Theses and Dissertations

2-1-2014

Gender dimensions in training and development at the information and communication technology sector in Egypt

Rozana Adnan Khayyat

Follow this and additional works at: https://fount.aucegypt.edu/etds

www.manaraa.com

The American University in Cairo

School of Global Affairs and Public Policy

GENDER DIMINSIONS IN TRAINING AND DEVELOPMENT

AT THE INFORMATION AND COMMUNICATION TECHNOLOGY

SECTOR IN EGYPT

A Thesis Submitted to the

Public Policy and Administration Department

**in partial fulfillment of the requirements for the degree of
Master of Public Policy**

By

Rozana Adnan Khayyat

Under the Supervision of Dr. Ghada Barsoum, PhD

December 2013

ACKNOWLEDGEMENT

The success of this thesis required a lot of support, guidance and assistance from many beloved people and I am extremely fortunate to have them along the way until the completion of my thesis.

First and foremost, I would like to thank God for giving me the willingness to develop my academic career and the determination that he has bestowed upon me during the entire master's studies and thesis.

I would like to thank and express my deepest appreciation to my supervisor Dr. Ghada Barsoum for her unconditional support throughout my entire master's studies and especially during the thesis process.

I would like to also thank my thesis committee: Dr. Hamid Ali and Dr. Shahjahan Bhuiyan for their guidance and support to reach where I am today.

I dedicate this research to my family, for giving me the opportunity to continue my academic career and for all their patience and continuous support over this long process.

I would like to thank my fiancé and all my dear friends & colleagues who have given me valuable insight, helpful analysis and precious thoughts.

The American University in Cairo

School of Global Affairs and Public Policy

Department of Public Policy and Administration

Gender Dimensions in Training and Development
At The Information and Communication Technology Sector in Egypt

Rozana Adnan Khayyat

Supervised by Dr. Ghada Barsoum,

ABSTRACT

This study examines women's career potentials at the information and communication technology (ICT) sector in Egypt. Taking a case study approach, the study particularly focuses on female employees' involvement in training and developing activities for skill and capacity building. The findings of this study show that most of the female employees in the case study hold administrative positions. Training activities actually increase the gap between male and female workers, as male workers were allowed more technical and expensive training opportunities than female employees. The interviews also reveal the payment inequality between male and female employees in the case study organization. The study shows that the pressures of scheduling training courses and the heavy daily work demands on female employees all hinder their career growth potentials.

Table of Contents

List of acronyms

ICT: Information and Communication Technology

MICT: The Ministry of Communications and Information Technology

GITR: The Global Information Technology Report

NRI: Network Readiness Index

TNA: Training Needs Assessment

Chapter One

The Introduction

Introduction

The Information and Communication technology sector in Egypt is a fast growing sector, keeping pace with the international experience. The sector is contributing to the economy and is creating a significant number of new jobs. This study seeks to examine women's career and opportunities in this sector.

The study specifically looks at employed women's access to training and developing in the ICT sector. As training and development are the main pillars for ICT employee's self-development and career advancement.

The study is based on a case study at one of the top ICT companies in Egypt, in order to identify and observe the challenges women face in developing their career at the ICT sector.

The study methodology aims to provide a comprehensive understanding of the subject matter in order to address the research question. The study uses both qualitative and quantitative methods; both methods are built on interviews with key staff members and a company-wide survey.

1.1 Background

Nowadays, the ICT industries have spread out all over the world and are not only confined themselves to developed countries. ICT industries generate a learning community whose participants have access to all the resources and information they require regardless of

6

gender and location. "The pace of technological innovation since World War II is dramatically accelerating following the commercial exploitation of the Internet" (Nemirovsky & Yoguel, 2001).

This innovation has encouraged information and communication technology companies to settle in almost all parts of the globe. These industries came with advantages to impact the international monetary structure, as well as technology transfer and the formation of the technological revolution. Additionally, almost all international ICT industries employ a large number of employees from different fields such as engineering, information technology, finance, and management (Saksena, 2009).

The ICT sector in Egypt witnessed a great development in computing facilities, equipment improvements and software development, which beneficially affect the sectors growth. The following figure indicates the record of the ICT sector in Egypt, where it recorded the highest growth rate among different socioeconomic sectors in 2008-2009 and the second highest growth rate in 2009-2010 (El-Shenawi, 2011).

Figure (1): Growth Rate among Different Socioeconomic Sectors
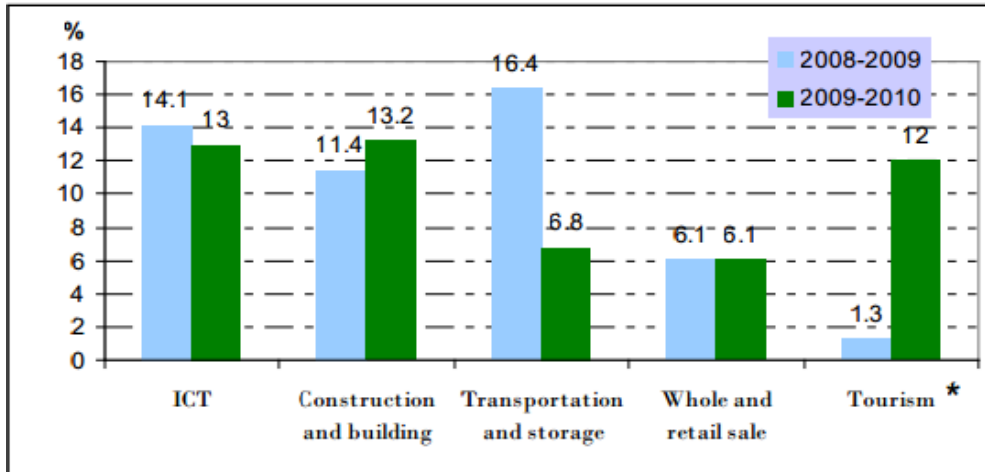
The decline in tourism growth rate in 2008-2009 was due to the impact of the financial crisis
Source: Ministry of Planning and International Cooperation, Follow up report, fiscal year 2009-2010, P:18

Additionally, the following figure indicates the growth expectation of the ICT sector in Egypt in the upcoming years according to the Ministry of Communications and Information Technology 2013. The figure also shows the National GDP ratio increment, which beneficially affects the sector locally and internationally.

Figure (2): The Expected Growth Rate of Natural GDP & ICT Sectors
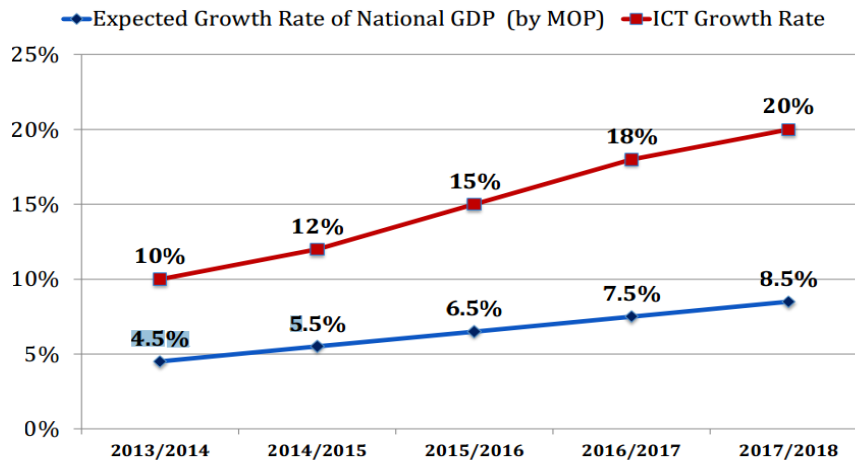
Source:Ministry of Communications and Information Technology 2013

However, this research argues that an assessment of equality in the ICT industry in Egypt necessitates a gender analysis to determine the nature of structural inequalities. We define gender equality as

> "Equal visibility, empowerment and participation of both sexes in all spheres of public and private life. It requires the acceptance and appreciation of the complementarity of women and men and their diverse roles in society" (Council of Europe, 1998).

Failure to harmonize gendered work responsibilities with social roles is still a big concern for women's career growth at ICT sectors in Egypt. It is known that women face difficulties in maintaining appropriate careers in different fields such as education, health, science and technology, which weakens the continues of sustainable development. According to the Egypt's central statistical bureau, women represent 23% of the labor force, while men labor force participants rate is 79%, which identifies the weak participation of women in labor market and the inequality with male's labor force (CAPMAS, 2011).

According to the UN women report, *Commission on the Status of Women,* the Committee welcomes the important contribution made by women in all areas of education, training, science and technology. Also it recognizes that women and men should continue to contribute promoting the ethical dimensions for scientific and technological progress (United Nations, 2011).

Furthermore, the Committee recognizes that research and development in the fields of science and technology has not covered all women's needs adequately. The United Nations stresses the need to increase cooperation between the countries, including International cooperation and technology transfer in accordance with the agreed terms to developing countries in particular, in order to promote women's access on an equal base with men in areas of science and technology also promote the participation in education (United Nations, 2011).

Internationally, ICT sectors consider training and development as important regulatory supplements for organizations. They open areas of competition and innovation among members from different establishments. Moreover, the extensive use of technology is shifting the way individuals work, learn, communicate and even the way they carry out their regular daily actions. Today, technology has had a dramatic impact on learning, including "service-learning" experiences. The "Service-learning" classes and activities can be increased through the use of technology to provide more effective experiences for firms. Employees with their ready access to new developmental methods at ICT sectors are well-positioned to take advantage of the rapid changes in the arena (NSLC, 2005).

According to Eurostat 2011, the creation, utilization and commercializing of new development technologies is important in the global race for competitiveness at ICT areas. Enterprises are basic drivers of *"economic growth, productivity, social protection, and generally it's a source of high added and well-paid employment"(*Eurostat, 2011).

Additionally, the MCIT in Egypt provides different training programs that help providing employees with different ICT skills which in turn increases their competitiveness in the labor market. For instance, The spread of "IT clubs" which play a vital role in eliminating ICT illiteracy giving training and access to diverse ICT services. Graduates of Particular and Proficient ICT Training Programs extended to around 41,000 participants by the end of January 2011 (MICT, 2011). The following figure shows the geographic distribution of "IT clubs" in Egypt.

Figure (3): IT Clubs Geographic Distribution
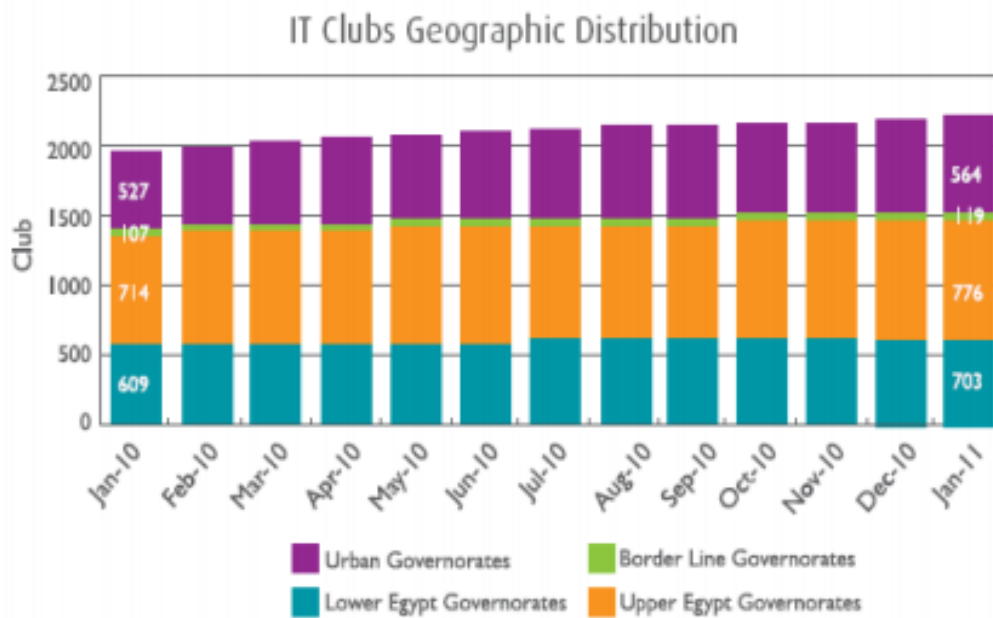
Source: Ministry of Communications and Information Technology

1.2 Importance of the study and the research question

This study tackles an important issue which is women's participation in offered training and development courses in technological firms and organizations. It is essential to understand the difference of participation between men and women, in training and developing courses for career growth. In light of the objective of promoting equality between men and women the aim of this study is to investigate the role of women and the motivation to develop themselves, and grow their career journey through the courses offered by ICT sectors. By identifying the gender ramifications of the structures of the industry, this research should imply methods for improving the gaps in the system. The specific research question of this study is:

What factors affecting women's career growth and advancement in the information and communication technology sector?

1.3 Conceptual framework

The conceptual framework of this study builds on the connection between the challenges affecting women's career advancement and their high turnover rate at the ICT sector in Egypt.

The chart below shows that ICT female employees tend to face numerous challenges that affect their career growth and advancement. The first challenge is the denial of gender problems; unfortunately few respondents care and elaborate to gender inequality. While, gender issues need more attention and more consideration especially in the Arab society, in order to achieve gender equality.

Another point is the gender division of work responsibility, as most of the female employees hold administrative positions because of the high rate of turnover, while male

employees hold the technical ones and high managerial positions due to their long term commitment,

Training and development scheduling affects women's career growth, as training courses are mostly held either after working hours or by weekends which don't fit most women's time schedule, and as a result this matter cause the gap of women's limitation in attending the training sessions which affects their career advancement at ICT firms.

Marital and social class issues both plays and important role in the hiring presses. Most of the women interviewed in the case study come from an elite background; they were predominantly single which shows that the long hours make it difficult for women to combine between work and family responsibilities. The other challenge women face at ICT sector is the payment gap which is also one of the main factors for women's turnover.

The outcome of these obstacles put pressure on female employees in the labor market which affect their career development and self-advancement, as a result of these outcomes they either cause a high rate of female employee's turnover or women quit work by senior age.

```
┌─────────────────────────────┐
│                             │
│  Women at ICT sector in Egypt │
│                             │
└─────────────────────────────┘
              │
              ▼
┌───────────────────────────────────────────────┐
│ Factors affecting women's career growth and    │
│ advancement in the information and             │
│ communication technology sector                │
└───────────────────────────────────────────────┘
```

Denial of gender problems

Gender division of work responsibility

Training scheduling

Marital and social class issues

Payment gap

Other challenges
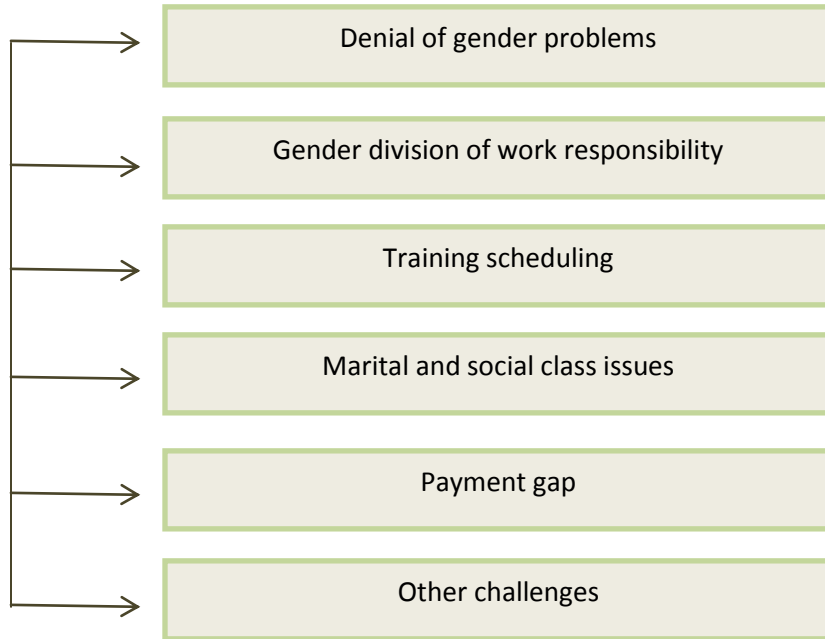
```
              │
              ▼
┌───────────────────────────────────────────────┐
│ High female employee's turnover rate and       │
│ slowdown in career advancement                 │
└───────────────────────────────────────────────┘
```

Chapter Two

The Literature Review

Literature Review

This section reviews different scholarly reports and case studies about the ICT sectors mission in Egypt, as well as the importance of training and development offered by the sector. Additionally, this section offers an explanation of the effectiveness and challenges of the subject and methods to improve the role of women in technology areas.

- o First part: The ICT sector in Egypt
- o Second part: Challenges women face in labor market
- o Second part: Importance of training and development for career development

2.1 The ICT Sector in Egypt

This part of the literature review aims to provide a brief idea of ICT sectors in Egypt. It also shows ICT's purpose, mission and effective strategy in the long run, as these sectors play a big role in the economic growth of the country. The ICT sectors are considered as engines to both economic and social development. The sector also generates employment and revenue which adds value to the society welfare

The world today is living a real revolution in the field of communications and information technology. In Egypt the Ministry of Communications and Information Technology (MICT) was established in 1999. As a complement to this, ICT sectors aim, in the next stage, to adapt the communication tools and information technology, in order to be engaged positively with community issues and apply innovative technological methods (MCIT, 2013).

MICT aims to "*develop a democratic knowledge-based society that supports a strong Egyptian economy and is based on equitable access, to information and communications services guaranteeing the digital rights of citizens and the development of a national industry based on human talent and creativity*"(MCIT, 2013).

The strategy plan is to be applied between (2013-2017) to accommodate the political and economic changes in Egypt; the development of the telecommunications sector internationally and regionally, which directly affects the MCITs future work plans; the priorities of sustainable development in Egypt; and challenges faced by the sector in the past decade (MCIT, 2013).

The development witnessed by the ICT sector in Egypt is due to the close cooperation and strong partnership that connects many of the parties involved. This has resulted in partnerships between the public and private sectors, NGO's, civil society organizations and other multilateral bodies, in order to find new models of leadership and cooperation in this sector (SIS, 2013).

The ministry of Information and communication technology plays a vital role in forming a knowledge based economy through simplifying effective communication, broadcasting methods, and the processing of information. Moreover, with the growing use of numerous forms of ICT, it is becoming a priority to utilize such technologies in serving socioeconomic developmental objectives (Mandour, 2009).

According to Mandour, (2009)

> "*ICT production and usage can significantly contribute to economic growth basically through gains in total factor productivity and increased flows of information and knowledge which are translated in reducing uncertainty and transactions costs. Such outcomes would help in overcoming market failures and asymmetric information. Moreover, with increased information flows, ICT availability and usage tend to allow greater transparency, accountability and accessibility in the delivery of public services, which in turn help in efficient allocation of resources*" (Mandour, 2009).

Furthermore, The Global Information Technology Report (GITR) 2009/2010Network Readiness Index (NRI), aims to measure the capability of the countries to benefit from the ICT sector, as well as provide the decision makers beneficial information on the extent of the variety and complexity of the factors affecting the growth of the ICT sector (El-Shenawi, 2011). The report indicates that:

> *"Egypt's rank with regards to the Network Readiness Index (NRI) has improved from the 76th position in 2008/2009 out of 134 countries to the 70th rank out of 133 countries included in the report of 2009/2010. Egypt was the only African country to improve by 6 ranks; whereas other countries witnessed no change such as Tunisia or even decreased in rank like Morocco, Algeria and Libya"* (ElShenawi, 2011).

Additionally, the ICT sector in Egypt, as well as computing services, equipment and software development, are amongst the biggest in the Arab region. The sector is observed as a major engine of economic growth in the country. The ICT sector's contribution in real GDP reached 4.1% in 2013 compared to 3.2% in 2011-2012. The sector is also one of the fastest growing sectors in Egypt where the revenue of the sector reached 96 billion EGP in 2013-2014 compared to 65 billion EGP in 2011-2012 (MCIT, 2013).

However, Egypt witnessed a drawback in its economy after the 25th revolution; the "Egyptian Ministry of Communications and Information Technology" (ICT) has pronounced a new National ICT Strategy that aims to increase investment in the ICT sector to "EGP 55 billion" (almost US$ 8 billion), in order to help the Egyptian economy recover from the revolution (Salah,2013).

According to Salah, (2013)

> *"The hope is that better infrastructure will increase the volume of e-commerce by 20% by 2017, boost e-banking by 30%, and, overall,*

increase the sector's contribution to 5% of Gross National Income (around $25 billion)" (Salah,2013).

In short, MCIT aims to develop the outsourcing services industry through applying effective strategy system in the upcoming years, also attract foreign investment and raise the IT service exports. Furthermore, the MICT sector looks forward to promote the sectors growth and create new job opportunities, in order to boost Egypt's global ICT competitiveness (MICT, 2013).

2.2 Challenges Women Face in Labor Market

The second part of the literature discusses the challenges women face in the labor market, and also shows the different kinds of discrimination women face as compared to their male counterparts; this part aims also to show these different challenges by reviewing scholars thoughts and experience concerning this matter.

To begin with, women have been seeking justice and rights in order to participate in different fields in the community during the past few years, the World Bank report shows that the rate of women's participation in the labor markets in the Middle East and North Africa does not exceed half of the global average. This indicates the legal barriers, social, inadequate skills, and the short growth prospects of the private sector are the main obstacles to women's participation in the labor markets in the region (World Bank, 2013).

This came in a new report by the World Bank entitled *"Missing Voices: Gender Equality in the Arab World",* which pointed out that the Middle East and North Africa has worked diligently over the past four decades to narrow the gender gaps, especially in the areas of education and health care, but it is ironic that these investments in human resources was offset by an increase in economic and political participation of women between 2011-2013, and the rate of

entry into the labor markets in the region does not exceed half the global average (World Bank, 2013).

The report finds that the changes that have swept the region over the past two years provide opportunities to strengthen efforts to achieve gender equality, but also to increase the risk of failure. According to Inger Andersen, Vice President, Middle East and North Africa, women have changed their ambitions rapidly. However, their home countries governments do not listen to their needs in the areas of demonstrations, there is no doubt that this fact is an important issue to be addressed in light of the profound changes experienced by the region (World Bank, 2013).

Furthermore, innumerable studies have revealed the challenges facing women at work. Women may face a lot of pressure within their scope of work which hinders their daily life. A report made by the United Nations called *"Commission on the Status of Women",* the report expresses its deep concern on all the legal, economic, and social barriers, as well as cultural aspects that forbid women to benefit equal educational opportunities and developmental trainings. Also, the report acknowledges that some women and girls face multiple forms of discrimination and prejudice that hinder their participation in education, training and development (United Nations, 2011).

Furthermore, According to the Inter-Parliamentary Union and the International Labor Organization,

> *"Women continue to face numerous challenges in accessing the labor market. More often than not they obtain jobs that are of a lesser quality than men's, they are discriminated against in the workplace, they*

experience poor working conditions and job insecurity, and they are vulnerable to abuse and exploitation" (ILO,2007).

Generally, women tend to have lower potential for career growth and development, compared to their male counterparts. One of the challenges women face at work is: having to work more, and getting paid less, than their male counterparts. According to Robbins

> *"Women do two-thirds of the world's work, receive 10 percent of the world's income and own 1 percent of the means of production."* (Robbins, 1999, p. 354).

According to Young, (1988), there is a strong relation between women's dependence and capital, whether in the public sphere or in the private sphere. For the private sphere

> *"Capital benefits from the unpaid work women perform, such as cooking, cleaning and caring. Women's domestic performance guarantees raising the class of their families above the received wage and maintaining unpaid socialization and care for the children who are the future labor force that the state and the capital should provide at high cost"*(Young et al, 1988).

On the other hand, after eliminating women from the labor market, the result would be raised wages for men in order to maintain their dependents (wife and the children) (Young et al, 1988).

While, women in the public sphere are considered cheap labor force, they are paid less and are used as a *"reserve army of labor",* because women by their nature are flexible workers who can be absorbed in times of growth and be fired in times of reduction since it is assumed that they will return home to their original situation of economic dependency (Young et al, 1988).

In addition, both the European Commission and the ILO believe that occupational separation can and should be eliminated. And for that they have two reasons. For the first reason, they claim that the separation of men and women into different careers is the major reason for

earnings differences between men and women. The second reason, they claim that occupational separation restricts individual's choice of career, especially in the early years of adult life." The Commission would like to see all occupations having a 50/50 male/female split, and would like to impose positive discrimination, or quotas, in order to achieve this" (Hakim, 2006).

Another challenge facing working women is choosing between family and career under social circumstances. Many women have successful careers, however giving this career up may not be comfortable for these successful women. This is the time where they have to make effective decisions about managing between families and careers. According to Mary Blair-Loy, (2003)

> *"The career paths of women financial executives who have tried various approaches to balancing career and family. The professional level these women have attained requires a huge commitment of time, energy, and emotion that seems natural to employers and clients, who assume that a career deserves single-minded allegiance. Meanwhile, these women must confront the cultural model of family that defines marriage and motherhood as a woman's primary vocation. This ideal promises women creativity, intimacy, and financial stability in caring for a family. It defines children as fragile and assumes that men lack the selflessness and patience that children's primary caregivers need. This ideal is taken for granted in much of contemporary society"* (Loy, 2003).

Moreover, a study made by Assaad & Hamidi, (2009) states the differences between women's management of work and family in the public sector and the private sector; in terms of the working hours, the effort given at each of these sectors, and the amount of responsibility women handle. As the public sector requires less time and effort therefore women can manage between family and career. However, the private sector needs more working hours and needs more effort in order to achieve career advancement (Assaad & Hamidi, 2009).

"Wage and salary employment in the private sector, with its long hours, relatively limited support structures, and few compromises to women's reproductive role is generally viewed as incompatible with women's marital responsibilities in Egypt. It is therefore a form of employment that is pursued by women primarily before marriage" (Assaad & Hamidi, 2009).

However, according to the World Economic Forum *"the global gender gap report"* women account for one-half of the prospective talent bases throughout the world, and the most important element of a country's competitiveness is its human talent—the skills, education and productivity of its labor force(Hausmann, Tyson, Zahidi & Zahidi, 2012).

In short, choosing between work and family is a matter of debate among scholars. Some researchers have the idea that women have full freedom in their career choices as long as they have education and experience, whereas other researchers see that women's choices are somehow restricted by their social background, and they only have to choose from what is available to them and not what they really desire to (Walby,1997: 24).

According to Walby (1997), there is a scholarly tendency shows that

"Men and women choose between work, domestic work, and leisure according to their perception of the reward to be derived from each of them. This point is arguable, as women who have the kind of rich human capital of education, skills, and market experience that virtually guarantees them the ability to find work will, inevitably, earn more than woman who do not possess these advantages" (Walby 1997).

Yet, there are some women are more likely to drop out of work when their husbands have the ability to support them. Walby suggests joining both the "structural and institutional" constraints since both of them affect women's occupation. Walby concludes that women have the power to make choices "but not under conditions of their own making" (Walby,1997: 24).

Nevertheless, the gap between genders is still an area of increasing scholarly research. According to Williams (2010)

> *"This culture gap between classes has fueled culture wars which are best understood in this context as expression of class conflict. Whether in a democratic administration or a republic one, family supports will never become politically feasible until progressives reconstruct the kind of coalition that existed in the past and led to the enactment of government subsidies (for example, social security) and workers protection (for example, The National Labor Relations). Creating a new long-term coalition will require reform-minded elites to develop a true sensitivity to issues of class"* (Williams, 2010).

In short, the previous reviews and reports throughout the literature shows the fact of what women face in the labor market, women in the Middle East particularly face a lot of challenges at work such as combining between work and family, payment gaps, and social classes discrimination. All these put pressure on female employees in the labor market which affect their career development and self-advancement.

2.3 Importance of Training and Development for Career Development

Training and development are considered main pillars in the Information and Communication Technology sectors, as these sectors require self-development along with the career journey, in order to achieve the main goals of the ICT's industries. Training and development are important to come up with creative and skilled employees to serve the sector in the long run.

To start with, training and development can be defined as

> *"An educational process, people can learn new information, re-learn and reinforce existing knowledge and skills, and most importantly have time to think and consider what new options can help them improve their effectiveness at work. Effective trainings convey relevant and useful information that inform participants and develop skills and behaviors that can be transferred back to the workplace"* (Salvi, n.d.).

The aim of training at ICT sectors is for employees to master skills, behavior, knowledge, and creativity that are emphasized in training programs, and to apply them to their day to day activities, this would lead ICT sectors to have a competitive atmosphere. And when we say competitive we mean a company's ability to maintain and gain market share in an industry (Noe, 2010).

Many studies confirm the importance of training and self-development for individual's career growth, which creates a higher level of competition and excellence on the basis of skills and knowledge. According to an industry report by the American Society for Training and Development (ASTD), *"U.S. organizations alone spend more than $126 billion annually on employee training and development"* (Paradise, 2007).Unfortunately, no data was found about Egypt, as it is common in developing countries for data to be misrepresented or insufficient.

Moreover, many studies have confirmed for the benefits of training and development for organizations as a whole. According to Aguinis & Kraiger, these benefits reveal on organizational performance, for example in profitability, success, outputs, and operating income per employee. In addition, other results that relate directly are for instance the development of quality and quantity. On the other hand, indirect results are for example: organization's status, and social capital to performance (Aguinis & Kraiger 2009). Additionally, "training" refers to a methodical approach to learning and development in order to improve team, individual, and organizational efficiency (Goldstein & Ford 2002).

In addition, numerous studies clarify that most ICT sectors aim to provide sustainable developing talent programs at all parts of the globe. High tech companies such as Microsoft

encourage their staff to keep maintaining higher performance via it's continues developing projects. According to the finance audit director at Microsoft, Julie Kwon, *"people development is a constant focus at Microsoft"* as its employee's benefit from training, observing and projects that helps them develop to take more responsibilities and have larger impression (Microsoft, 2013).

In addition, the so-called "performance" is mainly about organizational accomplishments. According to Tseng & Lee it is also an evaluation of how well the structural goals are achieved. Moreover, how the firm's operation, goals, and purpose have been applied based on indicators and estimation means. Another point "performance" can be used to reflect the actions that individuals at high tech adopt in order to accomplish organizational goals, and can direct future resource distributions inside an organization (Tseng & Lee, 2011).

Also, several studies across many fields have found that "Training and Development" are needed mechanisms of employees planning strategies. Once a strategic plan is acquired in which "mission, vision, and goals" are clearly defined, organizations can be assured of being on the right track to reach their main objectives as well as perform highly in their field of business.

Furthermore, individual job descriptions are directly related to job performance competencies. Individual employees improve identified learning objectives as well as training and development plans, which should improve their abilities and decreases their competencies they might already have. Furthermore, it can increase the overall range, in order to help them accomplish their personal career objectives as well as achieve preset organizational goals (Vermont.gov, 2012).

Additionally, according to Miller & Osinski identifying performance requirements inside organizations that help in directing resources to the areas of extreme need, are considered persistence of a training needs assessment (TNA). Furthermore, the importance of (TNA) is clear to those who are closely related to accomplishing the organizational objectives and purposes, improving productivity, and providing quality products and services. The two scholars also illustrate that

> *"The needs assessment is the first step in the establishment of a training and development Program. It is used as the foundation for determining instructional objectives, the selection and design of instructional programs, the implementation of the programs and the evaluation of the training provided. These processes form a continuous cycle which always begins with a needs assessment"* (Miller &Osinski, 2002).

To sum up, the previous points mean that training activities should be tied to the needs of the organization to the strategic goals for its development, and its employee's career development. Thus, training programs should be taken in consideration in order to achieve efficient results at ICT fields.

Summarizing the literature review

The literature review has reviewed some previous researches and studies about the goals and mission of information and communication technology sector in Egypt, also some reports revealed the challenges and obstacles women face at the labor market, and the importance of training and development sessions. After reviewing the literature, it is clear that the previous research tackles effective cases about the obstacles women face for career growth, which helps in illustrating the importance of the study. Until now, little literature has addressed the three issues in ICT nor the role of training and development in career advancement taking a gendered approached, the addition of this study is to address this gap.

Chapter Three

Study Methodology

Methodology

To be able to answer the research question, this study will use both qualitative and quantitative methods, both methodologies aim to paint the way to a comprehensive understanding of the subject matter in order to address the research question. The qualitative method typically method focuses on meanings, views, and perceptions, where informants' description of their situation is highly valued. Quantitative research, on the other hand, focuses on aggregate numeric results and statistics. In this research both qualitative and quantitative methods will be used in order to gain more in-depth information on the subject. Furthermore, both will provide the necessary information that meets the demands of both genders employees to provide opportunities to work with less time and effort to reach higher developmental stages. Additionally, the purpose of interviewing high tech employees is to identify women's technical performances at these firms.

3.1 Data collection

The study will take one of the largest information and communication technology firms in Egypt as a case study for this research. This research aims to interview and discuss the subject matter with several employees from different backgrounds, which when obtained, will satisfy the purpose of the understanding of women's urge in self-development in technological fields.

- ICT company project managers

- ICT company human resource managers

- ICT company employee from different managerial levels

The study is based on both qualitative and quantitative research methods.

3.2 The Qualitative Component

The qualitative component relied on in-depth interviews were done with eight employees at one of the top ICT companies in Egypt. These interviews were held between (October-November/2013) and all of them were in English which is a sign of high socio-economic status of the interviewees, signifying international education. I have interviewed for this study three female Associate Project Managers, two female Human Resource managers, one Finance female employee, one Customer Service female employee, and a male project manager. The interview questions I have asked were:

1. Do you think men and women have equal opportunities in career growth at your company/field?

2. Why do you believe women are not favoring the field of information technology in comparison to mechanical engineering for example?

3. Explain the challenges that slowdown women's career growth?

4. How different is the involvement of women between the company in Egypt and its others branches outside Egypt?

5. Is the hiring of women employees higher than men at the company?

6. What social factors affect gender gap?

These questions aim to discuss female employee's career growth and development, and understand the challenges and barriers women face at labor market.

3.3 The Quantitative Component

The survey of this study is divided into two parts which are:

The survey I have used was a tool built on job satisfaction; however, I modified it to suite the study purpose. The first part of the survey consists of general questions to be informed about the respondent's general data such as gender, age, and job description. The second part of the survey contains questions about how the organization assists its employees in order to seek career growth and self-development. Moreover, the survey contains questions about the usage and benefits of training sessions.

The survey was distributed to 100 employees at the ICT case company in Egypt, only 62 staff replayed half of them where male staff and the other half were female staff, almost all female employees were held in administrative positions, while male employees were divided into technical and management positions.

Chapter Four

Data Analyses

4.1 Qualitative Data Analyses

This section analyses the findings from the interviews from one of the top ICT companies in Egypt. Moreover reviews the responses of employees within the firm about gender equality, and the challenges that faced the researcher through the following:

Denial of gender issues

The success of a good interview largely depends to a large extent on interviewing people who have the ability to express information freely about the matter, and depends on their ability to give useful data for the study, in order to help in the examination of the problem.

A key observation in all interviews shows the issue of gender is not easy to discuss. I believe that this is because most employees do not take gender dimension issues seriously, also due to their personal concerns to reveal information. For example when I interviewed an associate project manager in the field she replayed to most of the questions with *"Not applicable"* or *"sorry I can't elaborate to this"* so this cause a huge drawback to have good data to support the study.

On the other hand, some employees reply with contradictory answers, meaning that they answer some questions very positively as if there is not any issues concerning gender equality. However when it comes to other questions in the same interview some answers shows a problem concerning gender for example:

When I asked an associate project manager if she thinks men and women have equal opportunities in career growth, she replayed with:

> *"Yes I do think we have equal opportunities in our office in Egypt. Judging from previous promotions I see that women have succeeded in getting higher positions"*

This answer shows her perception that both male and female employees have equal jobs within the company, and women maintained high positions within the company, so there is no issue concerning gender. However, when I asked the same employee to explain the challenges that slowdown women's career growth at her company she replied with:

> *"Well high management positions are globally still dominated by men which makes the working environment a tough and hard place to be in for the few women who have succeeded in those positions. For other working women I believe the high management positions are less attractive due to the seemingly high pressure put by men"*

This answer shows that only few women seceded to reach high-levele positions so there is a gap in the number of males and females in these positions, and these women face gender inequality.

Furthermore, some informants admitted that there is an issue concerning gender, but unfortunately they refused to provide data or talk about the matter or a case or an example to support the issue, for example when I asked a human resource manager about women receiving lower salaries than men for the same position she answered with:

> *"I believe so yes, but I am sorry I can't give you enough information about this matter"*

This answer admits that there is a payment gap however the employee refused to give information concerning this issue.

In short, the data collection process requires a large effort in order to get the largest possible amount of data, and requires concentration and patience in order to obtain information that can analyses the research problem.

Gender division of work responsibility

This part analyses the gap between men and women of labor responsibilities at the ICT field. Through the personal interviews that I have made it appeared to me that there is a division within the working positions and responsibilities.

The study I made at one of the ICT companies in Egypt shows that most women are hired for administrative position, but the technical positions are male dominant positions due to male's long commitment to work in technical fields. According to a project manager at the ICT company said:

> *"Most technical positions require long commitment with the company and physical attendance which is a type of job not preferred by women in Egypt. Instead women would like to have a stable office environment and therefore women are not generally interested to work on site"*

Additionally, according to another employee within the company said:

> *"The field of ICT always favors men especially at technical position. But I could say that we have a good number of women holding managerial positions"*

Furthermore, interviews show that ICT company find it hard to depend on women for long period of time, as these fields require continuity, precision and skilled work to achieve the sectors goals on the long run. According to a human resource manager:

www.manaraa.com

"The field of IT is a male dominant field of Business of course, starting with the ratio of IT female to male graduates. I think this can vary this can raises the chances of males to "rule" the field much more than women. However another reason I find it for male domination in this field is the dependency of women at work. You know women are bound to get married or be in a relationship, of course this can cause problems, they might get pregnant, they might have hormonal changes, of course this is affecting her decision making skills as well as other skills at work. So it's affecting work definitely".

In general most employees agree that there is a gender division in positions at their work place, most of them agrees that women are hired for managerial positions, where they are mainly responsible for the administrative aspects of projects and where their jobs are to organize, and consolidate work. However, any position that requires technical skills and long commitment within the company is more a male friendly position. According to an employee at the ICT field

"I think most female positions in IT companies are in areas where they can manage, they can coordinate, they can organize, so it's not necessary for them to be technically aware of the environment, nor do they have to physically be there. It not necessary at all"

However, in Egypt generally speaking men are more favored in most organizations, plus they are always demanded to carry big amount of responsibilities one of the employees clarified this by saying:

"Our culture, favors men in all social classes .However in multinationals there are different laws that govern the culture. I believe that the society as well as the legislative laws favors men in our society"

In short, this part shows gender inequality when it comes to position and responsibility division within the company, as most of the female employee hold administrative positions while male employees hold the technical ones due to their long term commitment.

Training increase the gap between men and women

Nowadays, training is considered as key to increase productivity and creativity in the Information and Communication Technology sectors. As mentioned in the literature review training is the most important method at ICT sectors for career growth. Neo (2010) stated that training sessions constantly increase employee's productivity, skills, and creativity which are main bases for creating competitive challenges for ICT sectors to grow.

Nevertheless, through the research I made at the company, it appeared that training session's increase the gap between men and women. This issue is caused due the training timing at the company, plus to how committed employees are within the company. Training courses are mostly held either after working hours or by weekends which don't fit most women's time schedule, especially in our Arab society, as a result this matter cause the gap of women's limitation in attending the training sessions and increase the number of men who have the motivation to take these training courses. One of the employees point out that:

> *"Generally speaking men are more eager to complete these technical examinations (for international certificates). Due to their obvious long term commitment to the field of IT"*

In addition, according to another employee stated that :

> *"Unfortunately the ladies at our company find it hard to attend training session constantly and particularly trainings that offers certificates which help in career growth. However, usually male employees are always the first to catch with the latest training, the reason behind that is sometimes these training sessions are held at weekends or after the daily working hours which make hard for women to be out of their houses for long time"*

This indicates that training sessions do cause a gap between both genders which is a main effect of the gap in career growth for females at ICT sectors.

Marital status and age issues affecting gender gap

During the data collection process, it appeared that the number of single women whose age category is from (18-25) is very high and there is a very small number of married women working in the company. Plus, after some researches for this issue it seemed that ICT sectors seek to employee single women specifically. This came as a reason to the huge amount of responsibilities single women can handle and can focus on in order to achieve the company's goals. According to this point a human resource manager said that:

> "There isn't that much burden on single ladies. As you know married women have children have responsibilities. So as a result, they dedicate most of their time for work efficiency. They have nothing else to do. As you know at most ICT sectors the first impression is catchy. Meaning that when ladies are fresh grads, when they take the interview and are hired to work they are willing to work hard and impress the company with their creative skills and this is what most ICT sector needs is the creativity"

Furthermore, although the sector likes to hire single women, the company also prefers hiring married men whose age is above 25 years old, due to their long commitment for the responsibilities they carry, to confirm this point one of the employees stated that:

> "In my company, I think hiring is based on qualifications and network. However, I heard from many hiring managers that they prefer married men and single women. The reason behind this way of thinking is quiet mean. A married man has responsibilities than the like hood of changing his job is lower. Also, a single woman will likely work very hard to prove herself and does not have a husband or kids to distract her"

In short, ICT companies tries its best to employ people who are willing to serve the sector in best shape, and who are willing to be part of it and take responsibilities to make the sector grow, this is due to ICT sector's continues journey of development.

Class social factors affect gender gap

Social class and academic career both plays and important role in the hiring presses. As these ICT sectors tries it best to have the elite of the society because of their educational background. This was also mentioned in the literature review as there is a scholarly trend shows that women who have *"rich human capital of education",* abilities, and market experience that effectively guarantees them the ability to find work will, certainly, earn more than woman who do not have these advantages. According to this point one of the employees elaborated to this point by:

> *"In Egypt, there is an obvious social gap between classes, and it really makes a difference which social class do you belong to, as this affects the places where will you work for and the way you will be treated"*

Additionally, another employee said:

> *"In Egypt the elite class and high educated people are the ones who fill positions in multinationals and big firms. This elite has a very high percentage of academically educated women who after graduation have a chance on the job market in Egypt. I believe that this social factor is one of the reasons why women from an elite society have good chances and the same opportunities on the job market as men"*

This indicates that there is a social division in the Egyptian society which creates a challengeable atmosphere between social classes and their academic qualifications. The environment and educational background in which people develop profoundly forms the track of their career method.

Payment gap between male and female employees

The study revealed the issue of payment gap between men and women. However pay is a very sensitive issue, as a result little data was revealed. As mentioned previously when I asked a human resource manager if women receive lower salaries than men for the same position she replayed with:

"I believe so, yes, but I am sorry I can't give you enough information about this matter"

This answer states that there is a gender payment gap however I believe due to the sensitivity of the matter the employee refused to give information concerning this issue.

Moreover, this issue was covered through the literature review where Wolfe (2013)*,* illustrated that the average net worth of single females is much lower than men, the study cited the wage gap as the main cause for this unfairness. (Wolfe, 2013)

Surprisingly, working women all over the world suffer from job discrimination, meaning they receive less wages than men for performing the same work, this unfairness increases in developing countries and least developed countries, which increases the suffering of women who tries to join between work and family support. However, I believe that this variation is due to the cultures concept of men being the breadwinner. According to one of the employee at the company clarified that:

> *"An important reason for my company in Egypt to concentrate on hiring women is the fact that women require lower salaries than men, for example although the difference between me and one of my female colleagues is only one position, I however receive double her salary, and it is impossible for her to receive anything near to my salary if she got promoted to my position, as one promotion will not result in doubling her salary"*

Furthermore, one of the employees said:

> "It is never talked about, but quietly known that women receive lower salaries even in the same position as men this is due to the idea of the man regarded as the breadwinner in any household"

In short, wages or salary variation between genders is a gap between the average total income of employees for men and women, where men get more salary than women, although they do the same business with the same efficiency. This gap is a cause of gender inequality and is also considered one of the most prominent results of gender unfairness.

The challenges that slowdown women's career growth causing a gender gap

As mentioned in the literature review, most working women face the issue of combining between work and family, which are more likely to exert negative impacts in the family domain, causing less life satisfaction and great inner conflict within the family. All employees at the ICT Company agreed that the most challengeable factor affects women's career is building a family. As marriage itself put women in a lot of pressure that results in slowing women's career growth.

According to a member at the ICT Company said:

> "Family, children, dependencies and most of all, technical uniqueness I mean by that to have unpreceded technical skills, for example you will never find a woman holding an IT firm's CEO position"

Additionally, another ICT employee said according this point:

> "I personally believe that the biggest challenge that slows down women's career growth might be personal reasons such as marriage, children or household. Sadly, Women at times come to a point where they have to choose between their family or career"

Furthermore, another employee said concerning this point:

> "Marriage and family commitments are one of the major factors affecting the gender gap all over the world. In Egypt, the gender gap is even wider as we live in a masculine society, where men have more rights than

women hence higher opportunity to grow and to get promoted. However, this is not the case in some of the multinational companies in Egypt as well as Banks where women are in senior positions and have huge responsibilities".

Last but least, one of the employees elaborated to this point by saying:

"Having a husband that doesn't believe that women should work or accelerate in their work is the main reason behind the slowdown of women career growth. This goes hand in hand with the society and culture."

Another challenge women face is the huge amount of responsibility they carry in order to prove themselves. As at the beginning of their career journey they are required to handle many tasks in order to show their capability of controlling different requirements. However, these women can be used by some other employees to take care of their business which is un ethical at all, but unfortunately this was stated by one of the employees at the ICT company where she said:

"I could say that women have to exert more effort at work in order to prove themselves that they are able to carry on their work requirements and this can be used by some men in order to lighten their own work burden"

In short, the Egyptian society force women to face a challengeable atmosphere when it comes to have both family and work, as combining both put a huge load on women to succeed and prove themselves. However, sadly speaking family responsibility ends by slowing down women career growth and focusing on growing career ends by unsatisfied family due to the drawback of family responsibilities.

4.2 Quantitative Data Analyses

This part provides statistical analysis of survey data collected as part of this study. The analysis is conducted using the "Statistical Package for Social Sciences" (SPSS). The section provides descriptive statistics that looks at the ICT case study's performance of employees, along with background characteristics related to their type of work, seniority level, and departmental responsibilities. The section also provides demographic characteristics related to marital status, and age. It also provides views and perceptions of male and female employees on training and development

Gender distribution of workers according to department

Table (1) illustrates the gender distribution of worker in the case study. As the table clearly shows, most male staff members are in positions at the "technical support" field and "project management operations". These two fields together, provide jobs for about 65% of men in the case study (32.2% in project management operation and 32.3% in technical support).

Meanwhile, female employees were concentrated in project management (45.2%) and in corporate marketing (35.5%). It is important to note here that the job of "project management" is primarily and administrative job that is responsible for communication with clients and contract management.

The employees distribution inside the departments show that the technical support field is fully staffed by male employees (100% of workers are male) at the "technical support" field. Similarly, there is high proportion of male workers in finance and accounting (80%). Women, on the other hand, are the majority in customer service (66.7% of employees), in corporate

41

marketing (64.7%), and in project management operation (58.3%). The department of human

resource management was fully staffed by women (100%).

Table (1): Gender Distribution of Workers According to Department

			Department						Total
			customer service	Finance /accounting	project management operations	technical support	corporate marketing	Human resources	
Gender	Male								
		% within Gender	3.2%	12.9%	32.3%	32.3%	19.4%	0.0%	100.0%
		% within Department	33.3%	80.0%	41.7%	100.0%	35.3%	0.0%	50.0%
		% of Total	1.6%	6.5%	16.1%	16.1%	9.7%	0.0%	50.0%
	Female								
		% within Gender	6.5%	3.2%	45.2%	0.0%	35.5%	9.7%	100.0%
		% within Department	66.7%	20.0%	58.3%	0.0%	64.7%	100.0%	50.0%
		% of Total	3.2%	1.6%	22.6%	0.0%	17.7%	4.8%	50.0%
Total									
		% within Gender	4.8%	8.1%	38.7%	16.1%	27.4%	4.8%	100.0%
		% within Department	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	4.8%	8.1%	38.7%	16.1%	27.4%	4.8%	100.0%

Caption above table: Gender * Department Cross tabulation (1)

In short, the distribution in table (1) indicates that female employees have more presence

in administrative tasks. However, male employees were primarily in key technical and financial

departments.

42

Age distribution of workers

Age is an important correlate to the gender distribution of workers.   In general, as Table (2) shows, male employees tend to be older and more senior. Among male employees, 51.6% were in the age group (26-35) years old, and (45.2%) were in the age group (36-45) years old. Only 3.2% of men are at the ages from (18-25) years old. However, almost one fifth of the women (22.6%) were in the young age category of (18-25) years old. Only one fifth of women in the case study (19.4%) were in the senior age category of (36-45) years old. The majority of working women (58.1%) were between the ages from (25-35) years old.

Table (2): Age Distribution of Workers

Gender * Age Cross tabulation (2)				Age		Total
			18-25	26-35	36-45	
Gender	**Male**					
		% within Gender	3.2%	51.6%	45.2%	100.0%
		% within Age	12.5%	47.1%	70.0%	50.0%
		% of Total	1.6%	25.8%	22.6%	50.0%
	Female					
		% within Gender	22.6%	58.1%	19.4%	100.0%
		% within Age	87.5%	52.9%	30.0%	50.0%
		% of Total	11.3%	29.0%	9.7%	50.0%
Total						
		% within Gender	12.9%	54.8%	32.3%	100.0%
		% within Age	100.0%	100.0%	100.0%	100.0%
		% of Total	12.9%	54.8%	32.3%	100.0%

Employee's marital status

Looking at the marital status of workers, it is obvious that the majority of women working in this case study were single. Table (3) explains the marital statues distributions of workers by gender, as it show 83.9% of working women were single and only 16.1% were married. Among men, this distribution was different as 51.6% of men were single and 48.4% were married.

Table (3): Workers Marital Status

			Marital status		Total
Gender * Marital status Cross tabulation			Single	married	
Gender	Male				
		% within Gender	51.6%	48.4%	100.0%
		% within Marital status	38.1%	75.0%	50.0%
		% of Total	25.8%	24.2%	50.0%
	Female				
		% within Gender	83.9%	16.1%	100.0%
		% within Marital status	61.9%	25.0%	50.0%
		% of Total	41.9%	8.1%	50.0%
Total					
		% within Gender	67.7%	32.3%	100.0%
		% within Marital status	100.0%	100.0%	100.0%
		% of Total	67.7%	32.3%	100.0%

To sum up, the majorities of working women is single, young, and are at administrative positions. Men, on the other hand, tended to be more senior in age, to be in technical positions and to be more likely to be married.

Views and Perceptions on Training and Development

Table (4) summarizes the views of male and female workers in the case study on training and development tools and potential impact of training programs on their career development.

Question (1) & (2) show that 87% of the sector's employees agree about the efficiency of the company's training policy, plus 74% of both male and female staff highly benefit from these training programs as they tackle important soft as well as crucial technical skills which employees need to develop in. Only few members disagree about these points. This indicates that the sector applies effective training policies to complete its mission in the long run.

However, question (3) shows when it comes to use and apply what's covered in the training program; it seems that male employees are more encouraged to share what they have learned with other employees within the sector, while female employees tend to disagree on this point. It is obvious that the overall interest is predominant on the male side rather than the female. Therefore, the interest in sharing newly learned "lessons" is rather sent out to fellow employees from their male colleagues than their female colleagues.

Questions (4), (5) show similar results when it comes to productivity and career development as both genders agree about the concept of training sessions increases their productivity and addresses issues about career development. This is a good indicator as career advancement and good productivity is a main goal ICT tries to accomplish. This shows the efficiency of the training courses. It is important to indicate that both genders benefit equally from these training sessions, which increases their productivity as well as enhances their career development chances and opportunities.

Meanwhile, question (6) shows that 33.8% of women contributed to the survey and benefit from training courses that focuses on behavioral skills, which is also an important aspect for the sector. On the other hand only 16.1% men agree to this point. The rest of the employees neither agree nor disagree about this point. It is also interesting to point out here, the interest shown by female employees to the behavioral skills trainings in comparison to the earlier mentioned general training sessions which are mostly tackling the technical skills.

Question (7) shows that 64.5% of both genders are motivated to learn and attend training sessions, and be familiar with the concept covered in training program in order to benefit the department they work in. More than half the sample of people interviewed is motivated to attend, participate, and understand what is being given in the training sessions to support their own department better and by that, have a chance to develop from a hierarchal point of view.

Question (8) show that both male and female employees agree on the statement that the company seeks to apply new and updated methods to improve technical management. This shows that the ICT sector puts a lot of effort in applying updated methods to improve its technical management. It would be rather questionable if a so called ICT firm, which is based on optimization of old tools, systems and methods, would not try to constantly seek updated more efficient methods to improve their technical management.

Nevertheless, when it comes to external training Question, such questions like (9) & (10) show that almost 50% of men agree more than women that external training serves the employees within the company, plus men staff agree that this external training complies with requirements of the job in Egypt, this can show that men benefit from abroad trainings more than

women do. This finding is rather interesting as this indicates that it is more beneficial for men to have abroad trainings and for women to have on-campus trainings only.

Question (11) shows that 50% of male and female employees agree, that their company applies the best techniques and methods in their training programs. As mentioned previously ICT companies give a lot of time and effort to make effective training programs. While 27% of the staff neither agree nor disagree, and only few staff disagree about this point. This shows that almost a quarter of the sample believes that their company does not apply the best techniques and methods in their training programs. It is obvious that the employees of the ICT firm are not highly impressed with their company's techniques and methods in their training programs.

Question (12) show that there is gender differences when it comes to get new assignments as a result of attending and learning from the given training sessions. On the one hand, 29% out of 50% of women disagree about this point and few of them neither agree nor disagree. However, on the other hand 24% out of 50% of their male counterparts neither agree nor disagree. Only few male staff disagrees about this point. Here it is shown that only a few more female employees feel that there is inequality in project/task assignments between male and female employees in which males are more preferred.

Question (13) shows that 54.9% of the staff agree that they witnessed improvement in their performance, which indicates that they benefit from these training sessions, however, 24.2% of women neither agree nor disagree about this subject. This means that most of the employees, whether women or men, generally benefit from the training sessions.

Yet, Question (14) shows that 79.1% male and female employees agree that training courses change their attitudes, which is a good sign, because attitudes and behavior are effective variables for better performance.

Question (15) shows that men agree more than women about training programs commensurate with the job levels in the company, which clearly show that male employees benefit more than women from these courses to maintain the sector's working ranks, while most women at the company neither agree nor disagree about this point

Question (16) show's different results between both genders, as 33.9% out of 50% male employees agree on the technical issue covered in the training courses. While, 20% out of 50% female employees agree about training courses which focus on technical skills. This shows that the technical field is more interesting for men. The rest of the employees neither agree nor agree, and only few of the staff disagrees about this point. This also shows a positive correlation to our previously mentioned hypothesis about question (3).

Questions (17) and (18) show similar percentages between both genders when it comes to career and management development, as both male and female employees agree that training programs focuses on career growth and management issues, especially for women who are holding administrative positions at the company.

To sum up, the results of the survey shown that most of the information and communication technology employees agree on the training and development objectives covered in the survey. However, only few questions show different results from the perspective of female employees. On the one hand, the female employees are more integrated into administrative skills, while male employees are more concentrated in the technical side of the business. This is one reason why female employees disagree about some points when it comes to technical areas.

.

	Gender	Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Strongly Disagree	Somewhat Disagree	Not Applicable
				Table (4)			
1- My organization has a training and development policy applicable to all employees	Male	12.9%	29.0%	3.2%	1.6%	3.2%	
	Female	14.5%	30.6%	1.6%	1.6%	1.6%	
	Total	27.4%	59.7%	4.8%	3.2%	4.8%	
2- I highly benefit from my corporate training programs	Male	9.7%	30.6%	3.2%	3.2%	3.2%	
	Female	3.2%	30.6%	14.5%	00.0%	1.6%	
	Total	12.9%	61.3%	17.7%	3.2%	4.8%	
3- When employees arrive from training, supervisors encourage them to share what they have learned with other employees	Male	8.1%	14.5%	17.7%	4.8%	3.2%	1.6%
	Female	1.6%	9.7%	22.6%	8.1%	3.2%	4.8%
	Total	9.7%	24.2%	40.3%	12.9%	6.5%	6.5%
4- The Training sessions I took increased my productivity within the organization	Male	6.5%	30.6%	11.3%	1.6%	00.0%	
	Female	3.2%	29.0%	11.3%	3.2%	3.2%	
	Total	9.7%	59.7%	22.6%	4.8%	3.2%	
5- the training addressed issues of career development	Male	3.2%	19.4%	21.0%	1.6%	4.8%	00.0%
	Female	3.2%	22.6%	14.5%	3.2%	4.8%	1.6%
	Total	6.5%	41.9%	35.5%	4.8%	9.7%	1.6%
6- The training focused on behavioral issues in the work place.	Male	1.6%	14.5%	17.7%	6.5%	9.7%	
	Female	4.8%	29.0%	8.1%	00.0%	8.1%	
	Total	6.5%	43.5%	25.8%	6.5%	17.7%	
7- I am motivated to learn the concepts that will be covered in the training program	Male	12.9%	19.4%	14.5%	3.2%	00.0%	
	Female	22.6%	9.7%	14.5%	1.6%	1.6%	
	Total	35.5%	29.0%	29.5%	4.8%	1.6%	
8- The company seeks to apply new and updated methods to improve technical management	Male	6.5%	17.7%	14.5%	4.8%	6.5%	
	Female	6.5%	16.1%	9.7%	6.5%	11.3%	
	Total	12.9%	33.9%	24.2%	11.3%	17.7%	
9- External training serves employees	Male	14.5%	22.6%	11.3%	00.0%	00.0%	1.6%
	Female	1.6%	16.1%	19.4%	6.5%	1.6%	4.8%
	Total	16.1%	38.7%	30.6%	6.5%	1.6%	6.5%

10- External training complies with requirements of the job in Egypt	Male	4.8%	27.4%	16.1%	00.0%	00.0%	1.6%
	Female	00.0%	9.7%	30.6%	6.5%	1.6%	1.6%
	Total	4.8%	37.1%	46.8%	6.5%	1.6%	3.2%
11- The Company seeks to apply the best techniques in their training programs	Male	9.7%	16.1%	12.9%	3.2%	8.1%	
	Female	6.5%	17.7%	14.5%	6.5%	4.8%	
	Total	16.1%	33.9%	27.4%	9.7%	12.9%	
12- Employees who use their training are given preference for new assignments	Male	4.8%	6.5%	24.2%	1.6%	12.9%	00.0%
	Female	00.0%	12.9%	19.4%	9.7%	4.8%	3.2%
	Total	4.8%	19.4%	43.5%	11.3%	17.6%	3.2%
13- Training leads to improved performance	Male	14.5%	17.7%	14.5%	1.6%	1.6%	
	Female	8.1%	14.5%	24.2%	1.6%	1.6%	
	Total	22.6%	32.3%	38.7%	3.2%	3.2%	
14- Training sessions affect individual skills and change their attitudes	Male	12.9%	25.8%	8.1%	1.6%	1.6%	
	Female	9.7%	30.6%	8.1%	1.6%	00.0%	
	Total	22.6%	56.5	16.1	3.2%	1.6%	
15- Training programs commensurate with the job levels in the organization	Male	6.5%	14.5%	24.2%	1.6%	3.2%	
	Female	3.2%	9.7%	29.0%	8.1%	00.0%	
	Total	9.7%	24.2%	53.2%	9.7%	3.2%	
16- The training I attended focused on technical issues	Male	6.5%	27.4%	9.7%	3.2%	3.2%	
	Female	3.2%	17.7%	12.9%	9.7%	6.5%	
	Total	9.7%	45.2%	22.6%	12.9%	9.7%	
17- The training I attended focused on career growth	Male	4.8%	16.1%	14.5%	9.7%	4.8%	00.0%
	Female	3.2%	19.4%	12.9%	9.7%	3.2%	1.6%
	Total	8.1%	35.5%	27.4%	19.4%	8.1%	1.6%
18- The training I attended focused on management issues	Male	4.8%	21.0%	17.7%	6.5%	00.0%	00.0%
	Female	3.2%	19.4%	12.9%	11.3%	1.6%	1.6%
	Total	8.1%	40.3%	30.6%	17.7	1.6%	1.6%

Chapter Five

Conclusion and Recommendations

Conclusion

This chapter provides concluding remarks on the gender dimensions in training and development based on this study. Despite the clear gender divisions that mark our society, the character and implications of this inequality are unappreciated. As cited, some studies went through this issue as one of the public rights of the citizens, without elaborating or stating adequately how to cope with the importance of this topic.

Gender equality is a fundamental step in the process of human development; hence many international organizations sought to prioritize objective and consider gender as a priority. The third millennium development goal is to empower women.

However, discrimination and inequality are rooted in the legal framework of the Arab world. Through the study I made at one of the largest ICT companies, it appeared that there are issues considering gender equality.

The findings of this study shows that most of the female employee hold administrative positions while male employees hold the technical and high managerial positions due to their long term commitment which for sure show gender division in work responsibilities.

Moreover, training sessions increase the gap between men and women at the ICT company. This issue is caused due the training timing at the company, plus to how motivated employees are for career advancement.

Social class and academic career both plays and important role in the hiring process. As these ICT sector are trying hard to have the elite of the society because of their educational background and are looking for hiring single women and married women in order to achieve the sectors goals.

Another finding for this study is the payment inequality between male and female employees. It is found that although both male and female employees do the same business with the same efficiency, male employees receive almost always higher salaries. This gap is a cause of gender inequality and is also considered one of the most prominent results of gender unfairness.

Last but not least, the Egyptian society force women to face a challengeable atmosphere when it comes to have both family and work, as combining both puts a huge load on women to succeed and prove themselves.

In short, the results of this research reveal the pressures that scheduling of training courses, daily social and work challenges and the payment gap place upon women. These seemingly harmless institutional decisions or structural realities place stresses upon women that men do not encounter by mere virtue of the male bias immanent in the system.

Finally, most of the global research acknowledges that women face challenges and obstacles through their career journey especially in the Arab region. This research took one of the top ICT companies in Egypt as a case study, and although it is a high social class industry, it shows that women in these industries also face challenges to prove themselves. I believe gender issues need more attention and consideration due to their importance since gender equality issues are still neglected in our society.

Recommendations

Gender issues require more attention and consideration due to their importance in this contemporary age, as today women succeeded in proving themselves at many fields. However, they still face gender discrimination. The (2012) World Bank report has provided several recommendations to enhance gender equality which are:

1- Taken gender issues are to be stated into the policy making process and that a gender dimension is taken into consideration. Hence, gender issues should be a feature in all state agencies to achieve gender equality (World Bank, 2012: page 345).

2- Globalization has the ability to promote more egalitarian gender roles and standards. The changes unleashed by globalization especially the massive access to economic chances and information among women could impact existing roles and norms ultimately promoting more democratic views when it comes to gender equality (World Bank, 2012: page 267).

The combination of public policy and globalization both can formulate and create gender equality. According to the World Bank (2012)

> *"Public policy aimed at closing existing gender gaps in endowments, agency and access to economic opportunities is therefore necessary for countries to fully capitalize on the potential of globalization as a force for development and greater gender equality"* (World Bank, 2012: page 271).

Law and justice can formulate powerful agents for social changes. As judiciary can be an effective driver for progressive gender changes. Additionally, courts that reliably have the ability to impose the law through their decisions can affect the future behavior of most citizens and organizations (World Bank, 2012: page 347).

In short, the state agencies, law, and public policy makers should take these recommendations seriously in order to spread gender equality. Also such recommendations enhance gender equality and boost women's role in building the country's economy, which result in great economic growth.

References:

Aguinis, H., & Kraiger.K. (2009). Benefits of Training and Development for Individuals and Teams, Organizations, and Society. Retrieved from http://www.owlnet.rice.edu/~ajv2/courses/12a_psyc630001/Aguinis%20&%20Kraiger%20(2009)%20ARP.pdf

Assaad.R.,(ed.) & Hamidi.F. (2009). Women in the Egyptian Labor Market. *The Egyptian Labor Market Revisited.* The American University in Cairo Press. Page 235

Baldwin, J. R., & Gellatly, G. (1998). Are There High-Tech Industries or Only High-Tech Firms? Evidence From New Technology-Based Firms. Micro-Economic Analysis Division. Retrieved from http://publications.gc.ca/collections/Collection/CS11-0019-120E.pdf

Blair, M. (2003).*Competing Devotions: Career and Family among Women Executives*.Harvard university press. Cambridge, Massachusetts, and London, England.

Central agency for public mobilization & statistics.(2011). Quarterly bulletin labor force survey third quarter.Page 33. Retrieved from www.capmas.gov.eg

Council of Europe.(1998). Gender equality. Retrieved from http://hub.coe.int/what-we-do/democracy/gender-equality

El-Shenawi.N. (2011).MICT.Egypt's ICT sector competitiveness: Driving forces and Challenges. ''Towards enhancing the competitiveness of Egypt in the world economy'' The Egyptian Center for Economic Studies. Retrieved from http://www.eces.org.eg/Uploaded_Files/events/%7BA1D92A92-DCE9-4879-BD5A-6633834A95B3%7D_The%20Competitiveness%20of%20Egypt's%20ICT%20sector-Dr.%20Nagwa_edited.pdf

Goldstein, IL.,& Ford, JK.. (2002). *Training in Organizations*. Belmont, CA: Wadsworth. 4th ed, page 539

Hakim, C. 2006.Women, careers, and work-life preferences.British Journal of Guidance and Counselling, Vol. 34, No. 3. Retrieved from http://blog.lib.umn.edu/puot0002/3004/Women,%20careers,%20and%20work-life%20preferences.pdf

Hausmann, R., Tyson, L., Zahidi, S., & Zahidi, S. (2012). The Global Gender Gap Report published by the World Economic Forum. Retrieved from http://www3.weforum.org/docs/WEF_GenderGap_Report_2012.pdf

Hecker, D. (2005).High-technology employment: a NAICS-based update. Retrieved from
http://www.bls.gov/opub/mlr/2005/07/art6full.pdf

Kwon, J. (2013). Career Development. Retrieved from
http://careers.microsoft.com/careers/en/gbl/careerdevelopment.aspx

Mandour.D. (2009).Impact of ICT on Gender Gap in Egypt.SRC/CIDA Research Program on Gender and
Work.Retrieved from http://www1.aucegypt.edu/src/wsite1/pdfs/rewebsite_cida/Dina_No4.pdf

Mendonca, S. (2009).*Brave old world: Accounting for 'high-tech' knowledge in 'lowtech' industries*.
Research Policy, 38, 470-482.

MICT.(2013). Egypt's ICT Strategy 2013 – 2017**.**Retrieved from**http://www.mcit.gov.eg/ICT_Strategy**

MICT.(2013). Digital Socio-Economic Development**.**The Way forward to Prosperity, Freedom and Social
Equity. Retrieved
fromhttp://www.mcit.gov.eg/Upcont/Documents/Digital_Socio_Economic_Development.pdf

Miller, J. A. S., &Osinski, D. M. S. (2002).TRAINING NEEDS ASSESSMENT. Retrieved from
http://www.ispi.org/pdf/suggestedReading/Miller_Osinski.pdf

Nemirovsky, A., &Yoguel.G. (2001).Dynamics of High-Technology Firms in the Silicon Valley, DANISH
RESEARCH UNIT FOR INDUSTRIAL DYNAMICS. Retrieved from
http://www3.druid.dk/wp/20010003.pdf

Noe.R. (2010).Employee Training and Development.Fifth edition.retrieved from
http://serverlib.moe.gov.ir/documents/10157/42675/Employee+Training+and+Development.pdf

OECD, (2009). GUIDE TO MEASURING THE INFORMATION SOCIETY Retrieved from
http://www.oecd.org/sti/sci-tech/43281062.pdf

Paradise, A. (2007). State of the Industry: ASTD's Annual Review of Trends in Workplace Learning and
Performance. Alexandria, VA: ASTD. Retrieved from
http://www.owlnet.rice.edu/~ajv2/courses/12a_psyc630001/Aguinis%20&%20Kraiger%20(2009)%2
0ARP.pdf

Richard, H. Robbins, *Global Problems and the Culture of Capitalism*, (Allyn and Bacon, 1999), p. 354

Saksena, A. (2009).High-Tech Industry: The Road to Profitability Through Global Integration and
Collaboration. Retrieved from
http://www.cisco.com/web/about/ac79/docs/wp/High_Tech_Indus_0716FINAL2.pdf

Salah, M.(2013). A Look at Egypt's ICT Sector: Growth, Strategy, and Impact on Startups. Retrieved from http://www.wamda.com/2013/04/a-look-at-egypt-s-ict-sector-growth-strategy-and-impact-on-startups

Salvi, S. S. (n.d.). What is Training and Development. Retrieved from https://www.amherst.edu/offices/human_resources/training/whatistraining

Shah, A. (2010). Women's Rights. Retrieved from http://www.globalissues.org/article/166/womens-rights

SIS.(2013).Communication and information. Retrieved from http://www.sis.gov.eg/Ar/Templates/Articles/tmpArticles.aspx?ArtID=1244

Tseng, L., & Lee, Y. (2011). Can High-Tech Companies Enhance Employee Task Performance through Organizational Commitment?.*SCIEDU press.* Retrieved from http://www.sciedu.ca/journal/index.php/ijba/article/view/136/125

United Nation.Entity for Gender Equality and the Empowerment of Women.(2011). Commission on the status of women. Retrieved from http://www.un.org/womenwatch/daw/csw/55sess.htm

Walby, Sylvia, (1997). *Gender Transformations*. London, Routledge.

Williams, Joan C. (2010). *Reshaping the Work-Family Debate, why men and culture matter*. Harvard university press. Cambridge, Massachusetts, and London, England.

Wolfe, L. (2013). Women Are More Vulnerable Than Men in an Unstable Economy. Women in Business. Retrieved from http://womeninbusiness.about.com/od/challengeswomenface/a/morevulnerable.htm

World Bank. (2012).World Development report. Gender Equality and Development. Retrieved from http://siteresources.worldbank.org/INTWDR2012/Resources/7778105-1299699968583/7786210-1315936222006/Complete-Report.pdf

World Bank report. (2013). Missing Voices: Gender Equality in the Arab World. Retrieved from http://www.worldbank.org/en/news/feature/2013/03/14/missing-voices-gender-equality-in-the-arab-world

Young, K., Wolkowitz and McCullagh, R. 1988. *Of Marriage and the market: women's subordination internationally and its lessons*. London; New York: Routledge.

APPENDIX

Appendix (A) Interview Questions

THE AMERICAN UNIVERSITY IN CAIRO
INSTITUTIONAL REVIEW BOARD

Documentation of Informed Consent for Participation in Research Study

Project Title: Gender Dimensions in Training & Development

Principal Investigator: Rozana Adnan Khayyat

*You are being asked to participate in a research study. The purpose of the research is to measure women's career growth, and the findings may be published, and presented.

*There will not be certain risks or discomforts associated with this research.

*The information you provide for purposes of this research is anonymous

*Participation in this study is voluntary. Refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You may discontinue participation at any time without penalty or the loss of benefits to which you are otherwise entitled.

Signature

Printed Name

Date

1. Do you think men and women have equal opportunities in career growth at your company/field?

2. Why do you believe women are not favoring the field of information technology in comparison to mechanical engineering for example?

3. Explain the challenges that slowdown women's career growth?

4. How different is the involvement of women between the company in Egypt and its others branches outside Egypt?

5. Is the hiring of women employees higher than men at the company?

6. What social factors affect gender gap?

Appendix (B) Questioner

Documentation of Informed Consent for Participation in Research Study

Project Title: Gender dimensions in training and development in the ICT sector in Egypt

Principal Investigator: Rozana Adnan Khayyat

*You are being asked to participate in a research study. The purpose of the research is to measure women's career growth, and the findings may be both *published, presented*.

The procedures of the research will be as follows: a survey will be conducted to provide statistical material to the study for the quantitative part, in order to measure employee's participants in training sessions.

*There will not be certain risks or discomforts associated with this research.

*There will not be benefits to you from this research.

*The information you provide for purposes of this research is confidential.

*Participation in this study is voluntary. Refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You may discontinue participation at any time without penalty or the loss of benefits to which you are otherwise entitled.

Signature

Printed Name

Date

Section One

Please take a few minutes to tell us about yourself (General information)

1- What is your gender type?

○ Male

○ Female

2- What is your age?

○ 18-25 years old

○ 26-35 years old

○ 36-45 years old

○ More than 46 years old

3- What is your marital status?

○ Single

○ Married

○ Separate

○ Divorced

4- Do you have children?

○ Yes

○ No

If your answer is YES how many children do you have? If NO go to question number 5

5- Which of the following best describes the department you work in?

○ Customer Service

○ Finance/Accounting

○ Project management operations

○ Technical support

○ Corporate Marketing

○ Human Resources

6- Which of the following best describes your position here?

○ Associate Project Manager

○ Project Manager

○ Project Consultancy Manager

○ Lead Project Manager

○ Project Management

○ Program Manager

○ Program Consultancy Manager

7- How long have you been with the company?

○ Less than 6 months

○ 6 months – 1 year

○ 1-3 years

○ 3-5 years

○ 5-10 years

○ More than 10 years

Section Two

Please take a few minutes to tell us about how the organization assists your self-development.

	Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Strongly Disagree	Somewhat Disagree	Not Applicable
1- My organization has a training and development policy applicable to all employees						
2- I highly benefit from my corporate training programs						
3- When employees arrive from training, supervisors encourage them to share what they have learned with other employees						
4- The Training sessions I took increased my productivity within the organization						
5-the training addressed issues of career development						
6-The training focused on behavioral issues in the work place.						
7- I am motivated to learn the concepts that will be covered in the training program						
8-The company seeks to apply new and updated methods to improve technical management						

9-external training serves employees					
10-External training complies with requirements of the job in Egypt					
11-The Company seeks to apply the best techniques in their training programs					
12-Employees who use their training are given preference for new assignments					
13-Training leads to improved performance					
14-Training sessions affect individual skills and change their attitudes					
15-Training programs commensurate with the job levels in the organization					
16- The training I attended focused on technical issues					
17- The training I attended focused on career growth					
18- The training I attended focused on management issues					

THANK YOU!

Appendix (C) IRB approval

Re: Approval of study This is to inform you that I reviewed your revised research proposal entitled "Gender dimensions in training and development At ICT sector in Egypt A case study of a high technology multinational company," and determined that it required consultation with the IRB under the "expedited" heading. As you are aware, the members of the IRB suggested certain revisions to the original proposal, but your new version addresses these concerns successfully. The revised proposal used appropriate procedures to minimize risks to human subjects and that adequate provision was made for confidentiality and data anonymity of participants in any published record. I believe you will also make adequate provision for obtaining informed consent of the participants.

Please note that IRB approval does not automatically ensure approval by CAPMAS, an Egyptian government agency responsible for approving much off-campus research involving surveys and interviews. CAPMAS issues are handled at AUC by the office of the University Counsellor, Dr. Amr Salama. The IRB is not in a position to offer any opinion on CAPMAS issues, and takes no responsibility for obtaining CAPMAS approval.

This approval is valid for only one year. In case you have not finished data collection within a year, you need to apply for an extension.

Thank you and good luck.
Dr. Atta Gebril
IRB chair, The American University in Cairo