents were further asked to state how often they needed the listed ICT training programmes. From the responses in Table 11, twenty-two (26.8%) respondents wanted the specified ICT training on an annual basis, followed by twelve (13.6%) who wanted the training when it became necessary. Nine (11.0%) wanted the training bi-annually while 4 (4.9%) wanted it very often. The responses of the respondents support Armstrong (2003) that ICT training should be done on a continuous basis.

The importance of training and development cannot be over-emphasised. As opined by O’Leary and O’Leary (1997), training to acquire knowledge, skills and abilities are necessary to improve employees’ efficiency and output and overall value to their organisations. This fact was evident



when respondents were requested to rate on a scale of strongly agree to strongly disagree whether the above-stated training would improve their work at SSNIT.

**Table 11: Frequency of stated ICT training**

Frequency of ICT training	Frequency	Percent
Once a year/annually	22	26.8
Twice a year/bi-annually	9	11.0
Thrice a year	2	2.4
Quarterly	2	2.4
Once every 2 years	3	3.7
Once every 4 years	1	1.2
Regularly	1	1.2
Very often	4	4.9
When necessary	12	13.6
No answer	26	32.8
<b>Total</b>	<b>82</b>	<b>100</b>

Source: Field data, 2009

The results presented in Table 12 showed that thirty-nine (47.6%) of the respondents strongly agreed that the training stated above would improve their work at SSNIT. Nineteen (23.2%) respondents agreed. Only one (1.2%) disagreed that the training would improve their work at SSNIT. However, twenty-three (28.0%) respondents were uncertain about whether the training would improve their work at SSNIT or not.

**Table 12: Improved work output after stated training**

Ranking	Frequency	Percent
Strongly agree	39	47.6
Agree	19	23.2
Uncertain	23	28.0
Disagree	1	1.2
Strongly disagree	0	0.0
Total	82	100

Source: Field data, 2009

Majority of the respondents totalling fifty-eight (70.7%) stated that the training would improve their work at SSNIT. This supports the view of Mullins (2007), that training increases the level of individual and organisational competence.

Respondents were asked to state whether they could perform their job schedules effectively without the above-stated training. This question elicited the responses that are captured in Table 13. The results in Table 13 showed that, five (6.1%) of the respondents strongly agreed that they could perform their job schedules effectively without the stated training while thirty-seven (45.1%) agreed. Seven (8.5%) respondents disagreed with no one strongly disagreeing. However, thirty-three (40.3%) of the respondents were uncertain as to whether they could perform their job schedules effectively without the training.

**Table 13: Effective work performance without the stated training**

Ranking	Frequency	Percent
Strongly agree	5	6.1
Agree	37	45.1
Uncertain	33	40.3
Disagree	7	8.5
Strongly disagree	0	0.0
Total	82	100

Source: Field data, 2009

Table 14 presents the responses to the number of times ICT training should be given to staff who use ICT in their jobs. The responses proved that majority of the respondents, seventy-four out of eighty-two, agreed that ICT training should be given to all staff of SSNIT who use ICT in the discharge of their jobs. They however just differed on the frequency of the training.

From Table 14, twenty-six (31.7%) of the respondents stated that ICT training should be given once every year. Fourteen (17.1%) said the training should be given when necessary/needed. Six (7.3%) respondents each stated that ICT training should be given once every two years, very often and as and when technology changes respectively. The respondents thus jointly agreed that all users of ICT need continuous ICT training.

Several reasons have been cited by respondents to justify the frequency of training that should be given to staff. Among them are the need to improve performance of staff, the need to keep staff current with changing technology and because there are constant changes/improvement in ICT in general. These

go to support the opinion of Acheampong (2006) that training is necessary because competence will not last forever due to such factors as curriculum and technological changes, transfers and promotions.

**Table 14: Expected number of ICT training for SSNIT staff**

Number of ICT training for staff	Frequency	Percent
Once a year	26	31.7
Twice a year	5	6.1
Thrice a year	1	1.2
Once every two years	6	7.3
Once every four year	1	1.2
Quarterly	4	4.9
Regularly	5	6.1
Very often	6	7.3
When technology changes	6	7.3
When necessary	14	17.1
No answer	8	9.8
Total	82	100

Source: Field data, 2009

### **Prospects for ICT training in SSNIT**

A series of questions were asked to identify prospects for ICT training in SSNIT. The issues examined under this objective include rating of the importance SSNIT management attached to ICT training, whether being competitive in the technological age required staff to be ICT proficient and

whether globalisation and the internet required staff to improve their ICT knowledge. Others are whether staff needed ICT training because operational activities had been computerised and if the introduction of new/improved application software and hardware engenders ICT training.

Table 15 presents a compilation of the issues raised to address the prospects of ICT training in SSNIT. Responses were to be ranked from strongly agree, agree, uncertain, disagree to strongly disagree. For purposes of this analysis, the responses have been re-grouped using A for agree, D for disagree and U for uncertain.

In the first question, respondents were asked to rate the statement that staff needed ICT training because Management attached much importance to it. Fifty-six (68.0%) respondents agreed with the statement while four (5.0%) disagreed. Twenty-two (27.0%) of the respondents were, however, uncertain. The positive majority response sought to suggest that ICT training was important to SSNIT management.

Respondents were asked to state if being competitive in the technological age required staff to be ICT proficient. Eighty (98.0%) of the respondents agreed with the statement. One (1.0%) respondent each disagreed and was uncertain about whether competitiveness in the technological age required staff to be ICT proficient. This positive response also supports findings of DeSimone and Harris (1998) that staff need constant training in ICT to be competitive in the technological age.

Seventy-four (90.0%) respondents agreed that globalisation and the internet required staff to improve their ICT knowledge constantly. One (1.0%) respondent disagreed with the statement while seven (9.0%)

respondents were uncertain. The positive response was in recognition of the importance and wide-reaching arms of electronic business (Laudon & Laudon, 2006).

**Table 15: Prospects for ICT training in SSNIT**

Prospects for ICT training in SSNIT	A	U	D
Staff need ICT training because Management attaches much importance to it	56	22	4
Being competitive in the technological age requires staff to be ICT proficient	80	1	1
Globalisation and the internet requires staff to improve their ICT knowledge constantly	74	7	1
Staff need ICT training because operational activities have been computerised	71	9	2
Staff need ICT training when new/improved application software are introduced	80	1	1
In order to use them efficiently, staff need training anytime new/improved ICT hardware are acquired	76	3	3

Source: Field data, 2009

The study explored the possibility that computerisation of SSNIT's operational activities required staff to receive ICT training. Seventy-one (87.0%) of the respondents agreed while two (2.0%) respondents disagreed with the statement. Nine (11.0%) of the respondents were however uncertain

on this issue. This strongly supported the point raised by Mullins (2007) that computerisation of operational activities of an establishment required training of users.

The introduction of new/improved application software in the organisation as a prospect for ICT training was examined. While eighty (98.0%) of the respondents agreed with this view, one (1.0%) respondent disagreed. One (1.0%) respondent was also uncertain about the need for training when new/improved software are introduced into an organisation. This is an indication that whenever new/improve software are introduced, staff have to be trained. As pointed out by O'Brien (1990) when he listed the benefits of ICT software training, staff will have greater sense of mastery over, and accomplishment with work, when they receive training in new and/or improved application software.

The acquisition of new/improved ICT hardware as a prospect for ICT training was also examined. Seventy-six (92.0%) respondents agreed that staff needed training when new/improved ICT hardware are introduced. Three (4.0%) respondents disagreed with this view while three (4.0%) respondents were uncertain. These responses also confirmed the fact that the introduction of new/improved ICT hardware would require the organisation to train the end-users who use them (O' Brien, 1990).

According to Mullins (2007), employees need to have the skills and understanding to know how to make the best use of technology and this can be acquired through training. In support of this statement, respondents listed other reasons that offered prospects for ICT training and these are presented in Table 16. There were responses from twenty respondents. Out of these, ten

(12.2%) of the respondents stated the need to improve efficiency as one of the reasons that could prompt ICT training. Three (3.7%) respondents each indicated change in job schedule and advances or improvement in technology as prospects for ICT training.

**Table 16: Any other reason for ICT training**

Reason for ICT training	Frequency	Percent
During job change	3	3.7
To improve efficiency	10	12.2
Upon advances/improvement in technology	3	3.7
When processes are computerised	1	1.2
When funds are allocated for training	1	1.2
When there's a threat to ICT software	2	2.4
None	62	75.6
Total	82	100

Source: Field data, 2009

### **Challenges of ICT training in SSNIT**

The last objective of the study was to examine the challenges to ICT training in SSNIT. The issues examined under the challenges to ICT training in SSNIT were the performance of course instructors in impacting knowledge and the instructors' ability to involve the learners during the training programme. Another was whether the trainees had ample opportunities to practice during the training programmes. The in-house ICT training facilities in SSNIT were also assessed to determine their adequacy. Finally, SSNIT



management's attitude towards ICT training in general as a challenge to ICT training in SSNIT was also examined.

The ratings used to assess the performance of the ICT course instructors were strongly agree, agree, uncertain, disagree and strongly disagree. However, for this analysis, the responses were re-classified in agree, uncertain and disagree and the results are presented in Table 17. The codes A, U and D stand for agree, uncertain and disagree.

**Table 17: Performance of ICT course instructors**

Performance of ICT course instructors	A	U	D
The Instructor stated the course objectives well	58	23	1
The Instructor treated the course well	56	24	2
The Instructor involved the learners during the course	59	21	2

Source: Field data, 2009

In rating the performance of the course instructors as captured in Table 17, fifty-eight (71.0%) respondents indicated that the instructors stated the course objectives well. In assessing how the instructors treated the course, fifty-six (68.0%) of the respondents stated that the instructors treated the course well. Asked whether the instructors involved the learners during the course, fifty-nine (71.0%) of the respondents stated that the instructors involved the learners during the training programme. The responses are an indication that the course instructors were effective trainers as they effectively stated and treated the courses. They also actively involved the learners during

the programme. These are a confirmation that SSNIT utilised effective trainers in support of DeSimone and Harris' (1998) view that effective trainers are those who have subject-matter expertise, are able to clearly communicate their knowledge to their trainees and have the ability to motivate others to learn.

To assess the availability of ICT training facilities in SSNIT as a challenge to ICT training, respondents were to comment on whether they had ample opportunity to practice during the training programme. Forty-one (50.0%) respondents stated that they had ample opportunity to practice during training programmes whilst twenty-three (28.0%) stated that they did not have enough opportunities to practice. This is an indication that the time allotted for training has to be re-examined to allow enough practice time because the findings by Schuler and Jackson (1996), states that practice is an important component of learning so trainees must be provided with enough practice opportunities.

The twenty-three respondents who did not have ample opportunity to practice during the programme cited the following reasons in Table 18 for the insufficient practice opportunities.

Out of the twenty-three respondents who did not have the opportunity to practice during training programmes, eleven (48.0%) stated that in their view, the course duration was short. Eight (35.0%) respondents indicated that the computers used during the training were insufficient so they had to share with other trainees and that contributed to their not having ample opportunities to practice. Three (13.0%) of the respondents indicated that some applications were not available on the system for them to use for practice. For one (4.0%)

respondent, there were too many interruptions during the training programme as he was called upon several times to perform other job functions. He therefore did not have enough time to practice.

**Table 18: Reasons for less practice opportunities**

Reasons for less practice opportunities	Frequency	Percent
Course duration was too short	11	48.0
Because of insufficient computers	8	35.0
Some applications were not available	3	13.0
Too many interruptions during training	1	4.0
Total	23	100

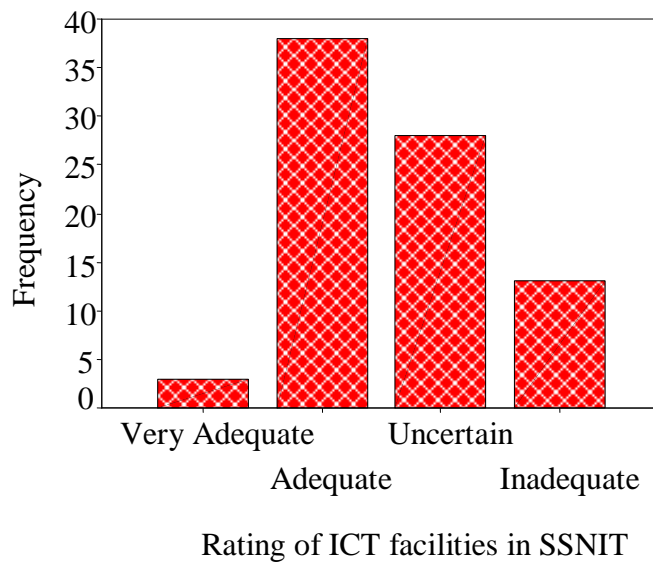
Source: Field data, 2009

As a follow up, respondents were requested to state if the computers used during the training programme were sufficient. Forty-four (53.0%) stated that the computers were sufficient while nineteen (23.2%) indicated that the computers were insufficient.

On the issue of access to computers when the trainees returned to their job schedules after the training programme, fifty-five (67.1%) respondents stated that they had access to computers while nine (11.0%) indicated that they did not have access to computers. This is an indication that proper ICT training needs assessment was not conducted to put in place a proper programme for trainees to utilise their training. As a result, staff who did not use computers in their job schedules or did not have access to computers were

selected for the ICT training programmes. This was contrary to the emphasis by Mullins (2007) that, the right employees must be sent for the right training.

The training facilities in SSNIT were assessed using an incremental scale of inadequate, adequate, very adequate and uncertain. From the responses in Figure 6, three (3.7%) of the respondents indicated that the training facilities in SSNIT were very adequate. Thirty-eight (46.3%) respondents stated that the facilities were adequate and thirteen (15.9%) respondents rated the training facilities as inadequate. Fifty percent of the respondents stated that the training facilities in SSNIT were adequate.



**Figure 6: Assessing the training facilities in SSNIT**

Source: Field data, 2009

This is an indication that there was room for SSNIT to improve upon the organisation's existing training facilities. Observations by the researcher

also revealed that currently, there was no dedicated laboratory/classroom for IT training in SSNIT.

Armstrong (2003) holds managements of organisations responsible for creating a climate in which all staff can learn continuously. SSNIT management’s attitude towards ICT training was therefore assessed with a series of questions. Respondents were requested to rate SSNIT management’s attitude towards ICT training using the scale strongly agree, agree, uncertain, disagree and strongly disagree. However, for the simplicity sake, the responses in Table 19 have been re-classified into agree, disagree and uncertain. The codes A, D and U stand for agree, disagree and uncertain.

**Table 19: SSNIT Management’s attitude towards ICT training**

Management’s attitude towards ICT training	A	U	D
Management places much emphasis on ICT training of staff	38	34	10
Management allocates enough resources for ICT training	31	35	16
Management encourages staff to participate in ICT training	32	42	8
Management provides sufficient time for staff during ICT training.	28	37	17

Source: Field data, 2009

From Table 19, on the issue of whether SSNIT management placed much emphasis on ICT training, thirty-eight (46.3%) of the respondents agreed that management placed much emphasis on ICT training. In assessing the allocation of resources by SSNIT management for ICT training, 37.8% of

the respondents indicated that management allocated enough resources for ICT training. This is an indication that SSNIT management did support ICT training by allocating some resources for ICT training. As to whether management encouraged staff to participate in ICT training, be it within or outside the Trust, 39.0% of the respondents indicated that SSNIT management encouraged staff to participate in ICT training. In assessing whether management provided sufficient time for staff to undertake ICT training, 34.2% of the respondents agreed that management did provide sufficient time for staff to undertake ICT training.

The various responses on SSNIT management's attitude towards ICT training in general represented less than 50% of total respondents. This reflects the fact that though SSNIT management supported ICT training in some way, their support was on the low side. A positive philosophy towards HRD activities, according to Armstrong (2003), is that management recognises the contribution of employees to the successful attainment of the organisation's objectives. Therefore management needed to invest in employee learning and development and to provide appropriate learning opportunities and facilities to facilitate training and development. This is what the respondents found lacking in the management of SSNIT.

## **Conclusion**

The conclusion drawn from the research was the fact that though SSNIT made high use of ICT in its operations, not all staff had benefited from SSNIT-sponsored ICT training. Most staff were selected for ICT training without a proper training needs assessment being conducted. The results also

brought to light several prospects for ICT training among which were the computerisation of operational activities and competition. Lack of an ICT training policy and inadequate training facilities were identified as some of the challenges for ICT training in SSNIT.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **Introduction**

This chapter presents a brief summary of findings, conclusions and recommendations based on the study undertaken. The research sought to examine the extent to which ICT was used in the operations of SSNIT and whether the type, quality and quantity of ICT training given to staff met the training needs of SSNIT staff. The study also sought to find out how the prospects of ICT training could be utilised to ensure efficiency in the Trust's operations` and how best to resolve the challenges of ICT training in SSNIT.

The research was conducted at the head office of SSNIT, the Pension House, with a sample size of one hundred respondents. Stratified random and convenience sampling procedures were utilised to select the respondents for the study. Data for the study was collected using questionnaires and from SSNIT documents.

#### **Summary of findings**

The first objective of the study examined the type, quality and quantity of ICT training given to SSNIT staff. The key findings from this are that:

1. out of the total number of respondents, 69.5% had attended an ICT training course organised by SSNIT;



2. selection of staff for ICT training programmes was done mainly by staffs' supervisors and the HRD department;
3. SSNIT mainly used external ICT specialists/other institutions for ICT training of staff;
4. the training improved staff's work efficiency and they could make better use of ICT tools; and
5. the duration of the courses were inadequate.

Examination of the ICT training needs/development of SSNIT staff was the second objective that the study addressed. The emergent issues are that:

1. SSNIT made use of a combination of methods to assess staff's ICT training needs, majority of which were during a change in job process and change in technology;
2. the majority of the respondents (64.6%) were not involved in the assessment of their own training needs;
3. the majority of the respondents were using prior ICT knowledge they had before joining SSNIT and knowledge gained from colleagues/self tuition in their current job schedules;
4. the two highest ICT software training need listed by respondents were Microsoft office suit and SSNIT Applications like the Pension System and BOS which were necessary to improve staff's work output if undertaken;
5. ICT training should be conducted frequently because of curriculum and technological changes, transfers and promotions.

The third objective was to examine how the prospects of ICT training could be utilised to achieve efficiency in the operations of the Trust. Majority of the respondents, over 70%, stated the following as opportunities for ICT training in SSNIT:

1. being competitive in the technological age;
2. globalisation and the use of the internet;
3. computerisation of SSNIT's operational activities;
4. introduction of new/improved application software and hardware;
5. the need to improve efficiency; and
6. when there were threats to the ICT software being used in the Trust.

Examination of the challenges to ICT training in SSNIT was the last objective of the study. The issues that emerged from this objective included the following, that:

1. the ICT training facilities in SSNIT were insufficient thereby limiting practice opportunities for trainees;
2. SSNIT management had a lukewarm attitude towards ICT training;
3. there was no ICT training policy for staff of SSNIT;
4. SSNIT did not have a dedicated classroom/laboratory to facilitate ICT training in the Trust.

## **Conclusions**

With respect to the first objective which was to analyse the type, quality and quantity of ICT training given to staff, it can be concluded that the extent of ICT usage in SSNIT is very high. All the operational departments in

SSNIT use ICT in their activities. Support departments also use ICT in the discharge of their duties. However, though SSNIT trains its staff to use ICT to discharge their duties, not all staff receive ICT training. Though the respondents found the training beneficial, the course duration was insufficient for the course contents to be properly treated.

An effective training begins with an effective training needs analysis of the organisation, the job and the individual. However, SSNIT did not perform training needs analysis before staff were trained. Staff were just selected by their supervisors or the HRD department to attend training programmes without any input from the staff concerning the type or content of training they needed. As a result, most staff did not have adequate knowledge in software applications like the Microsoft office and even the SSNIT Applications like the BOS and the Pension System as evidenced from the findings.

It came to light that competitiveness, globalisation and the use of the internet prompt ICT training in organisations. The computerisation of operational activities and the need to improve efficiency in SSNIT also means that staff must be trained in the usage of ICT to achieve operational efficiency. Further to that, the introduction of new/improved software and hardware and threats to SSNIT's ICT software and hardware make it imperative for staff to be given ICT training on a regular basis.

Finally, SSNIT is faced with some challenges that need to be overcome. The ICT training facilities in SSNIT were inadequate to enable an effective ICT training in-house as there is no laboratory/classroom dedicated to ICT training. SSNIT management's attitude towards ICT training was more of lip service than real as evidenced by the absence of an ICT training policy

and facility. This has therefore resulted in staff relying more on colleagues and self-tuition for the ICT knowledge necessary to discharge their duties.

### **Recommendations**

Based on the summarised findings and conclusions, the following recommendations are made for SSNIT management's consideration.

Management should:

- develop an ICT training policy for training of staff and updating staffs' knowledge and skills on new developments in the field of ICT.
- conduct a proper training needs analysis of the organisation, job and individual before embarking on any ICT training.
- involve staff in the training needs assessment so that the relevant/appropriate training can be carried out.
- provide dedicated ICT laboratory or classrooms with enough training facilities to facilitate ICT training in-house.
- ensure that the training programmes are properly structured with adequate practice opportunities.
- ensure that whenever new or improved software and/or hardware are introduced, all staff are given ICT training.
- embark on a programme to have well-trained ICT professionals in-house to undertake ICT-related research and/or to provide ICT training to staff.

The employees of SSNIT are also advised to ensure that they participate in their own ICT training needs assessment so that they can indicate the appropriate ICT programme that they need training in.

### **Suggestion for further studies**

ICT is a fast-developing technological area. So even though this research study on the prospects and challenges of ICT training in SSNIT has been extensive, it is not conclusive. Further research study on the issue is therefore recommended in the near future, especially in the area of training needs assessment before implementation of an ICT training programme for staff.

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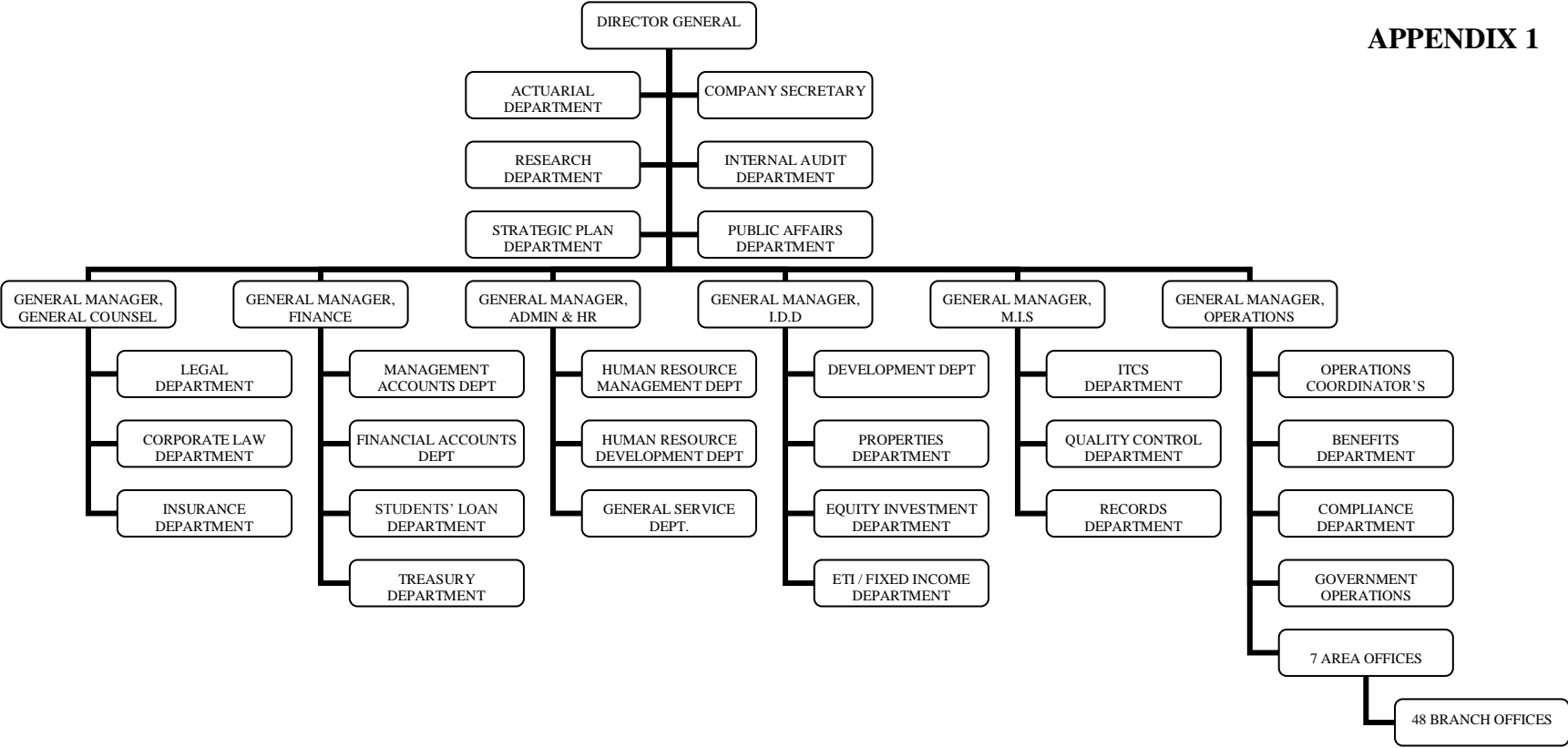


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**APPENDIX 1**



Source: Researcher’s construct, 2009

**Organogram of SSNIT Pension House**

## APPENDIX 2

### UNIVERSITY OF CAPE COAST

#### INSTITUTE OF DEVELOPMENT STUDIES

#### RESEARCH QUESTIONNAIRE

I am a Post-Graduate student of the University of Cape Coast pursuing Master of Arts Degree in Human Resource Development. As part of the requirements for the course, I have to write a dissertation. My topic is: “The Prospects and Challenges of ICT Training in SSNIT”. I would be most grateful if you could complete this questionnaire, which is solely for academic purposes. Your responses will be treated with utmost confidentiality.

Thank you.

Mrs. Sena Kpeto-Kumadie

(Post-Graduate Student)

Date: .....

Time: .....

#### Section A – Demographic Details

1. Gender/Sex      Male                       Female
2. Age range      21 – 30                       31 – 40  
                              41 – 50                       51 – 60
3. What is your highest educational qualification?  
 Middle School /JSS                       SSS / ‘A’ Level  
 Polytechnic                                       First Degree  
 Other (Please specify) .....

4. Which Division in SSNIT do you belong to?

- Admin & H/R       Finance       General Counsel  
 IDD       MIS       Operations

5. Please state your Department: .....

**Section B – Assessing the type, quality and quantity of ICT training given to staff in SSNIT**

6. Have you attended any ICT course organised by the Trust?

- YES       NO

If NO, please continue from Section C.

7. If YES, how were you selected to attend the course?

- Supervisor's nomination  
 Invitation by the HRD Department  
 You requested HRD Department to place you in the course

8. How did you receive the ICT training?

- SSNIT       ICT Specialist / Other Institution       Both

9. Was the duration of the ICT training adequate?

- YES       NO

10. If NO, please explain why .....

11. Was the training beneficial to you?       YES       NO

12. If YES, please state how the training has impacted positively on your work? .....

13. If NO, please explain why it was not beneficial to you

.....

14. Please state what you think could have been done to make the training beneficial to you?

.....

**Section C – Assessing the ICT training needs/development of staff**

15. How were your ICT training needs assessed? (Please tick)

From annual Assessment Form

Supervisor's assessment

The technology in use changed

Job process changed

Do not know

16. Were you involved in the assessment of your ICT training needs?

YES

NO

17. How did you gain the ICT knowledge that you use for your present job?

Course organised by SSNIT

Course you attended on your own outside SSNIT

On-the-job training / Taught by colleagues

Self tuition (trial & error)

Prior knowledge you had before joining SSNIT

18. Please list any ICT training you need .....
- .....
19. Please state why you need these types of training .....
- .....
20. How often do you think you need these training?.....
21. Will the training stated above improve your work at SSNIT?
- Strongly Agree     Agree     Uncertain
- Disagree     Strongly Disagree
22. Can you still perform your job schedule effectively without the above training?
- Strongly Agree     Agree     Uncertain
- Disagree     Strongly Disagree
23. How often should ICT training be given to staff? .....
- .....
24. Why should this number of ICT training be given to staff? .....
- .....

**Section D – Prospects of ICT training in SSNIT**

Please tick the appropriate column in answer to the questions:

SA = Strongly Agree    A = Agree    U = Uncertain    D = Disagree

SD = Strongly Disagree

		SA	A	U	D	SD
25.	Staff need ICT training because Management attaches much importance to it					
26.	Being competitive in the technological age requires staff to be ICT proficient					
27.	Globalisation and the internet requires staff to improve their ICT knowledge constantly					
28.	Staff need ICT training because operational activities have been computerised					
29.	Staff need ICT training when new/improved application software are introduced					
30.	In order to use them efficiently, staff need training anytime new/improved ICT hardware are acquired					

31. List any other thing/reason you know of that can prompt ICT training in SSNIT .....

**Section E – Challenges of ICT training in SSNIT**

Please rate the performance of the course Instructors in the following

dimensions: SA = Strongly Agree      A = Agree      U = Uncertain

D = Disagree      SD = Strongly Disagree



		SA	A	U	D	SD
32	The Instructor stated the objectives of the course well					
33	The Instructor treated the course well					
34	The Instructor involved the learners during the course					

35. Did you have ample opportunity to practice during the training?

YES       NO

36. If "NO", please state why not .....

37. Were the computers used during the training sufficient?

YES       NO

38. Did you have access to a computer to use after the training in order to put your knowledge into practice?

YES       NO

39. How would you rate the ICT training facilities in SSNIT?

Very Adequate       Adequate       Uncertain  
 Inadequate

**Please rate SSNIT Management's attitude towards ICT training in the following dimensions:**

SA = Strongly Agree      A = Agree      U = Uncertain      D = Disagree

SD = Strongly Disagree

		SA	A	U	D	SD
40	Management places much emphasis on ICT training of staff					
41	Management allocates enough resources for ICT training					
42	Management encourages staff to participate in ICT training					
43	Management provides sufficient time for staff during ICT training.					

Thank you.